
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, 2020
or
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR

15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ______ to ______

Commission file number 1-37774

AdvanSix Inc.

(Exact name of registrant as specified in its charter)

Delaware	81-2525089
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
300 Kimball Drive, Suite 101 Parsippany, New Jersey	07054
(Address of principal executive offices)	(Zip Code)

Registrant’s telephone number, including area code (973) 526-1800

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.01 per share	ASIX	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 o No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes o 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, a 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. (Check One):

Large accelerated filer ☐	Accelerated filer ☒	Non-accelerated filer o	Smaller reporting company ☐ Emerging growth company ☐

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. o

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

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

The aggregate market value of common stock held by non-affiliates of the Registrant was approximately $322 million as of June 30, 2020. The market value held by non-affiliates excludes the value of those shares held by executive officers and directors of the Registrant.

There were 28,033,935 shares of common stock outstanding at February 1, 2021.

Documents Incorporated by Reference

Part III: Proxy Statement for Annual Meeting of Stockholders to be held June 10, 2021.

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PART I.

Item 1. Business

In this Annual Report on Form 10-K, unless the context otherwise dictates, “AdvanSix”, the “Company”, “we” or “our” means AdvanSix Inc. and its consolidated subsidiaries.

Corporate History

On October 1, 2016, Honeywell International Inc. (“Honeywell”) completed the separation of AdvanSix. The separation was completed by Honeywell distributing (the "Distribution") all of the then outstanding shares of common stock of AdvanSix on October 1, 2016 (the “Distribution Date”) through a dividend in kind of AdvanSix common stock, par value $0.01 per share, to holders of Honeywell common stock as of the close of business on the record date of September 16, 2016 who held their shares through the Distribution Date (the “Spin-Off”).

Description of Business

AdvanSix plays a critical role in global supply chains, innovating and delivering essential products for our customers in a wide variety of end markets and applications that touch people’s lives, such as building and construction, fertilizers, plastics, solvents, packaging, paints, coatings, adhesives and electronics. Our reliable and sustainable supply of quality products emerges from the vertically integrated value chain of our three U.S.-based manufacturing facilities. AdvanSix strives to deliver best-in-class customer experiences and differentiated products in the industries of nylon solutions, chemical intermediates, and plant nutrients, guided by our core values of Safety, Integrity, Accountability and Respect. Our four key product lines are as follows:

- **Nylon** – We sell our Nylon 6 resin globally, primarily under the Aegis® brand name. Nylon 6, is a polymer resin which is a synthetic material used by our customers to produce fibers, filaments, engineered plastics and films that, in turn, are used in such end-products as carpets, automotive and electric components, sports apparel, food packaging and other industrial applications. In addition, our Nylon 6 resin is used to produce nylon films which we sell to our customers primarily under the Capran® brand name.

- **Caprolactam** – Caprolactam is the key monomer used in the production of Nylon 6 resin. We internally polymerize caprolactam into Aegis® Nylon 6 Resins, and we also market and sell the caprolactam that is not consumed internally to customers who use it to manufacture polymer resins to produce nylon fibers, films and other nylon products. Our Hopewell manufacturing facility is one of the world’s largest single-site producers of caprolactam as of December 31, 2020.

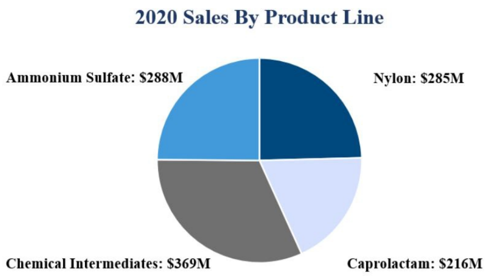
- **Chemical Intermediates** – We manufacture, market and sell a number of other chemical products that are derived from the chemical processes within our integrated supply chain. Most significant is acetone which is used by our customers in the production of adhesives, paints, coatings, solvents, herbicides and engineered plastic resins. Other intermediate chemicals that we manufacture, market and sell include phenol, alpha-methylstyrene (“AMS”), cyclohexanone, oximes (methyl ethyl ketoxime, acetaldehyde oxime and 2-pentanone oxime), cyclohexanol, sulfuric acid, ammonia and carbon dioxide.

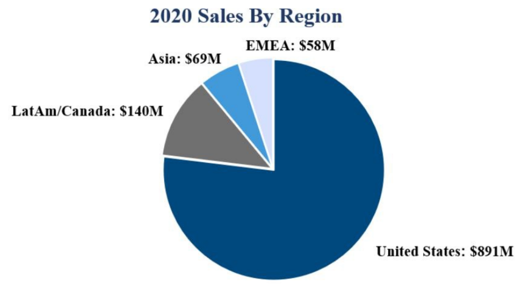
- **Ammonium Sulfate** – Our ammonium sulfate is used by customers as a fertilizer containing nitrogen and sulfur, two key plant nutrients. Ammonium sulfate fertilizer is derived from the caprolactam manufacturing process. Because of our Hopewell facility’s size, scale and technology design, we are the world’s largest single-site producer of ammonium sulfate fertilizer as of December 31, 2020. We market and sell ammonium sulfate primarily to North American and South American distributors, farm cooperatives and retailers to fertilize crops.

Each of these product lines represented the following approximate percentage of total sales:

	Years Ended December 31,		
	2020	**2019**	**2018**
Nylon	24%	27%	28%
Caprolactam	19%	22%	19%
Chemical Intermediates	32%	28%	33%
Ammonium Sulfate	25%	23%	20%
	100%	100%	100%

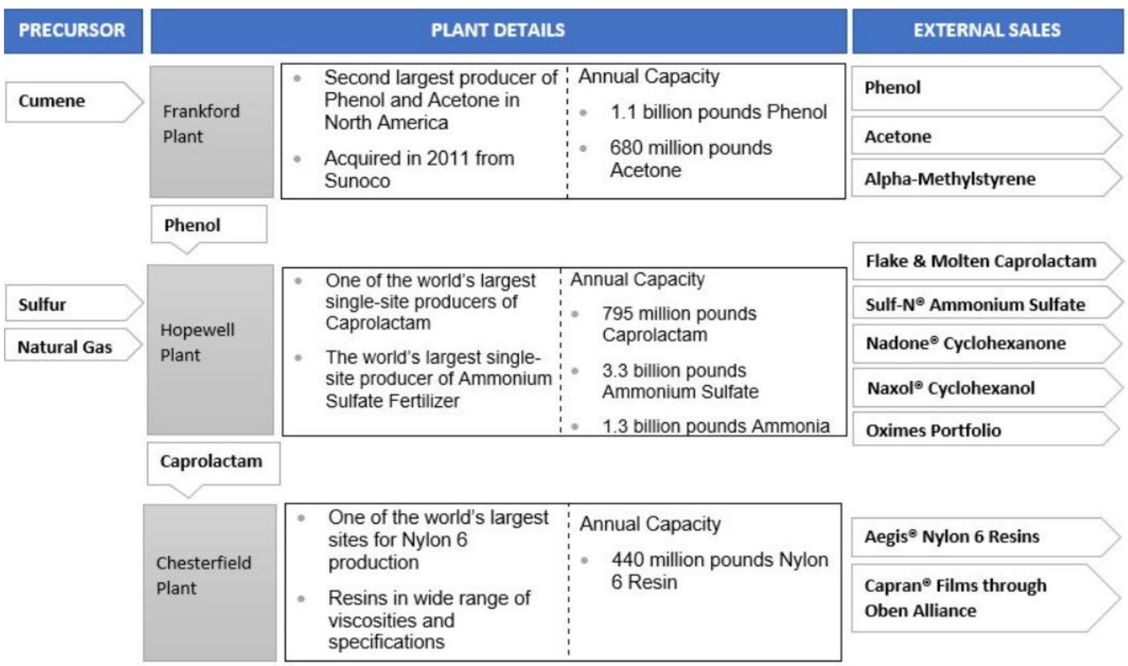
The following charts illustrate the distribution of our sales by product line and by region, measured by the destination of each sale, for the year ended December 31, 2020:





For information concerning revenues and assets by geographic region, see “Note 3. Revenue” to our Consolidated Financial Statements included in this Form 10-K, which is incorporated herein by reference.

Our manufacturing process is backward integrated. We use cumene, a chemical compound produced from benzene and propylene, to manufacture phenol, acetone and AMS at our Frankford, Pennsylvania plant. The majority of the phenol we manufacture is further processed at our Hopewell facility through an integrated series of unit operations, which also consume natural gas and sulfur, to produce caprolactam and ammonium sulfate. In recent years, approximately 55% of the caprolactam we have produced at our facility in Hopewell, Virginia has been shipped to our facility in Chesterfield, Virginia where it has been polymerized into Aegis® Nylon 6 resins.



Our integrated manufacturing process, scale and the quantity and range of our products make us one of the most efficient manufacturers in our industry. We consistently focus on and invest in improving production yields from our various manufacturing processes to build on our leading cost position. Our global logistics infrastructure enables a reliable intra-plant supply chain and consistent and timely delivery to our customers. In addition, we strive to understand the product applications and end-markets into which our products are sold, which helps us upgrade the quality, chemical properties and packaging of our products in ways which enable us to attract price premiums and greater demand.

We serve approximately 400 customers globally located in more than 50 countries. For the years ended December 31, 2020, 2019 and 2018, we had sales of $1,158 million, $1,297 million and $1,515 million with net income of $46 million, $41 million and $66 million, respectively. For the years ended December 31, 2020, 2019 and 2018, our international sales were $267 million, $240 million and $244 million, respectively.

AdvanSix is a single operating segment and a single reportable segment, operating through three integrated U.S.-based manufacturing sites located in Frankford, Pennsylvania and Hopewell and Chesterfield, Virginia. The Company's headquarters is located in Parsippany, New Jersey.

Competitive Strengths

Low Cost Position Driven by Integrated Manufacturing Footprint, Large Scale, Favorable Geographical Location, and High Utilization Rates. Our backward integrated manufacturing facilities, scale, access to lower cost raw materials, and high plant utilization rates help us maintain our position as the world's lowest cost producer of caprolactam. First, we are backward integrated into several key feedstock materials necessary to produce caprolactam, particularly phenol, ammonia and oleum/sulfuric acid, which we believe is a unique advantage in our industry. Backward integration contributes to higher operating margins by lowering raw material transportation, handling and storage costs. It also allows us to remain flexible, while optimizing sales from our diverse portfolio of products. Second, we operate one of the world's largest single-site caprolactam and ammonium sulfate production facilities, which is a competitive advantage in our fragmented industry. Our scale provides operating leverage and the opportunity to achieve stronger business performance than our competitors in several ways. Most fundamentally, it enables us to spread fixed and overhead costs across more pounds of production, thereby enabling us to produce caprolactam at a lower per pound cost than our competitors, as well as benefiting our procurement activities for raw materials and services. We believe that our reputation as one of the world's largest producers of caprolactam, Nylon 6 resin, ammonium sulfate, and associated chemical intermediates attracts potential new customers who seek greater stability with respect to their supply requirements. Third, the location of our manufacturing operations in the United States affords us access to the world's lowest cost natural gas, which is a key raw material needed to manufacture the ammonia used in the production of caprolactam as well as the source of energy for our manufacturing operations. By contrast, a significant number of our competitors are in geographic locations where energy prices are substantially higher. Our footprint also provides access to a number of higher value end markets across our product lines. Finally, our long-term customer relationships and contracts enable us to maintain high plant utilization rates, which, along with our large scale, provide significant operating and purchasing leverage.

Diverse Revenue Sources from the Sale of Fertilizer, Acetone and Other Chemical Intermediates. Due to our specific chemical manufacturing processes, backward integration and scale, we produce ammonium sulfate fertilizer, acetone and a wide range of other chemical intermediates that enable us to diversify our revenue sources. Most significantly, for every pound of caprolactam produced, we produce approximately four pounds of ammonium sulfate, a fertilizer used by farmers around the world. For the past two decades, we have employed agronomists to educate growers and retailers in the Americas on the yield value of using ammonium sulfate fertilizer on key crops including corn, wheat, coffee, sugar, cotton and rice. Sales of ammonium sulfate in 2020 were $288 million and represented 25% of our total sales. We are among the most significant suppliers of acetone to a variety of end-markets in North America. Sales of acetone in 2020 were approximately $184 million and represented 16% of our total sales. In addition to fertilizer and acetone, other products from our manufacturing process include high-purity phenol, AMS, cyclohexanone, oximes, cyclohexanol, sulfuric acid, ammonia and carbon dioxide. The diversity of our sales portfolio helps to mitigate, to some extent, the cyclicality in our end-markets.

Global Reach. The global reach of our sales and marketing capabilities enables us to compete everywhere nylon resin, caprolactam, ammonium sulfate and chemical intermediates are consumed. In 2020, approximately 23% of our sales were outside the United States. Our freight and logistics capabilities and terminal locations position us well to serve global markets, including the dock and loading facility at our Hopewell facility which serves ocean-going dry-bulk freight vessels. Our global reach enables us to arbitrage geographic price variations to ensure we are receiving the highest value for our products.

Technical Know-How, Customer Intimacy and Application Development Capabilities. Intimate knowledge of our customers and end-market applications, combined with our technical know-how, enables us to develop differentiated products that are often valued higher by customers compared to commodity products. We have a Research and Development ("R&D") department consisting of scientists and engineers with degrees in polymer and chemical synthesis, catalysis and chemical engineering, who work not only on developing new products for nylon resins but also driving unique offerings for our chemical intermediates and ammonium sulfate customers. Our R&D team has expanded our capabilities to test and scale production of copolymer Nylon 6/66 resin, which is used in food packaging films and other applications. Our agronomists provide the latest scientific information on the importance of sulfur nutrition for crops and how to optimize the benefits of ammonium sulfate fertilizer to our global customers through a variety of channels including webinars, technical training sessions for retailers and direct grower meetings. Further, members of our technical marketing team, representing each of our major product lines, present at various industry events and conferences to demonstrate our breadth of product offerings and capabilities.

Business Strategies

Operational Excellence and Improving Through-Cycle Profitability. Through our backward integration, size, access to low-cost raw materials, and high utilization rates, we seek to build on our low-cost leadership position and expand operating margins by reducing our Nylon 6 resin, caprolactam, ammonium sulfate and other chemical intermediate production costs. Our focus on operational excellence and ongoing productivity improvements concentrate on the following:

- Increasing production volume through asset reliability, flexibility and capacity;
- Investing in intermediate chemical buffer storage capacity to mitigate the unfavorable impact of routine maintenance and unplanned interruptions;
- Energy and direct material initiatives aimed at increasing plant productivity and lowering costs; and
- Procurement processes, competitive bidding and supplier diversification to reduce raw material and indirect costs.

Enhancing Portfolio Resiliency. Our diverse portfolio serves us well particularly during times of uncertainty. Over the past several years, we have invested in capabilities to increase the value of our product portfolio and meet customer specifications in certain high value industries including high-purity applications, high-value intermediates and differentiated nylon. Although many of these products are still in early stages of development, we have had successes across the portfolio including our oximes-based EZ-Blox™ anti-skinning agent used in paints and strong growth momentum for our Nadone® cyclohexanone product line, which is a solvent used in various high-value applications. Growing off a small base, we have also seen commercial success with our Nylon-based wire and cable offerings. Supporting our differentiated nylon portfolio, we installed a production line at our Chesterfield facility that is capable of producing multiple grades of higher value Nylon 6 resin as well as copolymer Nylon 6/66 resin, which are used in engineered plastics for the automotive industry, films for food packaging, as well as other higher value applications. Our customers typically buy nylon resin and caprolactam for compounding or extruding with additives and other materials, to increase strength or flexibility or to add color to make the resin more suitable for use in their end products such as textiles, packaging and industrial materials. We leverage our R&D investments, customer intimacy and knowledge of product applications to develop new resin products to better serve our customers and increase the value of our resin products portfolio. For example, engineered plastics that utilize Nylon 6 and Nylon 66 resin are being increasingly used in automobiles to reduce weight as automobile manufacturers strive to meet stricter fuel efficiency standards. We work with our customers serving this market to develop resin products specifically tailored for these product applications. Another focus of our R&D initiatives includes nylon resin processing technologies that can produce existing high value resins at lower costs. Our R&D team works with existing and potential customers to understand end-use applications, build application development capabilities and protect the value proposition of our new products. In addition, as a result of recent efforts and enhancements in crystallizer technology and operations, we are now producing more high-quality granular grade ammonium sulfate to meet the growing demand of our customers.

Strong Capital Stewardship. We have developed and are executing against a multi-year pipeline of high-return growth and cost savings capital projects. These efforts target improvement in production rate, cost, quality and yield. We are focused on improving our return on invested capital and remain disciplined in our approach as we support long-term shareholder value. On an ongoing basis we evaluate options to return cash to shareholders while also pursuing a highly-selective acquisition and alliance strategy to supplement our organic sales by broadening our customer base, developing our technology and product portfolios, expanding our geographic reach and enhancing our cash flow profile and margin stability.

Industry Overview

Nylon Solutions. Global demand for Nylon 6 resin spans a variety of end-uses such as textiles, engineered plastics, industrial filament, food and industrial films, and carpet. The market growth typically tracks global GDP growth over the long-term but varies by end-use.

Generally, prices for Nylon 6 resin and caprolactam reflect supply and demand in the marketplace as well as the value of the basic raw materials used in the production of caprolactam, consisting primarily of benzene and, depending on the manufacturing process utilized, natural gas and sulfur. The global prices for nylon resin typically track a spread over the price of caprolactam, which in turn tracks as a spread over benzene because the key feedstock materials for caprolactam, phenol or cyclohexane, are derived from benzene. This price spread has historically experienced cyclicality as a result of global changes in supply and demand. Generally, Nylon 6 resin prices track the cyclicality of caprolactam prices, although prices set above the spread are achievable when nylon resin manufacturers, like AdvanSix, formulate and produce differentiated nylon resin products. Our differentiated Nylon 6 products are typically valued at a higher level than commodity resin products. We believe that Nylon 6 end-market growth will continue to generally track global GDP over the long-term. Applications such as engineered plastics and packaging have potential to grow at faster rates given certain macrotrends. Additionally, one of our strategies is to continue developing higher-value, differentiated Nylon 6 products, such as our wire and cable and co-polymer offerings, in current and new customer applications.

The global market for Nylon 6 resin and caprolactam has undergone significant change over the past decade. Following a peak in 2011 through the first half of 2016, nylon and caprolactam prices experienced a cyclical period of downturn as Chinese manufacturers entered the market and increased global supply at a time when demand growth remained relatively stable. As a result of the increased capacity and competitive intensity, industry margins for Nylon 6 resin and caprolactam compressed over this period to a low point in mid-2016. In the second half of 2016, capacity reductions by our competitors occurred in North America and Europe improving supply / demand fundamentals in North America with continued dynamic conditions globally. Industry spreads had fluctuated near marginal producer cost since 2016, but, slowing global growth and soft end-market demand, combined with capacity increases and an uncertain macro environment, pressured pricing and spreads during the second half of 2019 and throughout 2020.

Chemical Intermediates. Chemical intermediates are used as key inputs for a variety of end-market products including construction materials, paints and coatings, packaging and consumer applications. The primary products are acetone, phenol, AMS and cyclohexanone. Acetone and phenol represent approximately 50% and 10%, respectively, of our chemical intermediates sales. In the United States, where we primarily sell our acetone, there were elevated levels of acetone imports during 2018 and 2019 given high industry operating rates globally, which pressured regional pricing and spreads. Prices for acetone are influenced by its own supply and demand dynamics but can also be influenced by the underlying move in propylene input costs. As a result of the anti-dumping filing and final ruling, acetone imports into the U.S. declined beginning mid-2019 and continued at lower levels through 2020, creating more favorable supply / demand conditions for the product. Supply and demand conditions for the remaining intermediates we sell are generally balanced or favorable.

Plant Nutrients. Ammonium sulfate fertilizer products are primarily sold in North and South America. Ammonium sulfate is used as a fertilizer providing the key nutrients of sulfur and nitrogen for major agricultural crops globally such as corn, wheat, coffee, sugar, cotton and rice. As of December 31, 2020, ammonium sulfate fertilizer accounts for approximately 5% of the global market for nitrogen fertilizer and over 40% of the global market for sulfur fertilizer. Global prices for ammonium sulfate are influenced by several factors including the price of urea, which is the most widely used source of nitrogen-based fertilizer in the world. Other global factors driving ammonium sulfate fertilizer demand are general agriculture trends, including the price of crops. Our ammonium sulfate product is positioned with the added value proposition of sulfur nutrition to increase yields of key crops. In addition, due to its nutrient density, the typical ammonium sulfate product delivers pound for pound the most readily available sulfur and nitrogen to crops than other fertilizers. We recently expanded our offering to directly supply packaged ammonium sulfate to customers, primarily in North and South America, and diversified and optimized our offerings to include spray-grade adjuvant to support crop protection, as well as other specialty fertilizers and products for industrial use.

We produce ammonium sulfate fertilizer continuously throughout the year as part of our manufacturing process, but quarterly sales experience seasonality based on the timing and length of the growing seasons in North and South America. North America ammonium sulfate prices are typically strongest during second quarter fertilizer application and then typically decline seasonally with new season fill in the third quarter. Due to the ammonium sulfate fertilizer sales cycle, we occasionally build up higher inventory balances because our production is continuous and not tied to seasonal demand for fertilizers. Sales of most of our other products have generally been subject to minimal, or no, seasonality.

Competition

Competition across our product offerings is based on a variety of factors including price, reliability of supply, product innovation, and quality. Other competitive factors include breadth of product line, R&D efforts and technical and managerial capability. While the competitive position of our individual products varies, we believe we are a significant competitor in each major product class. AdvanSix competes with integrated manufacturers, such as Highsun Group Holdings Ltd., BASF Corporation, Sinopec Limited, DOMO Chemicals GmbH, LANXESS AG and Ube Industries, Ltd. We also compete with manufacturers such as Li Peng Enterprise Co. Ltd. and Zig Sheng Industrial Co., Ltd. that produce only polymer resin; synthetic manufacturers of ammonium sulfate, such as Pasadena Commodities International and Nutrien Ltd.; and stand-alone phenol producers, such as Ineos and Altivia. A number of our products are sold in markets with many competitors, some of whom have substantial financial resources and significant technological capabilities. Additionally, our competitors include companies with global operations as well as those operating only within specific geographic regions.

Product Overview

Nylon and Caprolactam

We manufacture our Nylon 6 resin in our Chesterfield plant. We sell our Nylon 6 resin globally, primarily under the Aegis® brand name. In addition, we sell our Nylon 6 resin to a nylon film producer from whom we purchase films to sell to our customers under the Capran® brand name. In 2020, our Nylon products generated $285 million of sales. In 2020, 2019 and 2018, Nylon sales were 24%, 27% and 28% of our total sales, respectively.

We produce caprolactam, the key monomer used in the production of Nylon 6 resin, at our Hopewell plant using phenol produced at our Frankford plant and sulfur and natural gas obtained from third-party suppliers. In 2020, caprolactam generated $216 million of sales. In 2020, 2019 and 2018, caprolactam sales were 19%, 22% and 19% of our total sales, respectively.

Chemical Intermediates

We produce and sell chemical intermediates to a range of customers for use in many different types of end-products. In 2020, our chemical intermediates generated $369 million of sales, of which $296 million, or 80%, came from sales of acetone, phenol and cyclohexanone, and $73 million, or 20%, came from sales of our other chemical intermediates. In 2020, 2019 and 2018, sales of chemical intermediates were 32%, 28% and 33% of our total sales, respectively.

The phenol we produce at our Frankford plant is a key chemical intermediate used in our caprolactam manufacturing process. Approximately 82% of the phenol we produce is used in production of caprolactam and other chemical intermediates at Hopewell, and approximately 18% of our phenol is sold to customers for use in their product applications such as resins, epoxies and Bisphenol A.

All our acetone is sold to customers for use in end-products such as adhesives, paints, coatings, solvents, herbicides and engineered plastic resins. Acetone is typically used by our customers as a key raw material in the production of a variety of other chemicals which are then used in the applications listed above.

We also produce and sell AMS, cyclohexanone, oximes and cyclohexanol. We use some of these products in our manufacturing process and sell some to customers for use in end-products such as resins, inks, paints, coatings and agricultural chemical intermediates and electronic components.

Ammonium Sulfate

Ammonium sulfate fertilizer is produced simultaneously with caprolactam as part of our integrated caprolactam manufacturing process at our Hopewell plant. We manufacture this product in a ratio of approximately four pounds of ammonium sulfate to one pound of caprolactam. Our competitors typically produce approximately two pounds or less of ammonium sulfate for each pound of caprolactam. We are targeting conversion of approximately 65% of the ammonium sulfate we produce in higher-value granular form, an increase of approximately 5% compared to historical targets. We sell ammonium sulfate under the brand name Sulf-N®, and in 2020, our ammonium sulfate products generated $288 million of sales. In 2020, 2019 and 2018, ammonium sulfate sales were 25%, 23% and 20% of our total sales, respectively.

Raw Materials

The primary raw material used in our manufacturing process is cumene, which is produced from benzene and propylene. We purchase cumene from multiple suppliers to ensure stability of supply and optimal terms. Other important raw materials used in our manufacturing process are natural gas and sulfur, which are used to produce caprolactam and ammonium sulfate. We purchase natural gas and sulfur from a diverse set of suppliers.

Historically, we have been able to renew contracts with our suppliers and obtain sufficient quantities of cumene, sulfur, natural gas and any other key raw materials. Global supply and demand can significantly impact the price of our key raw materials, and historically prices have been cyclical. We mitigate our exposure to commodity price risk primarily through the use of medium and long-term, formula-based price contracts with our suppliers and formula-based price agreements with customers.

Sales, Marketing and Distribution

We have a global sales force with long-standing customer relationships and deep expertise with our products, product applications and end-markets. We predominantly sell directly to our customers, primarily under contracts but also through spot transactions under purchase orders and through distributors.

Our products are supported by our global logistics capability that we employ to ensure reliable and timely delivery to our customers while maximizing distribution resources and efficiency.

Customers

Globally, we serve approximately 400 customers in a wide variety of industries located in more than 50 countries. In 2020, the Company's 10 largest customers accounted for approximately 43% of total sales. Our largest customer is Shaw Industries Group Inc. ("Shaw"), one of the world's largest consumers of caprolactam and Nylon 6 resin. We sell Nylon 6 resin and caprolactam to Shaw under a long-term agreement. Sales to Shaw were 14% of our total sales for the year ended December 31, 2020 and 22% of our total sales for each of the years ended December 31, 2019 and 2018. We typically sell to our other customers under master services agreements, with primarily one-year terms, or by purchase orders. We have historically experienced low customer turnover.

Seasonality

We produce ammonium sulfate fertilizer continuously throughout the year as part of our manufacturing process, but quarterly sales fluctuate based on the timing and length of the growing seasons in North and South America. North America ammonium sulfate prices are typically strongest during second quarter fertilizer application and then typically decline seasonally with new season fill in the third quarter. Due to the ammonium sulfate fertilizer sales cycle, we occasionally build up higher inventory balances because our production is continuous and not tied to seasonal demand for fertilizers. Sales of most of our other products have generally been subject to minimal, or no, seasonality.

Research & Development and Intellectual Property

We believe success in our industry is driven not only by operational excellence and cost position but also through technological strength and innovation. Our R&D activities focus on improving our chemical manufacturing processes to increase efficiency, capacity, productivity, and lowering our production and operating costs, as well as innovating and developing new product applications.

We benefit from numerous patents and trademarks that we own. We sell our Nylon 6 resin under the Aegis® brand name, our nylon films under the Capran® brand name and our ammonium sulfate fertilizer under the Sulf-N® brand name. Chemical intermediates are sold under the brand names of Nadone®, Naxol® and EZ-Blox™. We also benefit from technology covered by trade secrets, including know-how and other proprietary information relating to many of our products, processes and technologies. We do not consider any individual patent, trademark or licensing or distribution rights related to a specific process or product to be of material importance in relation to our total business. In our judgment, our intellectual property rights are adequate for the conduct of our business. We intend to continue taking steps as necessary to protect our intellectual property, including when appropriate, filing patent applications for inventions that are deemed important to our business.

In 2020, we conducted R&D at technology centers with researchers at our sites in Frankford, Pennsylvania and Chesterfield, Virginia where our former Colonial Heights R&D facility relocated in early 2020 enabling an improved configuration of our labs to drive productivity, increased connectivity with our resin manufacturing and more effective collaboration with customers.

Regulation and Environmental Matters

We are subject to various federal, state, local and foreign government requirements regarding protection of human health and the environment. Compliance with these laws and regulations results in higher capital expenditures and costs. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental impact, and any resulting financial liability. Some risk of environmental impact is, however, inherent in some of our operations and products, as it is with other companies engaged in similar businesses.

We are and have been engaged in the handling, manufacture, use and disposal of many substances classified as hazardous by one or more regulatory agencies. It is possible that future knowledge or other developments, such as improved capability to detect substances in the environment or increasingly strict environmental laws, standards and enforcement policies, could bring into question our current or past handling, manufacture, use or disposal of these substances.

Among other environmental laws and regulations, we are subject to the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act and similar state, foreign and global laws for management and remediation of hazardous materials; the Clean Air Act (“CAA”) and the Clean Water Act, for protection of air and water resources; the Toxic Substance Control Act (“TSCA”), for regulation of chemicals in commerce and reporting of potential known adverse effects. There are also numerous other federal, state, local and foreign laws and regulations governing materials transport and packaging, under which we may be designated as a potentially responsible party liable for cleanup costs associated with current operating sites and various hazardous waste sites.

Our business may be impacted by potential climate change legislation, regulation or international treaties or accords in the foreseeable future. We will continue to monitor emerging developments in this area.

Our accounting policy for environmental expenditures is discussed in “Note 2. Summary of Significant Accounting Policies” to the audited Consolidated Financial Statements included in this Form 10-K. We continuously seek to improve our health, safety and environmental performance. We have expended funds to comply with environmental laws and regulations and expect to continue to do so.

Our Frankford and Hopewell facilities are regulated facilities under the Maritime Transportation Security Act of 2002 ("MTSA") due to the nature of our operations and the proximity of the facilities to adjacent waterways. As a result, we are required to comply with numerous regulations administered by the Department of Homeland Security, including the development and implementation of compliant security procedures and protocols. Additionally, sales of acetone, which is a List II Chemical under the TSCA, are regulated by the Drug Enforcement Act. This classification subjects us to audits by the Drug Enforcement Administration and ongoing restrictions on our sales activities with respect to acetone.

See "Risk Factors – Extensive environmental, health and safety laws and regulations applicable to our operations, including initiatives related to discharges into the air and water, hazardous waste, sustainability, global warming and climate change, may result in substantial costs and unanticipated loss or liability, which could adversely affect our business, financial condition and results of operations" in Item 1A.

Human Capital Management

As a company, we recognize that our people are our greatest asset and the foundation of our success. We feel a deep sense of responsibility to provide a safe, inclusive and engaging workplace for all our employees and contractors, and strive for a zero-incident safety culture. Our core values of Safety, Integrity, Accountability and Respect guide our day-to-day activities and inform our broader business strategy as we drive safe, stable and sustainable operations through an ownership mentality aligned to shareholder value creation. Our Board of Directors ("Board"), along with management and cross-functional teams, work closely to evaluate and proactively address human capital management topics such as safety, inclusion and diversity, employee development, employee benefits and employee engagement.

Employees

As of December 31, 2020, the Company employed approximately 1,400 people. Of this total, approximately 605 are salaried employees and approximately 795 are hourly employees. Approximately 705 employees are covered under collective bargaining agreements that expire between 2021 and 2024. The Company strives to maintain positive and productive relationships with all of its employees, including the unions representing those employees.

Oversight and Management

Our Board and Board committees provide oversight on various human capital management matters. As noted in their respective charters:

- Our Health, Safety, Environmental and Sustainability Committee oversees policies and programs relating to compliance with health, safety, environmental, and sustainability matters, including process safety, supply chain security, asset reliability, product stewardship, community engagement and government affairs, as well as such other matters regarding the Company's role as a responsible corporate citizen.
- Our Nominating and Governance Committee annually evaluates the effectiveness of our governance framework and social responsibility policies, goals and programs.
- Our Audit Committee exercises oversight of enterprise risk assessments and risk management including with respect to current and emerging labor and human capital management risks and seeks to mitigate exposure to those risks.
- Our Compensation and Leadership Development Committee is responsible for oversight of the performance, development and retention of management necessary to support the growth and success of the Company.

Health and Safety

At AdvanSix, safety is our number one core value — we "Live Safety" in all we do. "Live Safety" is an interdependent concept meaning that employees care not only for their own safety, but for the safety of their teammates and communities in which we operate.

AdvanSix is a Responsible Care® company with a focus on personal and process safety and advancing as a sustainable enterprise. Responsible Care® is the environmental, health, safety and security performance initiative of the American Chemistry Council (ACC). AdvanSix has demonstrated its commitment to the Responsible Care® Guiding Principles, which encourage ethical leadership, product safety, a culture which reduces and manages process safety risk, reduction of pollution and waste, and continuous improvement in environmental, health, safety and security performance.

As an organization, we maintain a relentless focus on continuous improvement and our expectation is zero injuries for employees and contractors. Toward the end of 2019, we launched a new program, CARE — *Courage to Act, Respond and Engage* — as the next step in our safety journey and to inspire us to Live Safety in all we do. We use the industry standard Total Case Incident Rate ("TCIR") to measure our ongoing safety performance and compare with benchmarks. TCIR is defined as the number of occupational injuries and illnesses per 100 employees. Our TCIR was 0.91 in 2020, 0.86 in 2019 and 0.76 in 2018.

In the first quarter of 2020, the Company began executing its business continuity plans with dedicated teams chartered to proactively implement measures to mitigate COVID-19 impacts while continuing to operate all of its manufacturing facilities to meet customer demand. In response to COVID-19, the Company took many actions during 2020 to protect its employees, customers, suppliers, shareholders and surrounding communities including, but not limited to: (i) 100% thermal screening process at all facilities and restrictions on non-essential visitors; (ii) telecommuting across all sites, where possible; (iii) prohibiting all non-essential domestic and international business travel; (iv) establishing social distancing while limiting the number of employees in control rooms, labs and in-person meetings; and (v) maintaining policies and practices consistent with CDC and government guidelines including upgraded personal protective equipment, face coverings at all facilities, and exposure management protocols. Our telecommuting policies have been designed to allow for continued operation of non-production business-critical functions, including financial reporting systems and internal controls. The Company has protocols in place at all sites, including on-site medical personnel at manufacturing facilities to actively monitor employees and contractors who report symptoms of or exposure to COVID-19. In addition, the Company has trained a contingent workforce to operate the plants as part of its business continuity planning. The Company continued its execution of these measures at all sites through the end of 2020 and intends to continue to do so through the duration of the pandemic.

Inclusion and Diversity

At AdvanSix, we strive for an inclusive work environment that fosters respect for all our coworkers, customers, suppliers and business partners. We value the diversity reflected in the various backgrounds, experiences, and ideas of our employees, contractors, and other stakeholders. Our Code of Conduct outlines our commitment to provide employees a workplace that is free from discrimination or harassment (specifically related to gender, race, disability, ethnicity, nationality, religion and sexual orientation) or personal behavior not conducive to a productive work climate. We believe it is important that each employee feels a sense of belonging and valued as part of the organizational culture we are cultivating, and we feel it is important that each employee sees diverse representation across our AdvanSix team.

AdvanSix joined hundreds of companies in signing the CEO Action for Diversity and Inclusion pledge, which centers around three main commitments: to have complex discussions about diversity and inclusion, implement and expand upon unconscious bias education and share diversity and inclusion practices. AdvanSix also seeks to improve gender equality in the manufacturing industry, starting with supporting science, technology, engineering and math (STEM) education and work in related fields. In 2019, a group of employees formed Supporting Women in Manufacturing (SWiM), an AdvanSix Employee Resource Group, to promote women in manufacturing, female leadership and growth in STEM-related fields. SWiM seeks to raise awareness on these matters through programs, events and discussions, including networking, professional development, outreach, volunteering and internal programs highlighting leadership and career paths in multiple disciplines. AdvanSix is committed to pay equity for its employees and regularly performs reviews of its compensation practices to evaluate and maintain pay equity in several respects, including by gender, ethnicity and race.

At a national level, AdvanSix not only participates as a Board member, but is a patron level supporter of the American Institute of Chemical Engineers' (AIChE) "Doing a World of Good" initiative that actively supports five high priority pillars within the chemical engineering field that align closely with sustainability and ESG principles including equity, diversity and inclusion. In addition, AdvanSix has supported and participated in the Future of STEM Scholars Initiative ("FOSSI"), a national, industry-wide program which provides scholarships to students pursuing STEM degrees at Historically Black Colleges and Universities (HBCU) and connections to internships, leadership development and mentoring opportunities.

During 2020, we introduced a number of key actions to progress inclusion and diversity within the organization including focus group discussions, review of our talent pipeline and overall development programs. Notably, we enhanced our recruiting processes by implementing a program mandating a diverse candidate slate with the goal to increase our organization's workforce diversity and improve outreach in the local communities where we operate. In addition, we introduced unconscious bias training at leadership and managerial levels enterprise-wide to enhance our recruitment efforts and the evaluation process of candidates.

Our senior leadership team was comprised of over 50% women in 2020, including our Chief Executive Officer, Chief Human Resource Officer, Chief Technology Officer, Chief Information Officer, Vice President, Nylon Solutions and Vice President, Business Development. Two of our eight-member Board of Directors are women.

Employee Development

AdvanSix seeks to attract the best talent from a diverse range of sources in order to meet the needs of our business now and in the future. We have established strong relationships with community colleges, universities, professional associations and industry groups with a focus on technical positions and development in order to attract talent including by utilizing co-op, internship programs and university relations as a talent pipeline. Early career development and continual learning is part of our employee engagement strategy. To support the advancement of our employees, we promote development through training that broadens work-related skills and believe that the most effective model combines an "experience, exposure, and education" approach. We acknowledge that learning is a career-long endeavor and place the greatest emphasis on learning by doing, supported by feedback, training, and self-reflection.

AdvanSix promotes development through training that broadens work-related skills. These include:

- Core competencies for all employees to develop and apply
- Leadership competencies needed by all employees managing people
- Functional competencies that are position specific and used to inform job progression

We support the continued development of our employees through semi-annual performance and development reviews, including annual enterprise-wide talent development assessments. We conduct safety and environmental training modules for new employees as part of Health, Safety and Environmental ("HSE") orientation, along with job-specific training aligned to roles. We have instituted an initiative to empower our First Line Supervisors ("FLS") to be HSE leaders within our organization including serving as decision makers and chief communicators on shift, while developing, coaching and mentoring their shift teammates. On an annual basis, senior leadership recognizes the FLS who demonstrates excellence with this initiative with an FLS of the Year Award. We also hold an annual Technical Career Progression event in order to recognize those employees who have displayed technical capability and regularly deliver in three key areas — results, behaviors and capability.

A highly trained and engaged workforce is essential for AdvanSix to be our customers' trusted partner, and those partnerships are built by delivering best-in-class experiences that result in satisfied customers and support shareholder return.

Employee Benefits

Our compensation programs are designed to align employee compensation with Company performance and to provide appropriate incentives in order to attract, retain and motivate our employees. We believe that in order to maintain the strength of our workforce, it is critical to monitor and assess the current business environment and labor market to refine our compensation and benefits programs and other resources available to our employees. We seek to offer compensation that is competitive and consistent with employee positions, skill levels, experience and geographic location. In addition to offering competitive base salaries, AdvanSix structures its compensation programs to balance incentive earnings for both short-term and long-term performance.

Our compensation and benefit programs are designed to support our business strategy through four key objectives:

- Attract and retain world-class talent;
- Drive and pay for performance that creates superior results and sustainable stockholder value;
- Manage risk through oversight and sound management; and
- Nurture a culture of employee health and wellness.

Information about our Executive Officers

The executive officers of AdvanSix, listed as follows, are appointed annually by the Board of Directors (the "Board"). Ms. Kane, Mr. Preston and Mr. Gramm were each first appointed as an executive officer in 2016, Mr. Blindenbach was first appointed as an executive officer in 2019, and Ms. Slieter and Mr. Kintiroglou were each appointed as executive officers in 2020.

There are no family relationships among them.

Name, Age	Position	Business Experience
Erin N. Kane, 43	Chief Executive Officer and Director	Prior to joining the Company, Ms. Kane served as vice president and general manager of Honeywell Resins and Chemicals since October 2014. She joined Honeywell in 2002 as a Six Sigma Blackbelt of Honeywell's Specialty Materials business. In 2004, she was named product marketing manager of Honeywell's Specialty Additives business. From 2006 until 2008, Ms. Kane served as global marketing manager of Honeywell's Authentication Technologies business, and in 2008 she was named global marketing manager of Honeywell's Resins and Chemicals business. In 2011, she was named business director of chemical intermediates of Honeywell's Resins and Chemicals business. Prior to joining Honeywell, Ms. Kane held Six Sigma and process engineering positions at Elementis Specialties and Kvaerner Process. Ms. Kane serves on the Boards of Directors of AdvanSix Inc., the Chemours Company, the American Chemistry Council, and the AIChE. Ms. Kane brings to the Board her extensive leadership experience as well as knowledge of AdvanSix's business, industry, health, safety and environmental processes, and operations.

Michael Preston, 49	Senior Vice President and Chief Financial Officer	Prior to joining the Company, Mr. Preston held various finance roles with Honeywell for over 15 years. Mr. Preston served as vice president and chief financial officer for Honeywell's UOP division from 2013 to 2016. Prior to this role, Mr. Preston was vice president of business analysis & planning from 2012 to 2013. Mr. Preston also held several finance leadership roles within Honeywell, including chief financial officer of the Fluorine Products business, director of financial planning & analysis for the Performance Materials and Technologies segment, and director of business analysis & planning for Honeywell corporate. Mr. Preston began his career with Honeywell in September of 2001 as manager of investor relations. Prior to joining Honeywell, he spent seven years in investor relations consulting. Mr. Preston is a Chartered Financial Analyst (CFA) Charterholder and is a member of the CFA Institute and CFA Society New York.
Achilles B. Kintiroglou, 42	Senior Vice President, General Counsel and Corporate Secretary	Prior to being named to his current role, Mr. Kintiroglou was the deputy general counsel of AdvanSix since the spin-off in 2016. Before joining AdvanSix, he was a corporate and securities partner at Day Pitney LLP and a corporate and finance associate at Pillsbury Winthrop Shaw Pittman LLP and Pitney Hardin LLP.
Kelly J. Slieter, 46	Senior Vice President and Chief Human Resources Officer	Prior to joining the Company, Ms. Slieter served as vice president of human resources of Honeywell International Inc. since 2018. She joined Honeywell in 1997 as an intern and subsequently served in various human resources roles through 2003, including as M&A integration leader and as HR manager for multiple business units. From 2003 to 2004, she served as human resources manager at Bristol-Myers Squibb Company. From 2004 to 2005, she served as organization development manager for Tyco International. Ms. Slieter rejoined Honeywell in 2005 and served in roles with increasing responsibility through 2015, including, director of HR functional excellence, corporate; director of organization development & learning for the Automation & Control Solutions business; director of human resources for Honeywell Building Solutions; and senior director, human resources corporate. From 2015 through 2018, she served as vice president, human resources of the Honeywell UOP business.
Christopher Gramm, 51	Vice President, Controller	Prior to joining the Company, Mr. Gramm served as vice president and controller of the aerospace and corporate government compliance divisions at Honeywell. From August 2014 to November 2015, Mr. Gramm served as vice president of finance for the integrated supply chain of the aerospace division at Honeywell. Beginning in March 2011, he was vice president and controller of the aerospace division at Honeywell. Over the course of the period from 1997 to March 2011, Mr. Gramm held several positions at Honeywell, including controller and chief financial officer of various divisions focused on areas including specialty materials and resins and chemicals. He joined Honeywell in 1997 as a senior staff accountant. Before joining Honeywell, Mr. Gramm was a manager at Corning Life Sciences.
Willem L. Blindenbach, 52	Senior Vice President, Integrated Supply Chain	Prior to joining the Company, Mr. Blindenbach served as Vice President of Mobil International Company Operations Manager, EMEA since 2018. He joined ExxonMobil in 1994 and served in several roles with increasing responsibility including Sales Engineer, Technical Support Supervisor, Pernis Plant Operations Manager, Europe Project Advisor, Europe Supply Manager, and Global Operations Project Advisor. From 2006 to 2007, he served as Executive Advisor to the President of ExxonMobil Lubes and Fuels. From 2007 to 2009, Mr. Blindenbach served as Manager, Supply and Distribution for EMEA. From 2010 to 2011, he served as Vice President, ExxonMobil Lubricants, Trading and Supply Manager, Global Basestocks. From 2011 to 2012, he served as Manager of Global Product Integrity. From 2012 to 2013, he served as Project Executive. From 2013 to 2014, he served as Manager of Midstream Business. From 2014 through 2017, he served as Manager, Manufacturing, Lubes, Americas.

Other Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports are available free of charge on our website (www.AdvanSix.com) under the heading Investors (see SEC filings) immediately after they are filed with, or furnished to, the Securities and Exchange Commission ("SEC"). In addition, in this Form 10-K, the Company incorporates by reference certain information from parts of its Proxy Statement for the 2021 Annual Meeting of

Stockholders, which will also be available free of charge on our website. Information contained on, or that may be accessed through, our website does not and will not constitute part of this Form 10-K. Our filings with the SEC are also available on the SEC website at www.sec.gov.

We are a Delaware corporation that was incorporated on May 4, 2016. Our principal executive offices are located at 300 Kimball Drive, Suite 101, Parsippany, NJ 07054. Our telephone number is (973) 526-1800. Our website address is www.AdvanSix.com.

Item 1A. Risk Factors

Cautionary Statement Concerning Forward-Looking Statements

All statements other than statements of historical fact included in this Form 10-K including, without limitation, statements under “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in other parts of this Form 10-K regarding our financial position, business strategy and the plans and objectives of management for future operations, are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). When used in this Form 10-K, words such as “expect,” “anticipate,” “estimate,” “outlook,” “project,” “strategy,” “intend,” “plan,” “target,” “goal,” “may,” “will,” “should,” and “believe,” and other variations or similar terminology and expressions identify forward-looking statements. Such forward-looking statements are based on the beliefs of management, as well as assumptions made by, and information currently available to, our management. They are not guarantees of future performance and actual results could differ materially from those contemplated by the forward-looking statements as a result of certain factors detailed in our filings with the SEC. All subsequent written or oral forward-looking statements attributable to us or persons acting on our behalf are qualified in their entirety by this paragraph. We do not undertake to update or revise any of our forward-looking statements. Our forward-looking statements are also subject to risks and uncertainties that can affect our performance in both the near- and long-term. These forward-looking statements should be considered in light of the information included in this Form 10-K, including, in particular, the factors discussed below. These factors may be revised or supplemented in subsequent reports on Forms 10-Q and 8-K.

Risk Factors

You should carefully consider all information in this Form 10-K and each of the risks described below, which we believe are the principal risks we face. Any of the following risks could materially and adversely affect our business, financial condition and results of operations and the actual outcome of matters as to which forward-looking statements are made in this Form 10-K.

Risks Relating to Our Business

Difficult and volatile conditions in the overall economy, particularly in the United States but also globally, and in the capital, credit and commodities markets could adversely affect our business, financial condition and results of operations.

Our business, financial condition and results of operations could be adversely affected by difficult global economic conditions and significant volatility in the capital, credit and commodities markets and in the overall economy. Adverse events affecting the health of the economy, including sovereign debt and economic crises, terrorism, rising protectionism, trade conflict including import and export restrictions, tariffs and other trade barriers or retaliatory actions, pandemics and the threat of war, could have a negative impact on the health of the global economy. These developments, or the perception that any of them could occur, may have a material adverse effect on global economic conditions or on the stability of global financial markets which may affect us and our customers. For example:

- Weak economic conditions, especially in our key markets, could reduce demand for our products, impacting our sales and margins;
- As a result of volatility in commodity prices, we may encounter difficulty in achieving sustained market acceptance of past or future price increases;
- Under difficult market conditions, there can be no assurance that access to credit or the capital markets would be available or sufficient, and as such, we may not be able to successfully obtain additional financing on reasonable terms, or at all;
- Market conditions and credit availability could adversely affect the financial situation of raw material suppliers and their ability to deliver key materials, thus impacting our ability to run our production facilities at the intended rates; and
- Market conditions could result in our key customers experiencing financial difficulties and/or electing to limit spending, which in turn could cause fluctuations in demand for our products, product prices, volumes and margins potentially resulting in decreased sales and earnings.

We are unable to predict the duration of economic conditions or their effects on financial markets or our business and results of operations. Economic volatility and uncertainty surrounding future economic conditions may at times make it challenging to identify risk that may affect our business, sources and uses of cash, financial conditions and results of operations. If economic conditions deteriorate, our results of operations, financial condition and cash flows could be materially adversely affected.

The industries in which we operate experience cyclicality which can cause significant fluctuations in our cash flows and may adversely affect our business, financial condition and results of operations.

Our historical operating results reflect the cyclical nature of the industries in which we operate including with respect to our Nylon 6 resin, caprolactam, nitrogen fertilizer, phenol and acetone products. We experience cycles of fluctuating supply and demand for each of our products resulting in changes in selling prices and margins. Periods of high demand, tight supply and increasing operating margins tend to result in increases in capacity and production until supply exceeds demand, generally followed by periods of oversupply and declining prices. While we strive to maintain or increase our profitability by reducing costs through improving production efficiency, by emphasizing higher margin products and by controlling transportation, selling and administration expense, we cannot assure you that these efforts will be sufficient to offset fully the effect of possible decreases in pricing on our operating results. As a result of potential cyclicality, we cannot assure you that pricing or profitability in the future will be comparable to any historical period, including the most recent period shown in our operating results. Structural changes in industry and customer trends for our products could adversely affect our business, financial condition and results of operations.

Any significant unplanned downtime or material disruption impacting any of our production facilities or logistics operations, or any third party on which we rely, may adversely affect our business, financial condition and results of operations.

We seek to run our complex production facilities on a nearly continuous basis for maximum efficiency and we rely on the integrity of our logistics operations for the uninterrupted operations of our business. While we have made significant annual capital improvements at our manufacturing plants, operational issues have occurred in the past and may occur in the future, which could cause damage to our manufacturing and production equipment and ancillary facilities. Unplanned interruptions in our production capabilities may adversely affect our production costs, product lead times and earnings during the affected period.

Although our integrated manufacturing, scale and the quantity and range of our product offerings make us one of the most efficient manufacturers in our industry, the significant level of integration across our manufacturing facilities exposes us to increased risk associated with unplanned downtime or material disruptions at any one of our production facilities which could impact our supply chain and our manufacturing process.

We seek to mitigate the risk of unplanned downtime through regularly scheduled maintenance for both major and minor repairs at all of our production facilities. We utilize maintenance excellence and mechanical integrity programs and maintain what we believe is an appropriate buffer inventory of intermediate chemicals necessary for our manufacturing process, both of which are intended to mitigate the extent of any production losses as a result of unplanned downtime. However, unplanned interruptions have occurred in the past and may occur in the future, and we may not have enough intermediate chemical inventory at any given time to offset production losses. Our business interruption insurance coverage may not cover all costs or losses associated with unplanned downtime, or such insurance may not continue to be available in amounts or on terms acceptable to us. Moreover, taking our production facilities offline for regularly scheduled repairs can be an expensive and time-consuming operation with risk that discoverable items and delays during the repair process may cause additional unplanned downtime. Any such unplanned downtime at any of our production facilities may adversely affect our business, financial condition and results of operations.

Our production facilities and logistics operations are also subject to the risk of catastrophic loss and material disruptions due to unanticipated events, such as unexpected repairs or other operational and logistical problems, severe weather conditions, personal injury or major accidents, prolonged power failures, chemical spills, fires, explosions, acts of terrorism, earthquakes, pandemics or other natural disasters, that we or a third party on which we rely may experience. While we seek to mitigate our risk of unplanned interruptions, we have experienced such unplanned interruptions in the past with respect to both our operations and the operations of third parties as described in our periodic reports filed with the SEC, and there is no assurance that we or other third parties on which we rely will not experience unplanned interruptions in the future. Depending on the nature, extent and length of any operational interruption from any such event, the results could adversely affect our business, financial condition and results of operations.

Raw material price fluctuations and the ability of key suppliers to meet delivery requirements can increase the cost of our products and services, impact our ability to meet commitments to customers and cause us to incur significant liabilities.

The cost of raw materials, including cumene, natural gas and sulfur, is a key element in the cost of our products. Our inability to offset material price inflation through increased prices to customers, formula-based or long-term fixed price contracts with suppliers, productivity actions or commodity hedges could adversely affect our business, financial condition and results of operations.

Although we believe that our sources of supply for raw materials are generally robust, it is difficult to predict the impact that shortages of raw materials or price increases may have in the future. Our ability to manage inventory and meet delivery requirements may be constrained by our suppliers' inability to scale production and adjust delivery of long lead-time products during periods of fluctuating demand. Our inability to satisfy our supply needs would jeopardize our ability to fulfill obligations under contracts, which could, in turn, result in reduced sales and profits, contract penalties or terminations and damage to customer relationships.

When possible, we have purchased, and we plan to continue to purchase, raw materials, including cumene, natural gas and sulfur, through negotiated medium- or long-term contracts. To the extent we have been able to achieve favorable terms in our existing negotiated contracts, we may not be able to renew such contracts at the current terms or at all, and this may adversely impact our results of operations. To the extent the markets for our raw materials significantly change, we may be bound by the terms of our existing supplier contracts and obligated to purchase raw materials at disadvantaged terms as compared to other market participants.

Our operations and growth projects require substantial capital and we may not be able to obtain additional capital that we need in the future on favorable terms or at all.

Our industry is capital intensive, and we may require additional capital in the future to finance our growth and development, upgrade and improve our manufacturing capabilities, satisfy regulatory and environmental compliance obligations, implement further marketing and sales activities, fund ongoing R&D activities, and meet general working capital needs. Our capital requirements will depend on many factors, including acceptance of and demand for our products, the extent to which we invest in new technology, new products and R&D projects and the status and timing of these developments. Our capital projects and other growth investments may have lengthy deadlines during which market conditions may deteriorate between the capital expenditure's approval date and the conclusion of the project, negatively impacting projected returns on our investments. Delays or cost increases related to capital and other spending programs, including those relating to plant improvements and development of new technologies, could materially adversely affect our ability to achieve forecasted operating results. In addition, we may need to seek additional capital in the future, and debt or equity financing may not be available to us on terms we find acceptable, if at all. If we incur additional debt or raise equity through the issuance of our preferred stock, the terms of the debt or our preferred stock may give the holders rights, preferences and privileges senior to those of holders of our common stock, particularly in the event of liquidation. If we raise funds through the issuance of additional common equity, ownership in AdvanSix would be diluted. We believe that we have adequate capital resources to meet our projected operating needs, capital expenditures and other cash requirements. However, we may need additional capital resources in the future, and if we are unable to obtain sufficient resources for our operating needs, capital expenditures and other cash requirements for any reason, our business, financial condition and results of operations could be adversely affected.

Our results of operations have been, and in the future may be, materially adversely impacted by the coronavirus (COVID-19) pandemic and the measures implemented to contain the spread of the virus.

The continued spread of the coronavirus (COVID-19) pandemic and the resulting containment measures have created significant volatility, uncertainty and economic disruption globally and have had, and in the future may have, a material impact on the Company's results of operations.

The U.S. Department of Homeland Security has designated our industry as "essential critical infrastructure" during the response to COVID-19 for both public health and safety as well as community well-being. The Company takes its obligation to produce materials that support the broader population seriously, all while maintaining a prioritized focus on the health and safety of its employees and the communities in which it operates, and assuring the continuity of its business operations. As a global provider of products that are key inputs for our customers' processes serving a variety of end-markets, a pandemic presents obstacles that can adversely affect our supply chain effectiveness and efficiencies, our manufacturing operations and customer demand for our products and, ultimately, our financial results. We believe we are positioned to respond to and mitigate the potential impacts of rapidly evolving market dynamics. While the Company was not materially impacted by COVID-19 in the first quarter of 2020, the Company experienced lower demand, particularly in nylon, caprolactam and phenol, during the second quarter of 2020, resulting in a reduction of utilization rates and a decrease in overall sales volume compared to the prior year period, primarily related to global markets and the economic impact of COVID-19. During the second half of 2020, the Company experienced an improvement of demand to approximately pre-COVID-19 levels; however, there is no assurance that sales volumes will remain stable or that demand will fully recover or continue given the recent resurgence of COVID-19 cases in the U.S. and abroad, increases in restrictions imposed by governments, or other factors resulting from sustained, or further resurgences in, infection rates. While the COVID-19 pandemic may impact the Company's results of operations, financial position and liquidity in the near-term and potentially beyond, we are unable to predict the extent or nature of these impacts at this time.

The extent of the future and overall impact from the COVID-19 pandemic on our business depends on numerous evolving factors and future developments that cannot be accurately predicted at this time, including, but not limited to: the scope and duration of the pandemic, including the extent of any resurgences, and the pace of recovery; the timing of the development and distribution of an effective vaccine or treatments for COVID-19; governmental, business and individuals' actions that have been and continue to be taken in response to the pandemic, including our business continuity and cash optimization plans that have been, and may in the future be, implemented; the impact of social and economic restrictions and other containment measures taken to combat virus transmission; the effect on our customers' demand for our products and our suppliers' ability to manufacture and deliver our raw materials, including implications of reduced refinery utilization in the U.S.; our ability to sell and provide our goods and services, including as a result of travel and other COVID-19-related restrictions; the ability of our customers to pay for our products; any closures of our and our customers' offices and facilities; risks associated with increased phishing, compromised business emails and other cybersecurity attacks and disruptions to our technology infrastructure; and risks associated with employees working remotely or operating with a reduced workforce. Customers may also slow down decision-making, delay planned work or seek to terminate existing agreements.

Due to difficult market conditions created by the pandemic, there can be no assurance that access to credit or the capital markets would be available or sufficient, and as such, if needed, we may not be able to successfully obtain additional financing on reasonable terms, at a reasonable cost, or at all. As a result, these market conditions may impact our ability to comply with financial covenants in our credit facility, increase our cost of capital or make additional capital, including the refinancing of our credit facility, more difficult or available only on terms less favorable to us, if at all. A sustained downturn may also result in the carrying value of our goodwill or other assets exceeding their fair value, which may require us to recognize an impairment to those assets. In addition, impacted financial markets and asset values may have the effect of increasing our pension funding obligations in order to ensure that our qualified pension plans continue to be adequately funded, which may divert cash flow from other uses. The effects of the pandemic may also impact our financial reporting systems and internal control over financial reporting, including our ability to ensure information required to be disclosed in our reports under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure.

Any of these events could materially adversely impact our business, financial condition, results of operations, cash flow, liquidity and/or stock price. The COVID-19 pandemic, as well as future pandemics, could also cause or contribute to the other risk factors identified in this Form 10-K, as may be amended in our subsequent Quarterly Reports on Form 10-Q, which in turn could materially adversely affect our business, financial condition, results of operations, cash flow, liquidity and/or stock price. Further, the COVID-19 pandemic may also affect our business, operations and financial results in a manner that is not presently known to us or that we currently do not consider to present significant risks to our operations.

For additional information regarding the impact of COVID-19 on our business, financial condition, results of operations, cash flow and liquidity, see the discussions under "Recent Developments - COVID-19" in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Our competitive position, as well as our failure to develop and commercialize new products or technologies to address our customers' needs and to effectively compete, could adversely affect our business, financial condition and results of operations.

Competition in the industries we serve is based on factors such as price, product quality and service. Additionally, the markets for our products are characterized by significant competition, both regionally and internationally, new industry standards, evolving distribution models, customer price sensitivity, and disruptive product and manufacturing process innovations. In addition to changes in regulations, the impact of health, sustainability, and safety concerns could increase the costs incurred by our customers to use our products and otherwise limit the use of these products, which could lead to decreased demand for these products. Any of these factors could create pressure on pricing and gross margins and could adversely impact our business. As a result, our competitors may be able to deliver greater innovation, respond more quickly to new or emerging technologies and changes in market demand, allocate more resources to the development, marketing and sale of their products, successfully expand into emerging markets, improve their cost structures, or price their products more aggressively than us.

Our continued ability to enhance our existing product offerings, as well as the successful development and commercialization of new products and technologies, are drivers to our future strategy. The development and commercialization of new products and technologies requires significant investment in R&D, capital expenditures, production and marketing. The sales and development cycle for our products is subject to customary budgetary constraints, internal acceptance procedures, competitive product assessments, scientific and development resource allocations, regulatory limitations, and other factors beyond our control. If we are not able to successfully accommodate these factors to enable customer development success, we will be unable to achieve sufficient sales to reach profitability and compete effectively. There is no assurance that we will be able to continue to identify, develop, market or, in certain cases, secure regulatory approval for, new products in a timely manner or at all, as may be required to replace or enhance existing products. We cannot be certain that costs incurred by investing in new products and technologies will result in an increase in our revenues or profits. Our ability to keep pace with our competitors and the success of any new products and technologies is uncertain and could adversely affect our business, financial condition and results of operations.

The loss of one or more of our significant customers could adversely affect our business, financial condition and results of operations.

Our business depends on significant customers, many of whom have been doing business with us for decades. The loss of one or several significant customers may have an adverse effect on our business, financial condition and results of operations. In 2020, our 10 largest customers accounted for approximately 43% of our total sales across all product lines. Our largest customer is Shaw, one of the world's largest consumers of Nylon 6 resin and caprolactam. We sell Nylon 6 resin and caprolactam to Shaw under a long-term agreement. We typically sell to other customers under master services agreements, with primarily one-year terms, or by purchase orders. If our sales to any of our significant customers were to decline, we may not be able to find other customers to purchase the excess supply of our products. The loss of one or several of our significant customers, or a significant reduction in purchase volume by any of them, or significant unfavorable changes to pricing or other terms in contracts with any of them, could have an adverse effect on our business, financial condition and results of operations. We are also subject to credit risk associated with customer concentration. If one or more of our largest customers were to become bankrupt or insolvent, or otherwise were unable to pay for our products, we may incur significant write-offs of accounts that may have an adverse effect on our business, financial condition and results of operations.

The occurrence or threat of extraordinary events, including terrorist attacks, may disrupt our operations and could adversely affect our business, financial condition and results of operations.

Due to concerns related to terrorism, we are subject to various security laws including MTSA regulations. Our Frankford and Hopewell facilities are regulated facilities under MTSA due to the nature of our operations and the proximity of the facilities to adjacent waterways. Federal, state, local and foreign governments could implement new or impose more stringent regulations affecting the security of our plants, terminals and warehouses or the transportation and use of fertilizers or other chemicals. These regulations could result in higher operating costs or limitations on the sale of our products and could result in significant unanticipated costs, lower sales and reduced profit margins. It is possible that federal, state, local and foreign governments could impose additional limitations on the use, sale or distribution of chemicals we produce and sell, thereby limiting our ability to manufacture or sell those products, or that illicit use of our products could result in potential exposure for us. The occurrence of extraordinary events, including future terrorist attacks and the outbreak or escalation of hostilities, cannot be predicted, and their occurrence can be expected to continue to negatively affect the economy in general, and the markets for our products in particular. The resulting damage from an attack on our assets could include loss of life and property damage. In addition, available insurance coverage may not be sufficient to cover all of the damage incurred or, if available, may be prohibitively expensive.

Hazards and compliance costs associated with chemical manufacturing, storage and transportation could adversely affect our business, financial condition and results of operations.

There are hazards associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes. These hazards could lead to an interruption or suspension of operations and could have an adverse effect on the productivity and profitability of a particular manufacturing facility, or on us as a whole. While we endeavor to provide adequate protection for the safe handling of these materials, issues could be created by various events, including natural disasters, severe weather events, acts of sabotage and performance by third parties, and as a result, we could face potential hazards such as piping and storage tank leaks and ruptures, mechanical failure, employee exposure to hazardous substances and chemical spills and other discharges or releases of toxic or hazardous substances or gases.

These hazards may cause personal injury and loss of life, damage to property and contamination of the environment, which could lead to government fines, work stoppage injunctions, lawsuits by injured persons, damage to our public reputation and brand and diminished product acceptance. If such actions are determined to be adverse to us or there is an associated economic impact to our business, we may have inadequate insurance or cash flow to offset any associated costs. Such outcomes could adversely affect our business, financial condition and results of operations.

Our business, financial condition and results of operations could be adversely affected by litigation and other commitments and contingencies.

We face risks arising from various unasserted and asserted litigation matters, including, but not limited to, product liability and claims for third-party property damage or personal injury stemming from alleged environmental or other torts. We have noted a nationwide trend in purported class actions against chemical manufacturers generally seeking relief such as medical monitoring, property damages, off-site remediation and punitive damages arising from alleged environmental or other torts without claiming present personal injuries. We also have noted a trend in public and private nuisance suits being filed on behalf of states, counties, cities and utilities alleging harm to the general public.

Various factors or developments can lead to changes in current estimates of liabilities such as a final adverse judgment, significant settlements or changes in applicable law. An adverse outcome or unfavorable development in any one or more of these matters could be material to our financial results and could adversely impact the value of any of our brands associated with any such matters.

In the ordinary course of business, we may make certain commitments, including representations, warranties and indemnities relating to current and past operations, including those related to divested businesses, and issue guarantees of third-party obligations. Additionally, we may be required to indemnify Honeywell for amounts related to liabilities allocated to, or assumed by, us in connection with our spin-off. If we are required to make any such payments, the payments could be significant and could exceed the amounts we have accrued with respect thereto, adversely affecting our business, financial condition and results of operations.

Any acquisition, strategic relationship, joint venture or investment could disrupt our business and harm our financial condition. Our inability to successfully acquire and integrate other businesses, assets, products or technologies or realize the financial and strategic goals that were contemplated at the time of any transaction could adversely affect our business, financial condition and results of operations.

We actively evaluate acquisitions, strategic relationships, joint ventures, collaborations, and strategic investments in businesses, products or technologies that we believe could complement or expand our business, broaden our technology and intellectual property or otherwise offer growth or cost-saving opportunities. Any of these transactions may be complex, time consuming and expensive, and may present numerous challenges and risks.

Lack of control over the actions of our business partners in any strategic relationship, joint venture or collaboration, could significantly delay the introduction of planned products or otherwise make it difficult or impossible to realize the expected benefits of such relationship. An investment in, or acquisition of, complementary businesses, products or technologies in the future could materially decrease the amount of our available cash or require us to seek additional equity or debt financing. We may not be successful in negotiating the terms of any potential acquisition, conducting thorough due diligence, financing the acquisition or effectively integrating the acquired business, product or technology into our existing business and operations. Our due diligence may fail to identify all of the problems, liabilities or other shortcomings or challenges of an acquired business, product or technology, including issues related to intellectual property, product quality or product architecture, regulatory compliance practices, revenue recognition or other accounting practices or employee or customer issues. Additionally, in connection with any acquisitions we complete, we may not achieve the synergies or other benefits we expected to achieve, and we may incur unanticipated expenses, write-downs, impairment charges or unforeseen liabilities that could negatively affect our business, financial condition and results of operations, have difficulty incorporating the acquired businesses, disrupt relationships with current and new employees, customers and vendors, incur significant debt or have to delay or not proceed with announced transactions. Further, contemplating or completing an acquisition and integrating an acquired business, product or technology could divert management and employee time and resources from other matters.

Failure to protect our intellectual property could adversely affect our business, financial condition and results of operations.

Intellectual property rights, including patents, trade secrets, confidential information, trademarks, trade names and trade dress, are important to our business. We will endeavor to protect our intellectual property rights in key jurisdictions in which our products are produced or used. However, we may be unable to obtain protection for our intellectual property in such key jurisdictions. Although we own and have applied for numerous patents and trademarks, we may have to rely on judicial enforcement of our patents and other proprietary rights. Our patents and other intellectual property rights may be challenged, invalidated, circumvented, and rendered unenforceable or otherwise compromised. If we must take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs and diversion of our resources and our management's attention, and we may not prevail in any such suits or proceedings. A failure to protect, defend or enforce our intellectual property could have an adverse effect on our business, financial condition and results of operations. Similarly, third parties may assert claims against us and our customers and distributors alleging our products infringe upon third-party intellectual property rights. Such claims could result in significant costs and diversion of our resources and our management's attention and we may not prevail in any resulting suits or proceedings.

We also rely materially upon unpatented proprietary technology, know-how and other trade secrets to maintain our competitive position. While we institute and maintain policies, internal security measures, and agreements to protect our trade secrets and other intellectual property, any failure to protect this intellectual property could negatively affect our future performance and growth.

We may be required to make significant cash contributions to our defined benefit pension plan.

We sponsor a defined benefit pension plan under which certain eligible AdvanSix employees who were employed by Honeywell prior to the spin-off earn pension benefits as if they remained employed by Honeywell. Significant changes in actual investment return on pension assets, discount rates, retirement rates and other factors could require unplanned cash pension contributions in future periods. Changes in discount rates and actual asset returns different from our anticipated asset returns can result in significant non-cash actuarial gains or losses. With regard to cash pension contributions, funding requirements for our pension plans are largely dependent upon interest rates, actual investment returns on pension assets and the impact of legislative or regulatory changes related to pension funding obligations. Our pension contributions may be material and could adversely impact our financial condition, cash flow and results of operations. We made pension contributions of approximately $8.1 million in 2020, which satisfied our pension funding requirements for such period, and we plan to make pension contributions in future periods sufficient to satisfy funding requirements.

Some of our workforce is represented by labor unions and our business could be harmed in the event of a prolonged work stoppage.

Approximately 705 of our employees are covered under collective bargaining agreements that expire between 2021 and 2024, which represents approximately 50% of our employee-base as of December 31, 2020. From time to time, we engage in negotiations to renew collective bargaining agreements as those contracts are scheduled to expire. While we generally have positive relationships with our labor unions, we cannot predict how stable our union relationships will be or whether we will be able to successfully negotiate successor agreements without impacting our financial condition. In addition, the presence of unions may limit our flexibility in dealing with our workforce. We may experience work stoppages, which could negatively impact our ability to manufacture our products on a timely basis and, ultimately, our business, financial condition and results of operations.

We depend on the recruitment and retention of qualified personnel, and our failure to attract and retain such personnel could adversely affect our business, financial condition and results of operations.

Due to the complex nature of our manufacturing business, our future performance is highly dependent upon the continued services of our key engineering personnel, scientists and our senior management team, the development of additional management personnel and the hiring of new qualified engineering, manufacturing, marketing, sales and management personnel for our operations. Competition for qualified personnel in our industry is intense, and we may not be successful in attracting or retaining qualified personnel. The loss of key employees, our inability to attract new, qualified employees or adequately train employees, or any delay in hiring key personnel, could negatively affect our business, financial condition and results of operations.

Cybersecurity threats and incidents continue to increase in frequency and sophistication. A successful cybersecurity attack could disrupt our business operations, result in the loss of critical and confidential information belonging to us, our customers and other business partners, and adversely impact our reputation, financial condition and results of operations.

Global cybersecurity threats and incidents can range from uncoordinated individual attempts to gain unauthorized access to information technology ("IT") systems to sophisticated and targeted measures known as advanced persistent threats, directed at AdvanSix, its plants and operations, its products, its customers and/or its third-party service providers including cloud providers. The techniques used to obtain unauthorized access to networks, or to sabotage IT systems, change frequently and generally are not recognized until launched against a target. We may be unable to anticipate these techniques or to implement adequate preventative measures. While we have experienced, and expect to continue to experience, these types of threats and incidents, none of them to date have been material to the Company. Our information technology infrastructure, including cybersecurity controls, deploys comprehensive measures to deter, prevent, detect, respond and mitigate these threats including access controls, data encryption, vulnerability assessments, continuous monitoring of our IT networks and systems and maintenance of backup and protective systems. We track cyber performance metrics and conduct training of our employees on protective measures regarding information security, data privacy, cyber-attacks and recognizing phishing attempts. Despite these efforts, cybersecurity incidents, depending on their nature and scope, could potentially result in the misappropriation, destruction, corruption or unavailability of critical data and confidential or proprietary information (our own or that of third parties) and the disruption of our plant operations and business generally or the disruption of the operations and businesses of our vendors or customers. Additionally, we use third-party vendors that may store sensitive data, including confidential information about our employees, and these third parties are subject to their own cybersecurity threats. While our standard vendor terms and conditions include certain safeguards, including requiring the use of appropriate security measures to prevent unauthorized use or disclosure of our data, a breach at these third-party vendors may occur. The potential consequences of a material cybersecurity incident of our own systems or the systems of those with whom we do business, include reputational consequences, safety risk, physical damage to our assets, claims from and litigation with third parties, fines levied by governmental authorities, diminution in the value of our investment in research, development and engineering, and increased cybersecurity protection and remediation costs, which in turn could, individually or in the aggregate, adversely affect our competitiveness, plant operations, business, financial condition and results of operations. We maintain cyber liability insurance, but this insurance may not be sufficient to cover the losses that may result from a cybersecurity incident.

Data privacy, information security and protection of confidential information may require significant resources and present certain risks.

We maintain, have access to and process certain confidential or sensitive data, including proprietary business information, personal data and other information, that may be subject to privacy and security laws, regulations and/or customer-imposed controls. Despite our efforts to protect such information and data, we may be vulnerable to material security breaches, theft, misplaced or lost data, or errors by employees or third-party providers that could potentially cause such information and data to be compromised, or lead to improper use of our systems or networks, unauthorized access, use, disclosure, modification or destruction of information, and operational disruptions. In addition, there are different and potentially conflicting data privacy laws in effect in the domestic and foreign jurisdictions in which we operate, including the General and Data Protection Regulations implemented in the European Union, and we must comply with all applicable laws and standards. Noncompliance with these laws can result in reputational damage, fines and penalties, and enforcement proceedings and litigation, any of which may adversely affect our business, reputation, financial condition and results of operations.

Disruptions in transportation or significant changes in transportation costs could adversely impact our business financial condition and results of operations.

We rely heavily on third party transportation to deliver raw materials to our facilities and ship products to our customers. Transport operators are exposed to various risks, such as extreme weather conditions, natural disasters, work stoppages, personnel shortages, and operating hazards, as well as interstate and international transportation requirements. If we experience transportation problems, or if there are other significant changes in the cost of these services, we may not be able to arrange efficient alternatives and timely means to obtain raw materials or ship products to our customers. We also seek to maintain appropriate buffer inventory of intermediate chemicals necessary for our manufacturing process, which are intended to mitigate the extent of any delays or disruptions in supply chain logistics. However, our failure to obtain raw materials, ship products or maintain sufficient buffer inventory could materially and adversely impact our business, financial condition and results of operations.

Exposure to risks and events beyond our control could adversely impact our business, financial condition and results of operations.

We are exposed to risks from various events that are beyond our control, which may have significant effects on our results of operations. While we attempt to mitigate these risks through appropriate loss prevention measures, insurance, business contingency planning and other means, we may not be able to anticipate all risks or to reasonably or cost-effectively manage those risks that we do anticipate. We maintain property, cyber liability, business interruption and casualty insurance but such insurance may not cover all risks, loss, damages or expenses associated with our business and is subject to limitations, including deductibles and limits on the liabilities covered. Consequently, our operations could be adversely affected by circumstances or events in ways that are significant and/or long lasting. The risks and uncertainties identified herein are not the only risks that we have. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial also may adversely affect us. If any known or unknown risks and uncertainties develop into actual events, these developments could have a material adverse effect on our business, financial condition and results of operations.

Risks Relating to Our Indebtedness

We are subject to certain risks associated with our indebtedness.

We are a borrower of funds under a credit facility. Our ability to make payments on and to refinance our indebtedness, including the debt incurred, as well as any future debt that we may incur, will depend on our ability to generate cash in the future from operations or financings. Our ability to generate cash is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. In addition, the terms of our indebtedness include a number of restrictive covenants that impose significant operating and financial restrictions on us and our subsidiaries and limit our ability to engage in actions that may be in our long-term best interests. These may restrict our and our subsidiaries' ability to take some or all of the following actions:

- Incur or guarantee additional indebtedness or sell disqualified or preferred stock;
- Pay dividends on, make distributions in respect of, repurchase or redeem capital stock;
- Make investments or acquisitions;
- Sell, transfer or otherwise dispose of certain assets;
- Create liens;
- Enter into sale/leaseback transactions;
- Enter into agreements restricting the ability to pay dividends or make other intercompany transfers;
- Consolidate, merge, sell or otherwise dispose of all or substantially all of our or our subsidiaries' assets;
- Enter into transactions with affiliates;
- Prepay, repurchase or redeem certain kinds of indebtedness;

Issue or sell stock of our subsidiaries; and/or

- Significantly change the nature of our business.

These restrictions may impact our current and future operations, how we conduct our business and pursue our strategy, as well as our ability to incur debt that we may need to fund initiatives associated with our strategy, ongoing operations, competitive industry dynamics and new business opportunities. A breach of any of these covenants, if applicable, could result in an event of default under the terms of this indebtedness. If an event of default occurs, the lenders would have the right to accelerate the repayment of such debt and the event of default or acceleration may result in the acceleration of the repayment of any other debt to which a cross-default or cross-acceleration provision applies. Substantially all domestic tangible and intangible assets of the Company and its subsidiaries are pledged as collateral to secure the obligation under our credit facility and, in the event we were unable to repay any amount of this indebtedness when due and payable, the lenders could proceed against the pledged collateral. In the event our creditors accelerate the repayment of our borrowings, we may not have sufficient assets to repay such indebtedness, which could adversely affect our business, financial condition and results of operations.

Furthermore, our credit facility currently uses LIBOR as a benchmark for establishing the interest rate. LIBOR will be discontinued by the end of 2021 and other regulators have suggested reforming or replacing LIBOR with other benchmark rates. The consequences of these developments with respect to LIBOR cannot be entirely predicted but could cause volatility or disruption in the overall financial market, result in an increase in the cost of our variable rate debt or adversely affect our cost of funding, any of which could adversely affect our financial condition and results of operations. Additionally, while our credit facility contains a provision providing for an alternative rate calculation in the event LIBOR is unavailable, this provision may not adequately address the actual changes to LIBOR or successor rates.

Risks Relating to Legal and Regulatory Matters

Our operations are dependent on numerous required permits and approvals.

We hold numerous environmental and other governmental permits and approvals authorizing operations at each of our facilities. In addition, any expansion or major modification of our operations is dependent upon securing the necessary environmental or other permits or approvals. A decision by a government agency to deny or delay issuing a new or renewed material permit or approval, or to revoke or substantially modify an existing material permit or approval, could have an adverse effect on our ability to continue operations at the affected facility, or facilities, and on our business, financial condition and results of operations.

We are subject to risks related to adverse trade policies inherent in international sales and associated regulations in certain important markets for our products.

We have exposure to risks inherent in international sales, including difficulties and costs associated with complying with a wide variety of complex laws, treaties and regulations including customs and international trade laws; unexpected changes in political or regulatory environments; earnings and cash flows that may be subject to tax withholding requirements or the imposition of tariffs, exchange controls or other restrictions; political and economic instability; import and export restrictions, tariffs, and other trade barriers or retaliatory actions; fluctuations in foreign currency exchange rates; government takeover or nationalization of business; and government mandated price controls. These considerations limit the countries in which we can do business, the persons or entities with whom we can do business, the products which we can buy or sell, and the terms under which we can do business. As a U.S.-based producer, we are impacted by anti-dumping investigations which have had, and may continue to impose, significant anti-dumping duties on our products. Such duties place us at a significant competitive disadvantage in the applicable markets. In each case, we diligently evaluate our commercial and legal options to defend these investigations and their subsequent sunset reviews and take steps we feel are prudent to protect our interests, including our filing anti-dumping petitions covering imports of acetone with the International Trade Commission in February 2019 (see "Anti-Dumping Duty Petitions" under Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations”). Historically, we have successfully mitigated these risks through geographical mix management so that the imposition of duties does not materially affect our business results. However, such duties could have an adverse effect on the sales of key product lines and affect our business performance in the future.

There can be no assurance that, in the future, any governmental or international trade body will not institute trade policies or remedies that are adverse to exports from the United States, and given the change in the U.S. presidential administration, we may face additional uncertainty with regard to U.S. government trade policy. In recent years, the U.S. imposed tariffs on certain U.S. imports, and China and other countries responded with retaliatory tariffs on certain U.S. exports. Any significant changes in international trade policies, practices or trade remedies, especially those instituted in our target markets or markets where our major customers are located, such as the United States-Mexico-Canada Agreement which became effective in July 2020, could potentially increase the price of our products relative to our competitors or decrease our customers’ demand for our products, which in turn may adversely affect our business, financial condition and results of operations.

Extensive environmental, health and safety laws and regulations applicable to our operations, including initiatives related to discharges into the air and water, hazardous waste, sustainability, global warming and climate change, may result in substantial costs and unanticipated loss or liability, which could adversely affect our business, financial condition and results of operations.

Various federal, state, local and foreign governments regulate the discharge of materials into the environment and can impose substantial fines and criminal sanctions for violations and require installation of costly equipment or operational changes to limit emissions and/or decrease the likelihood of accidental hazardous substance releases. If we are found to be in violation of these laws or regulations, we may incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations. See "Item 1. Business - Regulation and Environmental Matters" for more information on the environmental laws and regulations to which we are subject.

Primarily because of past operations at our current manufacturing locations and other locations used in our operations as currently conducted, we may be subject to potentially material liabilities related to the remediation of environmental hazards and to claims of personal injuries or property damages that may have been or may be caused by hazardous substance releases and exposures or other hazardous conditions. Lawsuits, claims and costs involving these matters may arise in the future. In addition, changes in laws, regulations and enforcement of policies, the discovery of previously unknown contamination or other information related to individual sites, the establishment of stricter state or federal toxicity standards with respect to certain contaminants or the imposition of new clean-up requirements or remedial techniques could require us to incur additional costs in the future that would have a negative effect on our business, financial condition and results of operations.

Additionally, there are substantial uncertainties as to the nature, stringency and timing of any future regulations or changes in regulations, including discharges into the air and water, handling and disposal of hazardous wastes, remediation of soil and groundwater, and greenhouse gas ("GHG") and water nutrient regulations. Due to the concerns about risks associated with air, water, global warming and climate change, more stringent regulations, including those which could result from the recent change in the U.S. presidential administration, may require us to incur additional capital expenditures or make changes to our operating activities that would increase our operating costs, reduce our efficiency, limit our output, increase our costs for or limit the availability of energy, raw materials or transportation or otherwise adversely affect our business, financial condition and results of operations. If enacted, more stringent GHG limitations are likely to have a significant impact on us because our production facilities emit GHGs such as carbon dioxide and nitrous oxide and because natural gas, a fossil fuel, is a primary raw material used in our production process. To the extent that GHG or other restrictions are not imposed in countries where our competitors operate or are less stringent than regulations that may be imposed in the United States, our competitors may have cost or other competitive advantages over us. In addition, increasing regulation of fuel emissions could substantially increase the distribution and supply chain costs associated with our products. Consequently, legislative and regulatory programs to reduce emissions of GHG could have an adverse effect on our business, financial condition and results of operations.

Further, there has been public discussion that climate change may be associated with more extreme weather conditions, such as increased frequency and severity of storms, droughts, and floods. Extreme weather conditions can interfere with our operating activities, disrupt our maritime logistics and intraplant supply chain, increase our costs of operations or reduce the efficiency of our operations, and potentially increase costs for insurance coverage in the aftermath of such conditions. Long-term, higher average global temperatures could result in changes in natural resources, growing seasons, precipitation patterns, weather patterns, species distributions, water availability, sea levels, and biodiversity. These impacts could cause changes in supplies of raw materials used to maintain our production capacity and could lead to possible increased sourcing costs in the future. We continually assess our manufacturing plants for risks and opportunities to increase our preparedness for climate change. We are continuing to evaluate sea level rise and storm surge at our plants to understand potential impacts and response actions that may need to be taken. Significant physical effects of climate change could also have an indirect effect on our financing and operations by disrupting the transportation or process-related services provided by companies or suppliers with whom we have a business relationship.

There is also a risk that one or more of our key raw materials or one or more of our products may be found to have, or be characterized as having, a toxicological or health-related impact on the environment or on our customers or employees, which could potentially result in us incurring liability in connection with such characterization and the associated effects of any toxicological or health-related impact. If such a discovery or characterization occurs, we may incur increased costs to comply with new regulatory requirements, or the relevant materials or products, including products of our customers that incorporate our materials or products, may be recalled or banned. Changes in laws and regulations, or their interpretations, and our customers' perception of such changes or interpretations may also affect the marketability of certain of our products. Additionally, sales of acetone, which is a List II Chemical under TSCA, are regulated by the Drug Enforcement Act. This classification subjects us to periodic audits by the Drug Enforcement Administration and ongoing restrictions on our acetone sales activities.

Heightened public focus on climate change, sustainability, and environmental issues has also led to increased government regulation and may cause certain of our key stakeholders to require that we meet certain standards, including customers or suppliers who may impose environmental standards on us as a part of doing business with them, all of which could increase the costs incurred by our customers to use our products and otherwise limit the use of these products, which could lead to decreased demand for these products.

Failure to maintain effective internal controls could adversely impact our ability to meet our reporting requirements.

We are required, under the Sarbanes-Oxley Act of 2002, to maintain effective internal control over financial reporting and disclosure controls and procedures. This includes performing system and process evaluations and testing of our internal control over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by the Sarbanes-Oxley Act, with auditor attestation of the effectiveness of our internal controls. If we are not able to comply with these requirements, or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our common shares could decline and we could be subject to penalties or investigations by the NYSE, the SEC or other regulatory authorities, which would require additional financial and management resources.

Effective internal controls are necessary for us to provide reasonable assurance with respect to our financial reports and to effectively prevent fraud. Internal controls over financial reporting may not prevent or detect misstatements because of inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Therefore, even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the effectiveness of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in their implementation, our business and operating results could be harmed, we could fail to meet our reporting obligations, and there could be a material adverse effect on our stock price.

The ongoing process of implementing internal controls requires significant attention from management and we cannot be certain that these measures will ensure that we implement and maintain adequate controls over our financial processes and reporting in the future. Difficulties encountered in their implementation could harm our results of operations or cause us to fail to meet our reporting obligations. If we fail to obtain the quality of services necessary to operate effectively or incur greater costs in obtaining these services, our profitability, financial condition and results of operations may be materially and adversely affected.

Risks Relating to the Spin-Off

Our spin-off could result in significant tax liability.

Completion of our spin-off was conditioned on Honeywell's receipt of a written opinion of Cravath, Swaine & Moore LLP to the effect that the October 1, 2016 distribution by Honeywell of all of the then outstanding shares of AdvanSix common stock should qualify for non-recognition of gain and loss under Section 355 of the Code. The opinion of counsel did not address any U.S. state, local or foreign tax consequences of the spin-off. The opinion was based on numerous assumptions and on certain representations as to factual matters from, and certain covenants by Honeywell and us. The opinion cannot be relied on if any of the assumptions, representations or covenants is incorrect, incomplete or inaccurate or is violated in any material respect. The opinion of counsel is not binding on the Internal Revenue Service ("IRS") or the courts, and there can be no assurance that the IRS or a court will not take a contrary position. Honeywell did not request a ruling from the IRS regarding the U.S. Federal income tax consequences of the spin-off.

If the distribution were determined not to qualify for non-recognition of gain and loss under Section 355(e) of the Code, our U.S. stockholders could be subject to tax. In this case, each U.S. stockholder who received our common stock in the distribution would generally be treated as having received a distribution in an amount equal to the fair market value of our common stock received, which would generally result in (1) a taxable dividend to the U.S. stockholder to the extent of that
U.S. stockholder's pro rata share of Honeywell's current and accumulated earnings and profits; (2) a reduction in the U.S. stockholder's basis (but not below zero) in its Honeywell common stock to the extent the amount received exceeds the stockholder's share of Honeywell's earnings and profits; and (3) a taxable gain from the exchange of Honeywell common stock to the extent the amount received exceeds the sum of the U.S. stockholder's share of Honeywell's earnings and profits and the U.S. stockholder's basis in its Honeywell common stock. A discussion of the material U.S. federal income tax consequences of the spin-off can be found in our Form 10.

If, due to any of our representations being untrue or our covenants being breached, it were determined that the distribution did not qualify for non-recognition of gain and loss under Section 355 of the Code, we could be required to indemnify Honeywell for the resulting taxes and related expenses. Any such indemnification obligation could adversely affect our business, financial condition and results of operations.

We have limited operating history as an independent, publicly-traded company, and our historical consolidated financial information is not necessarily representative of the results we would have achieved as an independent, publicly-traded company and may not be a reliable indicator of our future results.

We derived the historical consolidated financial information prior to our spin-off included in "Item 6. Selected Financial Data" of this Form 10-K from Honeywell's consolidated financial statements, and this information does not necessarily reflect the results of operations and financial position we would have achieved as an independent, publicly-traded company during the periods presented, or those that we will achieve in the future. This is primarily because of the following factors:

- Prior to the spin-off, we operated as part of Honeywell's broader corporate organization, and Honeywell performed various corporate functions for us. Our historical consolidated financial information prior to the spin-off reflects allocations of corporate expenses from Honeywell for these and similar functions. These allocations may not reflect the costs we incur for similar services as an independent, publicly-traded company.

- Our historical consolidated financial information prior to the spin-off does not reflect certain changes that we experienced as a result of our separation from Honeywell, including changes in the financing, cash management, operations, cost structure and personnel needs of our business. There were certain benefits derived from Honeywell's operating diversity, size, purchasing power, borrowing leverage and available capital for investments that may not be available to us in all instances, as an independent entity. In addition, our historical consolidated financial data does not include an allocation of interest expense comparable to the interest expense we will incur as a result of the series of internal transactions which were effected in order for us to hold, directly or through our subsidiaries, the businesses constituting Honeywell's Resins and Chemicals business and related operations, and the spin-off, including interest expense in connection with the incurrence of indebtedness at AdvanSix.

Following the spin-off, we are also responsible for the additional costs associated with being an independent, publicly- traded company, including costs related to corporate governance, investor and public relations and public reporting. Additionally, we may be required to indemnify Honeywell for amounts related to liabilities allocated to, or assumed by, us in connection with our spin-off. While we were profitable as part of Honeywell, we cannot assure you that our profits will continue at a similar level as an independent, publicly-traded company.

Risks Relating to Our Common Stock and the Securities Market

Our stock price may fluctuate significantly and investments in our stock could lose value.

The market price of our common stock may fluctuate widely, depending on many factors, some of which may be beyond our control, including:

- Actual or anticipated fluctuations in our results of operations due to factors related to our business;
- Success or failure of our business strategies;
- Competition and industry capacity;
- Changes in interest rates and other factors that affect earnings and cash flow;
- Our level of indebtedness, our ability to make payments on or service our indebtedness and our ability to obtain financing as needed;
- Our ability to repurchase our common stock;
- Our ability to retain and recruit qualified personnel;
- Our quarterly or annual earnings, or those of other companies in our industry;
- Announcements by us or our competitors of significant acquisitions or dispositions;
- Changes in accounting standards, policies, guidance, interpretations or principles;
- Changes in earnings estimates by securities analysts or our ability to meet those estimates;
- The operating and stock price performance of other comparable companies;
- Investor perception of our company and our industry;
- Overall market fluctuations and volatility unrelated to our operating performance;
- Results from any material litigation or government investigation;
- Changes in laws and regulations (including tax laws and regulations) affecting our business;
- Changes in capital gains taxes and taxes on dividends affecting stockholders; and
- General economic conditions and other external factors.

General or industry-specific market conditions, stock market performance or macroeconomic and geopolitical factors unrelated to our performance may also affect our stock price. For these reasons, investors should not rely on recent or historical trends to predict future stock prices, financial condition, results of operations or cash flows. Volatility in our stock price could expose us to litigation, which could result in substantial costs and the diversion of management time and resources. In addition, repurchases pursuant to our share repurchase program could affect our stock price and increase its volatility. The existence of a share repurchase program could also cause our stock price to be higher than it would be in the absence of such a program and could potentially reduce the market liquidity for our stock. There can be no assurance that any share repurchases will enhance stockholder value because the market price of our common stock may decline below the levels at which we repurchased shares of common stock. Although our share repurchase program is intended to enhance long-term stockholder value, short-term stock price fluctuations could reduce the program's effectiveness. Furthermore, the program does not obligate the Company to repurchase any dollar amount or number of shares of common stock, and may be suspended or discontinued at any time and any suspension or discontinuation could cause the market price of our stock to decline.

We will evaluate whether to pay cash dividends on our common stock in the future, and the terms of our indebtedness could limit our ability to pay dividends on our common stock.

We will evaluate whether to pay cash dividends to our stockholders and the timing, declaration, amount and payment of future dividends to stockholders, if any, will fall within the discretion of our Board. Among the items we will consider when establishing a dividend policy will be the capital intensive nature of our business and opportunities to retain future earnings for use in the operation of our business and to fund future growth. Additionally, the terms of our indebtedness limit our ability to pay cash dividends. There can be no assurance that we will pay a dividend in the future or, if we do commence paying dividends, that we will continue to pay any such dividend.

Stockholder percentage ownership in AdvanSix may be diluted in the future.

A stockholder's percentage ownership in AdvanSix may be diluted in the future because of common stock-based equity awards that we have granted and expect to grant in the future to our directors, officers and other employees. In addition, we may issue equity to raise capital to finance our ongoing operations or as all or part of the consideration paid for acquisitions and strategic investments that we may make in the future.

Certain provisions in our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws and Delaware law may discourage takeovers.

Several provisions of our Amended and Restated Certificate of Incorporation, Amended and Restated By-laws and Delaware law may discourage, delay or prevent a merger or acquisition that is opposed by our Board. These include, among others, provisions that do not permit our stockholders to act by written consent, establish advance notice requirements for stockholder nominations and proposals, limit the persons who may call special meetings of stockholders, and limit our ability to enter into business combination transactions with certain stockholders. These and other provisions of our Amended and Restated Certificate of Incorporation, Amended and Restated By-laws and Delaware law may discourage, delay or prevent certain types of transactions involving an actual or a threatened acquisition or change in control of AdvanSix, including unsolicited takeover attempts, even though the transaction may offer our stockholders the opportunity to sell their shares of our common stock at a price above the prevailing market price.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal executive offices are located in leased space at 300 Kimball Drive, Suite 101, Parsippany, NJ 07054. We also own three production facilities located in Frankford, Pennsylvania, Chesterfield, Virginia and Hopewell, Virginia. In addition, upon spin-off, we entered into site sharing and services agreements with Honeywell under which Honeywell leased space to us at Honeywell's facility in Pottsville, Pennsylvania and its R&D center in Colonial Heights, Virginia. Our Pottsville and Colonial Heights site sharing and services agreements were terminated in late 2019 and our former Colonial Heights R&D facility relocated to our AdvanSix site in Chesterfield in early 2020, enabling an improved configuration of our labs to drive productivity, increased connectivity with our resin manufacturing and more effective collaboration with customers.

We consider the manufacturing facilities and technology centers and the other properties that we own or lease to be in good condition and generally suitable for the purposes for which they are used. Our manufacturing facilities are maintained through ongoing capital investments, regular maintenance and equipment upgrades. We believe our facilities are adequate for our current operations.

Item 3. Legal Proceedings

From time to time, we are involved in litigation relating to claims arising out of the ordinary course of our business operations. We are not a party to, and, to our knowledge, there are no pending claims or actions against us, the ultimate disposition of which could be expected to have a material adverse effect on our consolidated financial position, results of operations or operating cash flows.

The United States Environmental Protection Agency ("EPA") notified the Company in December 2016 that alleged violations, involving the enhanced leak detection and repair program and emission testing requirements, at the Company's manufacturing facility in Hopewell, Virginia, in each case that were self-reported by the Company, may potentially subject the Company to stipulated penalties under the 2013 consent decree among the Company, the U.S. and the Commonwealth of Virginia. The Company has discussed this matter with the EPA and negotiations to resolve it are ongoing. Although the outcome of the matter cannot be predicted with certainty, we do not believe that it will have a material adverse effect on our consolidated financial position, results of operations or operating cash flows.

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 is traded on the New York Stock Exchange under the symbol "ASIX". On February 1, 2021, there were 19,845 holders of record of our common stock and the closing price of our common stock on the New York Stock Exchange was $22.29 per share.

As of February 1, 2021, 28,033,935 shares of our common stock and 0 shares of our preferred stock were outstanding.

On May 4, 2018, the Company announced that the Board of Directors (the "Board") authorized a share repurchase program of up to $75 million of the Company's common stock. On February 22, 2019, the Company announced that the Board authorized a share repurchase program of up to an additional $75 million of the Company's common stock, which was in addition to the remaining capacity available under the May 2018 share repurchase program. Repurchases may be made, from time to time, on the open market, including through the use of trading plans intended to qualify under Rule 10b5-1 of the Exchange Act. The size and timing of these repurchases will depend on pricing, market and economic conditions, legal and contractual requirements and other factors. The share repurchase program has no expiration date and may be modified, suspended or discontinued at any time.

The below table sets forth the repurchases of Company common stock, by month, for the quarter ended December 31, 2020:

Period	Total Number of Shares Purchased [(1)]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan
October 2020	—	$ —	—	$ 59,581,679
November 2020	1,273	17.50	—	59,581,679
December 2020	—	—	—	$ 59,581,679
Total	1,273	$ 17.50	—	

(1) Total number of shares purchased includes 1,273 shares withheld to cover tax withholding obligations in connection with the vesting of equity awards.

As of December 31, 2020, the Company had repurchased 3,593,912 shares of common stock, including 504,150 shares withheld to cover tax withholding obligations in connection with the vesting of equity awards, for an aggregate of $101.7 million at a weighted average market price of $28.30 per share.

During the period January 1, 2021 through February 1, 2021, no additional shares were repurchased under the currently authorized repurchase program.

Dividends

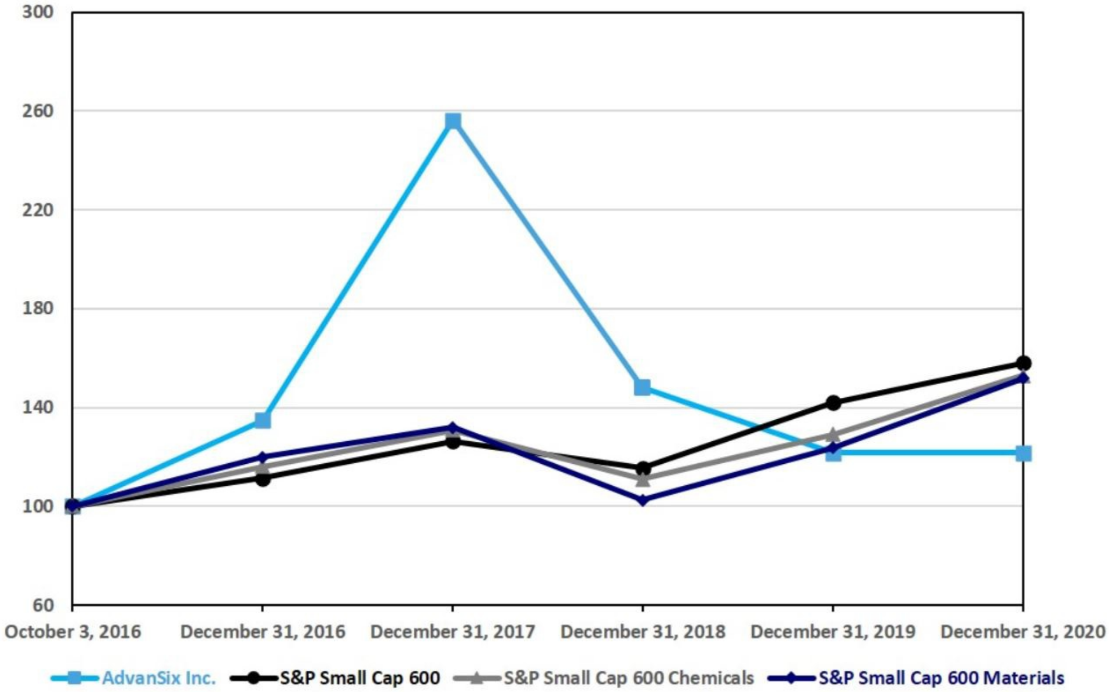
We evaluate the payment of cash dividends to our stockholders and the timing, declaration, amount and payment of future dividends to stockholders, if any, will fall within the discretion of our Board. Holders of shares of our common stock will be entitled to receive dividends when, and if, declared by our Board at its discretion out of funds legally available for that purpose, subject to the preferential rights of any preferred stock that may be outstanding. The timing, declaration, amount and payment of the future dividends will depend on our financial condition, earnings, capital requirements and debt service obligations, as well as legal requirements, regulatory constraints, industry practice and other factors that our Board deems relevant. There can be no assurance that payment of a dividend will occur in the future.

We did not declare or pay any dividends during the years ended December 31, 2020, December 31, 2019 and December 31, 2018.

Performance Graph

The following graph compares the cumulative total stockholder return on the Company's common stock to the total returns on the Standard & Poor's ("S&P") Small Cap 600 Stock Index, the S&P Small Cap 600 Chemicals Index and the S&P Small Cap 600 Materials Index. The changes for the periods shown in the graph assume that $100 had been invested in AdvanSix stock and each index on October 3, 2016, the date that AdvanSix common stock began "regular-way" trading on the New York Stock Exchange, and that all dividends, if any, were reinvested. The share price performance in the graph is not necessarily indicative of future price performance.

COMPARISON OF CUMULATIVE TOTAL RETURN



	October 3, 2016	December 31, 2016	December 31, 2017	December 31, 2018	December 31, 2019	December 31, 2020
AdvanSix Inc.	100	135	256	148	122	122
S&P Small Cap 600	100	112	126	116	142	158
S&P Small Cap 600 Chemicals	100	116	131	111	129	153
S&P Small Cap 600 Materials	100	120	132	103	124	152

Item 6. Selected Financial Data

Selected Historical Consolidated Financial Data

The following tables present certain selected historical consolidated financial information as of and for each of the years in the five-year period ended December 31, 2020. The selected historical consolidated financial data as of and for the years ended December 31, 2020, 2019, 2018, 2017 and 2016 are derived from our historical audited Consolidated Financial Statements. The selected historical data related to the balance sheet information for December 31, 2020 and 2019 and the statement of operations information for the years ended December 31, 2020, 2019 and 2018 are included in this Form 10-K. The selected historical data related to the balance sheet information for December 31, 2018, 2017 and 2016 and statement of operations information for the years ended December 31, 2017 and 2016 are not included in this Form 10-K.

The selected historical consolidated financial data presented below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our historical Consolidated Financial Statements and the accompanying Notes thereto included elsewhere in this Annual Report. For the periods presented, our business was wholly owned by Honeywell through October 1, 2016. The financial information included herein may not necessarily reflect our financial position, results of operations and cash flows in the future or what our financial position, results of operations and cash flows would have been had we been an independent, publicly-traded company during the periods presented prior to October 1, 2016. In addition, our historical consolidated financial information does not reflect changes as a result of our separation from Honeywell, including changes in the financing, operations, cost structure and personnel needs of our business. Further, the historical consolidated financial information includes allocations of certain Honeywell corporate expenses to the historical Consolidated Financial Statements. We believe the assumptions and methodologies underlying the allocation of these expenses are reasonable. However, such expenses may not be indicative of the actual level of expenses that we would have incurred if we had operated as an independent, publicly-traded company or of the costs expected to be incurred in the future.

	Years Ended December 31,				
Selected Statement of Operations Information (Dollars in thousands):	**2020**	**2019**	**2018**	**2017** [(2)]	**2016**
Sales	$ 1,157,917	$ 1,297,393	$ 1,514,984	$ 1,475,194	$ 1,191,524
Net Income	46,077	41,347	66,244	146,699	34,147
Earnings Per Common Share [(1)]					
Basic:	$ 1.64	$ 1.47	$ 2.20	$ 4.81	$ 1.12
Diluted:	1.64	1.43	2.14	4.72	1.12
Weighted average common shares [(1)]					
Basic:	28,048,726	28,122,288	30,172,050	30,482,966	30,482,966
Diluted:	28,157,062	28,898,836	30,978,291	31,091,601	30,503,587

	As of December 31,				
Selected Balance Sheet Information (Dollars in thousands):	**2020**	**2019**	**2018**	**2017**	**2016**
Total assets	$ 1,263,407	$ 1,235,969	$ 1,034,626	$ 1,050,274	$ 904,957
Total liabilities	819,284	835,091	614,288	673,949	689,595
Total equity	444,123	400,878	420,338	376,325	215,362

(1) On October 1, 2016, the date of consummation of the Spin-Off, 30,482,966 shares of the Company's common stock were distributed to Honeywell stockholders of record as of September 16, 2016. Basic and Diluted Earnings Per Share ("EPS") for all periods prior to the Spin-Off reflect the number of distributed shares, or 30,482,966 shares. These shares were treated as issued and outstanding from January 1, 2016 for purposes of calculating historical Basic and Diluted EPS. No dividends have been paid by the Company from October 1, 2016 through December 31, 2020.

(2) Reflects a net tax benefit of $53,424 primarily related to the reduction in the federal corporate tax rate to 21% pursuant to the Tax Cuts and Jobs Act.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

(Dollars in thousands, except per share data or unless otherwise noted)

The following section, referred to as the "MD&A" presents management's discussion and analysis of the Company's financial condition and results of operations and should be read in conjunction with the Consolidated Financial Statements and the notes thereto contained in this Form 10-K. This section of this Form 10-K generally discusses our financial condition and results of operations as of and for the years ended December 31, 2020 and 2019 and year-to-year comparisons between 2020 and 2019. Discussions of our financial condition and results of operations as of and for the year ended December 31, 2018 and year-to-year comparisons between 2019 and 2018 that are not included in this Form 10-K can be found under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on February 21, 2020.

Corporate History

On October 1, 2016, Honeywell International Inc. ("Honeywell") completed the separation of AdvanSix. The separation was completed by Honeywell distributing (the "Distribution") all of the then outstanding shares of common stock of AdvanSix on October 1, 2016 (the "Distribution Date") through a dividend in kind of AdvanSix common stock, par value $0.01 per share, to holders of Honeywell common stock as of the close of business on the record date of September 16, 2016 who held their shares through the Distribution Date (the "Spin-Off").

Business Overview

We produce and sell caprolactam as a commodity product and produce and sell our Nylon 6 resin as both a commoditized and differentiated resin product. Our results of operations are primarily driven by production volume and the spread between the sales prices of our products and the costs of the underlying raw materials built into market-based and value-based pricing models. The global prices for nylon resin typically track a spread over the price of caprolactam, which in turn tracks as a spread over benzene because the key feedstock materials for caprolactam, phenol or cyclohexane, are derived from benzene. This price spread has historically experienced cyclicality as a result of global changes in supply and demand. Generally, Nylon 6 resin prices track the cyclicality of caprolactam prices, although prices set above the spread are achievable when nylon resin manufacturers, like AdvanSix, formulate and produce differentiated nylon resin products. Our differentiated Nylon 6 products are typically valued at a higher level than commodity resin products.

We believe that Nylon 6 end-market growth will continue to generally track global GDP over the long-term. Applications such as engineered plastics and packaging have potential to grow at faster rates given certain macrotrends. Additionally, one of our strategies is to continue developing higher-value, differentiated Nylon 6 products, such as our co-polymer offerings, in current and new customer applications.

We also manufacture, market and sell a number of chemical intermediate products that are derived from the chemical processes within our integrated supply chain. Most significant is acetone, which is used by our customers in the production of adhesives, paints, coatings and solvents. Prices for acetone are influenced by its own supply and demand dynamics but can also be influenced by the underlying move in propylene input costs. We continue to invest in and grow our differentiated product offerings in high-purity applications and high-value intermediates including our oximes-based EZ-Blox™ anti-skinning agent used in paints and Nadone® cyclohexanone, which is a solvent used in various high-value applications.

Our ammonium sulfate is used by customers as a fertilizer containing nitrogen and sulfur, two key crop nutrients. Global prices for ammonium sulfate fertilizer are influenced by several factors including the price of urea, which is the most widely used source of nitrogen-based fertilizer in the world. Other global factors driving ammonium sulfate fertilizer demand are general agriculture trends, including the price of crops. Our ammonium sulfate product is positioned with the added value proposition of sulfur nutrition to increase yields of key crops. In addition, due to its nutrient density, the typical ammonium sulfate product delivers pound for pound the most readily available sulfur and nitrogen to crops than other fertilizers.

We produce ammonium sulfate fertilizer continuously throughout the year as part of our manufacturing process, but quarterly sales experience seasonality based on the timing and length of the growing seasons in North and South America. North America ammonium sulfate prices are typically strongest during second quarter fertilizer application and then typically decline seasonally with new season fill in the third quarter. Due to the ammonium sulfate fertilizer sales cycle, we occasionally build up higher inventory balances because our production is continuous and not tied to seasonal demand for fertilizers. Sales of most of our other products have generally been subject to minimal, or no, seasonality.

We seek to run our production facilities on a nearly continuous basis for maximum efficiency as several of our intermediate products are key feedstock materials for other products in our integrated manufacturing chain. While our integration, scale and range of product offerings make us one of the most efficient manufacturers in our industry, these attributes also expose us to increased risk associated with material disruptions at any one of our production facilities or logistics operations which could impact the overall manufacturing supply chain. Further, although we believe that our sources of supply for our raw materials, including cumene, natural gas and sulfur, are generally robust, it is difficult to predict the impact that shortages, increased costs and related supply chain logistics considerations may have in the future. In order to mitigate the risk of unplanned interruptions, we schedule several planned plant turnarounds each year to conduct routine and major maintenance across our facilities. We also utilize maintenance excellence and mechanical integrity programs, targeted buffer inventory of intermediate chemicals necessary for our manufacturing process, and co-producer swap arrangements, which are intended to mitigate the extent of any production losses as a result of planned and unplanned downtime; however, the mitigation of all or part of any such production impact cannot be assured. For a description of our principal risks, see “Risk Factors" in Item 1A.

Recent Developments

COVID-19

In March 2020, the World Health Organization categorized the novel coronavirus (COVID-19) as a global pandemic with numerous countries around the world declaring national emergencies, including the United States. Since early 2020, COVID-19 has continued to spread rapidly, with most countries and territories worldwide having confirmed cases, and with certain jurisdictions experiencing resurgences. The spread has resulted in authorities implementing numerous measures to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place orders and business shutdowns. The pandemic and these containment measures have had, and are expected to continue to have, a substantial negative impact on businesses around the world and on global, regional and national economies, including disruptions to supply chains, reduced demand and production sales across most industries, declines and volatility within global financial markets, and decreased workforces causing increased unemployment. The continuously evolving nature of this pandemic and the responses to combat the pandemic, such as governmental restrictions on non-essential business and travel, continue to have a negative impact on the United States and global economies. While various jurisdictions have ended, or have implemented policies to phase out, these containment measures, increases in new COVID-19 cases have caused certain jurisdictions to re-implement restrictions.

The U.S. Department of Homeland Security designated our industry as "essential critical infrastructure" during the response to COVID-19 for both public health and safety as well as community well-being. The Company takes its obligation seriously to produce materials that support the broader population, all while maintaining a prioritized focus on the health and safety of its employees and the communities in which it operates, and assuring the continuity of its business operations. As a global provider of products that are key inputs for our customers' processes serving a variety of end-markets, a pandemic presents obstacles that can adversely affect our supply chain effectiveness and efficiencies, our manufacturing operations and customer demand for our products and, ultimately, our financial results. We believe we are positioned to respond to and mitigate the potential impacts of the rapidly evolving market dynamics. For a description of risks in relation to the COVID-19 pandemic, see "Risks Relating to Our Business" under "Risk Factors" in Item 1A.

In the first quarter of 2020, the Company began executing its business continuity plans with dedicated teams chartered to proactively implement measures to mitigate COVID-19 impacts while continuing to operate all of its manufacturing facilities to meet customer demand. In response to COVID-19, the Company took many actions to protect its employees, customers, suppliers, shareholders and surrounding communities including, but not limited to: (i) 100% thermal screening process at all manufacturing facilities and restrictions on non-essential visitors; (ii) telecommuting across all sites, where possible; (iii) prohibiting all non-essential domestic and international business travel; (iv) establishing social distancing while limiting the number of employees in control rooms, labs and in-person meetings; and (v) maintaining policies and practices consistent with CDC and government guidelines including upgraded personal protective equipment, face coverings at all facilities, and exposure management protocols. Our telecommuting policies have been designed to allow for continued operation of non-production business-critical functions, including financial reporting systems and internal controls. The Company has protocols in place at all sites, including on-site medical personnel at manufacturing facilities to actively monitor employees and contractors who report symptoms of or exposure to COVID-19. In addition, the Company has trained a contingent workforce to operate the plants as part of its business continuity planning. The Company continued its execution of these measures at all sites through the fourth quarter of 2020 and into 2021.

We believe our competitive strengths are serving us well during this time including our vertically integrated asset base and global low-cost advantage as well as driving disciplined cost and cash management across the organization with further reductions of capital expenditures and discretionary spending. During the fourth quarter of 2020, the Company continued to support safe and stable operations while serving its customers by adjusting output to changes in mix and demand. From an industry perspective, building and construction demand has improved, particularly in residential applications, however, commercial construction remains soft. Auto demand has also been improving with the U.S. and Europe experiencing a slower recovery, while China and other Asia markets saw a faster rebound. Export demand for textiles out of Asia has been soft, which has had an impact on nylon supply and demand conditions. The nylon product line has seen an improvement in demand domestically as end markets improved from a challenging first half of 2020. Ammonium Sulfate and acetone demand have not been significantly impacted by COVID-19 to date. Ammonium Sulfate has experienced steady demand through the peak second quarter domestic planting season and into the new season fill, while the North American acetone industry supply and demand balance has continued to be favorable following the affirmative final anti-dumping duties and robust demand for isopropyl alcohol (IPA), used for hand sanitizer and other disinfectants, and methyl methacrylate (MMA), used for acrylic screens, and other solvents. As a result of COVID-19, demand reduction for transportation fuels and resultant inventory builds have reduced refinery utilization rates, which the Company continues to monitor as it relates to potential impacts on its supply chain and availability of key raw materials.

The Company's Consolidated Financial Statements reflect estimates and assumptions made by management that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements and reported amounts of revenue and expenses during the reporting periods presented. The Company considered the impact of COVID-19 on the assumptions and estimates used and determined that there was a material impact on the Company's second quarter 2020 results of operations. In particular, the Company experienced lower demand, particularly in nylon, caprolactam and phenol, resulting in a reduction of plant utilization rates and a decrease in overall sales volume (approximately 19%) in the second quarter of 2020 compared to the prior year period, primarily related to global markets and the economic impact of COVID-19. During the third quarter of 2020, the Company experienced an improvement in demand to approximately pre-COVID-19 levels. During the fourth quarter of 2020, the Company experienced greater demand than in the third quarter whereby demand and volume exceeded pre-COVID-19 levels overall as compared to 2019. With states, regions and countries in various phases of re-opening and the continued development and distribution of vaccines for COVID-19, we expect demand to continue to gradually improve through 2021, although there is no assurance demand recovery will continue given the potential for increased restrictions imposed by governments due to a surge in infection rates. We will continue to monitor developments and execute our operational and safety mitigation plans.

The situation surrounding COVID-19 remains fluid and unpredictable, and the potential for a continued material impact on the Company increases the longer the social and economic restrictions which impact the overall level of consumer and business activity in the United States and globally, remain in place or are reinstituted. For this reason, the Company cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on the Company's results of operations, financial position, and liquidity, see below in the MD&A under "Liquidity and Capital Resources" and Part I, Item 1A, "Risk Factors".

The Company continues to evaluate the potential impact of the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), enacted on March 27, 2020 and the Consolidated Appropriations Act, 2021 which was enacted on December 27, 2020. The CARES Act, and other government stimulus programs are intended to provide economic relief resulting from the COVID-19 pandemic which includes, but is not limited to, provisions for taxes, employment related costs, deferral of pension payments and options for liquidity. See "Note 4. Income Taxes" below for further discussion of the CARES Act.

Credit Agreement

On February 19, 2020, the Company entered into Amendment No. 2 to the Credit Agreement to amend the consolidated leverage ratios in order to provide the Company with additional operating flexibility. For a discussion of Amendment No. 2 to the Credit Agreement, please refer to "Note 9. Long-term Debt and Credit Agreement" under "Financial Statements and Supplementary Data" in Item 8.

Anti-Dumping Duty Petitions

On February 19, 2019, the Company announced that it filed anti-dumping duty petitions covering imports of acetone with the International Trade Commission ("ITC") and U.S. Department of Commerce ("Commerce"). The petitions allege that dumped acetone imports into the United States from Belgium, Saudi Arabia, Singapore, South Africa, South Korea, and Spain have caused material injury to the domestic industry. On April 4, 2019, the ITC voted to continue the anti-dumping duty investigations concerning imports of acetone from all such nations other than Saudi Arabia. During the third quarter of 2019, Commerce announced its preliminary affirmative dumping determination regarding imports from Singapore, Spain, Belgium, South Africa and South Korea. On October 21, 2019, Commerce published its final affirmative determination of dumping regarding imports from Singapore and Spain, and on December 10, 2019, the ITC issued its final determination of material injury to the industry by reason of imports from Singapore and Spain. Effective December 20, 2019, Commerce imposed anti-dumping orders and applicable duties on imports of acetone from Singapore and Spain for a five-year period. On February 13, 2020, Commerce published its final affirmative determination of dumping regarding imports from Belgium, South Africa and South Korea and on March 17, 2020, the ITC issued its final determination of material injury to the industry by reason of imports from Belgium, South Africa and South Korea. Effective March 31, 2020, Commerce imposed anti-dumping orders and applicable duties on imports of acetone from Belgium, South Africa and South Korea for a five-year period. The anti-dumping orders are subject to annual administrative review, which may change the applicable level of duties. On May 26, 2020, LG Chem, Ltd., and LG Chem America, Inc., filed a motion with the U.S. Court of International Trade contesting the final determination made by Commerce concerning imports from South Korea, and on June 19, 2020, the Company filed a motion to intervene. The anti-dumping orders applicable to imports from all other sources were not appealed.

2019 Developments

On May 2, 2019, the Company approved the closure of its Pottsville, Pennsylvania films plant as part of its broader strategic efforts to improve the Company's competitive position in providing quality film products and services to its customers. The Company has also announced a strategic alliance with Oben Holdings Group S.A. ("Oben"), a third-party producer of films for the flexible packaging industry, leveraging the Company's sales channels and Nylon 6 resin supply with Oben's new state-of-the-art manufacturing facility. The Company ceased operations at the Pottsville, Pennsylvania plant in July 2019. We recognized a restructuring charge of approximately $11 million during 2019 and do not expect to incur any additional restructuring charges related to the closure. See "Note 18. Restructuring" to the Consolidated Financial Statements included in Item 8 of this Form 10-K for further information.

On May 4, 2018, the Company announced that the Board of Directors (the "Board") authorized a share repurchase program of up to $75 million of the Company's common stock. On February 22, 2019, the Company announced that the Board authorized a share repurchase program of up to an additional $75 million of the Company's common stock, which was in addition to the remaining capacity available under the May 2018 share repurchase program. Repurchases may be made, from time to time, on the open market, including through the use of trading plans intended to qualify under Rule 10b5-1 of the Exchange Act of 1934, as amended (the "Exchange Act"). The size and timing of these repurchases will depend on pricing, market and economic conditions, legal and contractual requirements and other factors. The share repurchase program has no expiration date and may be modified, suspended or discontinued at any time.

On March 13, 2018, a federal search warrant was executed at the Company's Hopewell, Virginia manufacturing facility. On the same date, the Company was separately served with a grand jury subpoena issued by the U.S. District Court for the Eastern District of Virginia, which requested documents related to the Hopewell facility's air emissions and its compliance with the terms of a previously disclosed 2013 consent decree with the federal government and the Commonwealth of Virginia. The Company was notified during the first quarter of 2019 that the U.S. Attorney's Office for the Eastern District of Virginia had closed its investigation and no further action by the Company was required. On May 13, 2019, the Company announced that the United States government notified the Company that the balance of the criminal investigation concluded with no further action required.

Operational Events

On June 24, 2019, the Company announced that it was assessing the potential business impact of the fire that occurred at Philadelphia Energy Solutions' ("PES") refinery in Philadelphia, Pennsylvania. PES was one of multiple suppliers to the Company of cumene, a feedstock material used to produce phenol, acetone and other chemical intermediates. The PES disruption did not have a material impact on second quarter 2019 financial results. The Company incurred an approximately $10 million unfavorable impact to pre-tax income in the second half of 2019, including incremental raw material and logistics costs as well as a modest unfavorable impact from fixed cost absorption. As the PES refinery remains shutdown, the Company submitted a business interruption insurance claim and has realigned its supply chain to ensure the continuity of cumene supply. The Company had an approximately $11 million unfavorable impact to pre-tax income in 2020, associated with its realigned supply chain, which was comparable to full-year impact in 2019.

On March 11, 2019, the Company announced that it declared force majeure on its phenol product line as a result of shortages and delivery delays of its key raw material, cumene. The Company's cumene deliveries were reduced due to weather-related logistics disruptions in the Gulf Coast area and supplier operational constraints. As a result of this force majeure event, phenol production at the Company's Frankford, Pennsylvania facility and caprolactam production at its Hopewell, Virginia facility were reduced. The Company incurred an approximately $6.9 million unfavorable impact to pre-tax income in the first quarter of 2019, including the unfavorable impact of fixed cost absorption and incremental logistics costs. In addition, the Company incurred an approximately $1.4 million unfavorable impact to pre-tax income in the first quarter of 2019 and an approximately $2.3 million unfavorable impact to pre-tax income in the second quarter of 2019 due to lost sales. The Company is no longer on force majeure with phenol customers.

On January 17, 2018, the Company announced that it had experienced a temporary production issue at its Hopewell, Virginia facility related to the severe winter weather ("first quarter 2018 weather event"). As a result of this unplanned interruption, caprolactam and resin production had been reduced at the Hopewell and Chesterfield, Virginia facilities. The Company incurred a $20 million unfavorable impact to pre-tax income in the first quarter of 2018 including the impact of fixed cost absorption, maintenance expense and incremental raw material costs. In addition, the Company incurred an approximately $10 million unfavorable impact to pre-tax income in the first quarter of 2018 due to lost sales. The Company submitted a business interruption insurance claim related to the first quarter 2018 weather event and recorded a benefit of $2.9 million to Cost of goods sold in the fourth quarter of 2018 and $6.6 million and $2.3 million to Cost of goods sold in the first and second quarters of 2019, respectively. The business interruption claim was closed in the second quarter of 2019 with a total recorded benefit of approximately $12 million.

Consolidated Results of Operations for the Years Ended December 31, 2020, 2019 and 2018

(Dollars in thousands)

Sales

	2020	2019	2018
Sales	$ 1,157,917	$ 1,297,393	$ 1,514,984
% change compared with prior period	(10.8)%	(14.4)%	2.7 %

The change in sales is attributable to the following:

	2020 versus 2019	2019 versus 2018
Volume	0.6 %	(3.6)%
Price	(11.4)%	(10.8)%
	(10.8)%	(14.4)%

2020 compared with 2019

Sales decreased in 2020 compared to 2019 by $139.5 million (approximately 11%) due primarily to lower sales prices (approximately 11%) driven primarily by (i) lower prices of raw materials (approximately 7%), following a net decrease in the cost of benzene and propylene (inputs to cumene which is a key feedstock material for our products) and (ii) lower market-based pricing (approximately 5%) in nylon, ammonium sulfate and caprolactam product lines partially offset by increases in chemical intermediates, specifically acetone. Volume showed a slight increase (approximately 1%) due primarily to favorable mix and sales timing related to the ammonium sulfate product line, partially offset by decreases in caprolactam and chemical intermediates related to global markets and the economic impact of COVID-19.

Cost of Goods Sold

	2020	2019	2018
Cost of goods sold	$ 1,024,169	$ 1,161,921	$ 1,340,497
% change compared with prior period	(11.9)%	(13.3)%	7.4 %
Gross margin %	11.6 %	10.4 %	11.5 %

2020 compared with 2019

Costs of goods sold decreased in 2020 compared to 2019 by $137.8 million (approximately 12%) due primarily to (i) lower prices of raw materials, particularly benzene and propylene (approximately 11%), (ii) the net impact of lower plant spend and construction-related expenses, and lower production (approximately 2%) and (iii) the absence of the restructuring charge from the closure of the Pottsville films plant in 2019 (approximately 1%), partially offset by (i) increased sales volume (approximately 1%) and (ii) the absence of insurance proceeds received in 2019 (approximately 1%).

Gross margin percentage increased by approximately 1% in 2020 compared to 2019 due primarily to (i) lower raw material pricing (approximately 4%), (ii) the net favorable impact of lower plant spend and construction-related expenses, and lower production (approximately 1%), (iii) absence of the Pottsville restructuring (approximately 1%), partially offset by lower market based pricing (approximately 5%) and the absence of insurance proceeds (approximately 1%).

Selling, General and Administrative Expenses

	2020	2019	2018
Selling, general and administrative expense	$ 70,870	$ 75,375	$ 81,224
% of sales	6.1 %	5.8 %	5.4 %

2020 compared with 2019

Selling, general and administrative expenses decreased in 2020 compared to 2019 by $4.5 million, or approximately 6%, due primarily to decreased legal expenses, lower IT spending and reduced compensation costs related to performance incentives.

Interest Expense, Net

	2020	2019	2018
Interest Expense, net	$ 7,792	$ 5,454	$ 7,492

2020 compared with 2019

Interest expense, net, increased in 2020 compared to 2019 by $2,338, or approximately 42.9%, due primarily to higher average borrowings and lower amounts of interest capitalized associated with capital projects.

Other Non-operating Expense (Income), Net

	2020	2019	2018
Other non-operating expense (income), net	$ 53	$ 1,295	$ 3

2020 compared with 2019

The decrease in Other non-operating expense (income), net in 2020 compared to 2019 was due primarily to the decrease of severance accruals and environmental remediation costs in the current year.

Income Tax Expense

	2020	2019	2018
Income tax expense	$ 8,956	$ 12,001	$ 19,524
Effective tax rate	16.3 %	22.5 %	22.8 %

On December 22, 2017 the U.S. government passed the Tax Cuts and Jobs Act (the “2017 Act”). In 2017, the Company reasonably estimated the accounting for the effects of the 2017 Act. In 2018, under Staff Accounting Bulletin No. 118 (“SAB 118”), we finalized the accounting for the 2017 Act and our financial statements for the year ended December 31, 2018 reflect certain effects of the 2017 Act including a reduction in the corporate tax rate to 21% from 35% and changes made to executive compensation rules. As a result of the 2017 Act, the Company recorded a reduction in income tax expense of $1,651 during the year ended December 31, 2018.

The CARES Act includes various modifications to current tax law and is intended to provide economic relief in response to the COVID-19 pandemic. One provision included in the CARES Act allows for a five-year carryback of Federal net operating losses (NOLs) generated in tax years beginning in 2018, 2019 and 2020. The Company finalized its 2019 U.S. federal income tax return which reflected a net operating loss, on a tax basis, and certain tax credits which were carried back to earlier tax years. This carryback claim generated a refund of previously paid taxes in the amount of $12.2 million which is recorded in Taxes receivable. We anticipate receiving the refund in the first half of 2021.

The Company's income tax expense for 2020 and 2019 was $8,956 and $12,001, respectively. In the absence of the changes due to the 2017 Act and the related one-time remeasurement of deferred tax assets and liabilities to account for the reduction in the corporate tax rate to 21%, tax expense for 2018 would have been $21,175.

The Company's effective income tax rate for 2020 was lower compared to the U.S. Federal statutory rate of 21% due primarily to the impact of research tax credits as well as an energy tax credit described in more detail in “Note 4. Income Taxes”. This was partially offset by state taxes, executive compensation deduction limitations and a shortfall on the vesting of equity compensation.

The Company's effective income tax rate for 2019 was slightly higher compared to the U.S. Federal statutory rate of 21% due primarily to state taxes and executive compensation deduction limitations, partially offset by the vesting of restricted stock units and research tax credits.

The Company's effective income tax rate for 2018 was higher compared to the U.S. Federal statutory rate of 21% due primarily to state taxes and executive compensation deduction limitations resulting from the 2017 Act, partially offset by income tax benefits associated with the filing of the 2017 U.S. federal income tax return and the related completion of the accounting for the tax impacts of the 2017 Act.

As of December 31, 2020, 2019 and 2018, there were no unrecognized tax benefits recorded by the Company. Although there are no unrecognized income tax benefits, when applicable, the Company’s policy is to report interest expense and penalties related to unrecognized income tax benefits in the income tax provision.

For additional discussion of income taxes and the effective income tax rate, see “Note 4. Income Taxes” in the Notes accompanying the audited Consolidated Financial Statements included in Item 8 of this Form 10-K.

Net Income

	2020	2019	2018
Net income	$ 46,077	$ 41,347	$ 66,244

2020 *compared with 2019*

As a result of the factors described above, net income was $46.1 million in 2020 as compared to $41.3 million in 2019.

Non-GAAP Measures

The following tables set forth the non-GAAP financial measures of EBITDA and EBITDA margin. EBITDA is defined as Net income before Interest, Income taxes and Depreciation and amortization. EBITDA margin is equal to EBITDA divided by Sales. The following tables also present each of these measures as further adjusted. The Company believes these non-GAAP financial measures provide meaningful supplemental information as they are used by the Company’s management to evaluate the Company’s operating performance, enhance a reader’s understanding of the financial performance of the Company, and facilitate a better comparison among fiscal periods and performance relative to its competitors, as the non-GAAP measures exclude items that are not considered core to the Company’s operations.

These non-GAAP results are presented for supplemental informational purposes only and should not be considered a substitute for the financial information presented in accordance with U.S. GAAP. Non-GAAP financial measures should be read only in conjunction with the comparable U.S. GAAP financial measures. The Company’s non-GAAP measures may not be comparable to other companies’ non-GAAP measures.

The following is a reconciliation between the non-GAAP financial measures of EBITDA and EBITDA Margin to their most directly comparable U.S. GAAP financial measure:

(Dollars in thousands, except per share amounts or unless otherwise noted)

	Years Ended December 31,		
	2020	2019	2018
Net income	$ 46,077	$ 41,347	$ 66,244
Interest expense, net	7,792	5,454	7,492
Income tax expense (benefit)	8,956	12,001	19,524
Depreciation and amortization	60,832	56,826	53,233
EBITDA (non-GAAP)	123,657	115,628	146,493
One-time Pottsville restructuring charges (1)	—	(11,020)	—
EBITDA excluding one-time Pottsville restructuring charges (non-GAAP)	$ 123,657	$ 126,648	$ 146,493
Sales	$ 1,157,917	$ 1,297,393	$ 1,514,984
EBITDA margin % (non-GAAP)	10.7 %	8.9 %	9.7 %
EBITDA margin % excluding one-time Pottsville restructuring charges (non-GAAP)	10.7 %	9.8 %	9.7 %

(1) Prior year one-time Pottsville restructuring charges reflect the closure of the Company's Pottsville, Pennsylvania films plant. See "Note 18. Restructuring" to the Consolidated Financial Statements included in Item 8 of this Form 10-K for further information.

The following are reconciliations between the non-GAAP financial measure of Net Income and EPS excluding the one-time net tax benefit to its most directly comparable GAAP financial measure of Net Income and EPS:

	Years Ended December 31,		
	2020	2019	2018
Net Income	$ 46,077	$ 41,347	$ 66,244
One-time net tax benefit (2)	—	—	(1,651)
Net Income excluding one-time net tax benefit	$ 46,077	$ 41,347	$ 64,593

	Years Ended December 31,		
	2020	2019	2018
Basic			
EPS	$ 1.64	$ 1.47	$ 2.20
One-time net tax benefit (2)	—	—	(0.05)
EPS excluding one-time net tax benefit	$ 1.64	$ 1.47	$ 2.15

	Years Ended December 31,		
	2020	2019	2018
Diluted			
EPS	$ 1.64	$ 1.43	$ 2.14
One-time net tax benefit (2)	—	—	(0.05)
EPS excluding one-time net tax benefit	$ 1.64	$ 1.43	$ 2.09

(2) Reflects a net tax benefit primarily related to re-measurement of net deferred tax liability at a lower corporate tax rate pursuant to the 2017 Act. See "Note 4. Income Taxes" in the Notes accompanying the audited Consolidated Financial Statements included in Item 8 of this Form 10-K.

Liquidity and Capital Resources

Liquidity

We believe that cash balances and operating cash flows, together with available capacity under our credit agreement, will provide adequate funds to support our current short-term operating objectives as well as our longer-term strategic plans, subject to the risks and uncertainties outlined below and in the risk factors as previously disclosed in in Item 1A, Risk Factors. Our principal source of liquidity is our cash flow generated from operating activities, which is expected to provide us with the ability to meet the majority of our short-term funding requirements. Our cash flows are affected by capital requirements and production volume, which may be materially impacted by unanticipated events such as unplanned downtime, material disruptions at our production facilities as well as the prices of our raw materials and general economic and industry trends, and customer demand. The Company applies a proactive and disciplined approach to working capital management to optimize cash flow and to enable capital allocation options in support of the Company's strategy. We utilize supply chain financing and trade receivables discount arrangements with third-party financial institutions which enhance liquidity and enable us to efficiently manage our working capital needs. Although we continue to optimize supply chain financing and trade receivable programs in the ordinary course, our utilization of these arrangements, both prior to and during the COVID-19 pandemic, has not had a material impact on our liquidity. In addition, we monitor the third-party depository institutions that hold our cash and cash equivalents. Our emphasis is primarily on the safety of principal and secondarily on maximizing yield on those funds. We diversify our cash and cash equivalents among counterparties to minimize exposure to any one of these entities.

On a recurring basis, our primary future cash needs will be centered on operating activities, working capital, and capital expenditures reflecting disciplined capital deployment and following the completion of several high-return growth and cost savings investments. Capital expenditures are deployed for various ongoing investments and initiatives to improve reliability, yield and quality, expand production capacity and comply with HSE regulations. While the COVID-19 pandemic has created and continues to create volatility in funding markets, we expect that our future cash from operations, together with cash on hand and our access to credit and capital markets, will provide adequate resources to fund our expected operating and financing needs and obligations. Our ability to fund our capital needs, however, will depend on our ongoing ability to generate cash from operations and access to credit and capital markets, both of which are subject to the risk factors previously disclosed in Item 1A, as well as general economic, financial, competitive, regulatory and other factors that are beyond our control.

As of the end of 2020, the Company had approximately $11 million of cash on hand with approximately $149 million of additional capacity available under the revolving credit facility. Given the uncertain environment in light of the COVID-19 pandemic, the Company maintained higher cash balances as a precautionary measure in the second quarter of 2020 for its working capital needs and other general corporate purposes. Cash balances were reduced in the second half of 2020 in order to decrease debt levels and minimize interest cost. The Company's Consolidated Leverage Ratio financial covenant of its credit facility allows it to net up to $75 million of cash with debt. The Second Amendment to the credit facility also provided leverage ratio covenant flexibility in 2020. In response to the current environment, the Company took certain actions to improve liquidity and optimize cash flow in 2020. Capital expenditures were approximately $83 million in 2020, which represents a decrease of approximately $67 million versus 2019, as we continued to prioritize investments and assess opportunities to maximize free cash flow by deferring, or reducing, non-critical repair and maintenance capital expenditures in light of current and anticipated economic conditions. The Company is also driving disciplined cost management across the organization including all discretionary spending. As a result of its actions, the Company executed approximately $26 million in cost reductions in 2020 versus the prior year. Given several of the cost actions were temporal in nature, the Company expects approximately 50% of the expenses to return in 2021.

The CARES Act is intended to provide economic relief resulting from the COVID-19 pandemic and includes, but is not limited to provisions for taxes, employment related costs, deferral of pension funding obligations and options for liquidity. While we continue to evaluate all the impacts and benefits of the CARES Act and the Consolidated Appropriations Act, 2021, the Company deferred payment of approximately $6.5 million of social security taxes in 2020 and anticipates receiving a $12 million federal income tax refund in the first half of 2021. For social security taxes that have been deferred, 50% will be due by December 31, 2021 with the remainder due by December 31, 2022.

We assumed from Honeywell all HSE liabilities and compliance obligations related to the past and future operations of our current business, as well as all HSE liabilities associated with our three current manufacturing locations and the other locations used in our current operations including any cleanup or other liabilities related to any contamination that may have occurred at such locations in the past. Honeywell retained all HSE liabilities related to former business locations or the operation of our former businesses. Although we have ongoing environmental remedial obligations at certain of our facilities, in the past three years, the associated remediation costs have not been material, and we do not expect our known remediation costs to have a material adverse effect on our consolidated financial position and results of operations.

We expect that our primary cash requirements for 2021 will be to fund costs associated with ongoing operations, capital expenditures and amounts related to contractual obligations noted in the tables below. See the items noted below in “Contractual Obligations” and “Capital Expenditures” for more information.

The Company made contributions to the defined benefit pension plan of $8.1 million during the year ended December 31, 2020 sufficient to satisfy pension funding requirements for 2020 under the AdvanSix Retirement Earnings Plan. Cash contributions of $1.7 million and $6.4 million were made in the first and the fourth quarters of 2020, respectively. No cash contributions were made during the second and third quarters of 2020. The Company plans to make $8.0 million to $10.0 million of cash contributions in 2021 and additional contributions in future years sufficient to satisfy pension funding requirements in those periods as outlined in the contractual obligations table.

The Company made cash contributions to the defined contribution plan of $6.1 million and $5.9 million for the years ended December 31, 2020 and 2019, respectively.

On May 4, 2018, the Company announced that the Board authorized a share repurchase program of up to $75 million of the Company’s common stock. On February 22, 2019, the Company announced that the Board authorized a share repurchase program of up to an additional $75 million of the Company's common stock, which was in addition to the remaining capacity available under the May 2018 share repurchase program. Repurchases may be made, from time to time, on the open market, including through the use of trading plans intended to qualify under Rule 10b5-1 of the Exchange Act. The size and timing of these repurchases will depend on pricing, market and economic conditions, legal and contractual requirements and other factors. The share repurchase program has no expiration date and may be modified, suspended or discontinued at any time. The par value of the shares repurchased is applied to Treasury stock and the excess of the purchase price over par value is applied to Additional paid-in capital.

As of December 31, 2020, the Company had repurchased 3,593,912 shares of common stock, including 504,150 shares withheld to cover tax withholding obligations in connection with the vesting of equity awards, for an aggregate of $101.7 million at a weighted average market price of $28.30 per share. As of December 31, 2020, $59.6 million remained available for repurchase under the currently authorized repurchase program. During 2020 and the period January 1, 2021 through February 1, 2021, no additional shares were repurchased under the currently authorized repurchase program.

Credit Agreement

On February 21, 2018 (the “First Amendment Date”), the Company entered into Amendment No. 1 (the “First Amendment”) to the Credit Agreement among the Company, the guarantors, the lenders party thereto and Bank of America, N.A., as administrative agent (the Original Credit Agreement, after giving effect to the First Amendment, the “First Amended and Restated Credit Agreement”).

The credit facilities under the Original Credit Agreement consisted of a senior secured term loan in an aggregate principal amount of $270 million, of which $267 million was outstanding just prior to entering into the First Amendment, and a senior secured revolving credit facility in a principal amount of $155 million. Pursuant to the First Amendment, (i) the term loan facility under the Original Credit Agreement was terminated and the entire outstanding balance of the term loan facility (the “Term Loan”) thereunder was paid in full and (ii) the maximum aggregate principal amount of the senior secured revolving credit facility (the “Revolving Credit Facility”) was increased to $425 million.

On the First Amendment Date, the Company borrowed $242 million under the Revolving Credit Facility. The proceeds of such loans, as well as cash on hand, were used to repay the outstanding Term Loan under the Original Credit Agreement. The Revolving Credit Facility under the First Amended and Restated Credit Agreement has a 5-year term with a scheduled maturity date of February 21, 2023. The First Amendment resulted in an increase in the Revolving Credit Facility to replace the Term Loan and provided increased borrowing flexibility and reduced overall borrowing costs with an approximate 50 basis point reduction in the interest rate spread.

The First Amended and Restated Credit Agreement permits the Company to utilize up to $40 million of the Revolving Credit Facility for the issuance of letters of credit and up to $40 million for swing line loans. The Company has the option to incur incremental term loans and/or increase the amount of the Revolving Credit Facility in an aggregate principal amount for all such incremental term loans and increases of the Revolving Credit Facility of up to the sum of (x) $175 million plus (y) an amount such that the Company’s Consolidated Senior Secured Leverage Ratio (as defined in the First Amended and Restated Credit Agreement) would not be greater than 1.75 to 1.00, in each case, to the extent that any one or more lenders, whether or not currently party to the First Amended and Restated Credit Agreement, commits to be a lender for such amount. Borrowings under the First Amended and Restated Credit Agreement bore interest at a rate equal to either the sum of a base rate plus a margin ranging from 0.50% to 1.50% or the sum of a Eurodollar rate plus a margin ranging from 1.50% to 2.50%, with either such margin varying according to the Company’s Consolidated Leverage Ratio (as defined in the First Amended and Restated Credit Agreement). The Company was also required to pay a commitment fee in respect of unused commitments under the Revolving Credit Facility, if any, at a rate ranging from 0.20% to 0.40% per annum depending on the Company’s Consolidated Leverage Ratio. The initial margin under the First Amended and Restated Credit Agreement was 0.75% for base rate loans and 1.75% for Eurodollar rate loans and the initial commitment fee rate was 0.25% per annum.

The First Amended and Restated Credit Agreement contained customary covenants limiting the ability of the Company and its subsidiaries to, among other things, pay cash dividends, incur debt or liens, redeem or repurchase stock of the Company, enter into transactions with affiliates, make investments, make capital expenditures, merge or consolidate with others or dispose of assets. The First Amended and Restated Credit Agreement also contained financial covenants that required the Company to maintain a Consolidated Interest Coverage Ratio (as defined in the First Amended and Restated Credit Agreement) of not less than 3.00 to 1.00 and to maintain a Consolidated Leverage Ratio of (i) 3.50 to 1.00 or less for the fiscal quarter ending March 31, 2018, through and including the fiscal quarter ending December 31, 2019, (ii) 3.25 to 1.00 or less for the fiscal quarter ending March 31, 2020, through and including the fiscal quarter ending December 31, 2020, (iii) 3.00 to 1.00 or less for the fiscal quarter ending March 31, 2021, through and including the fiscal quarter ending December 31, 2021, and (iv) 2.75 to 1.00 or less for the fiscal quarter ending March 31, 2022 and each fiscal quarter thereafter (subject to the Company's option to elect a consolidated leverage ratio increase in connection with certain acquisitions). If the Company did not comply with the covenants in the First Amended and Restated Credit Agreement, the lenders could have, subject to customary cure rights, required the immediate payment of all amounts outstanding under the Revolving Credit Facility. The Company was compliant with all related covenants at December 31, 2020.

On February 19, 2020, the Company entered into Amendment No. 2 (the "Second Amendment") to the First Amended and Restated Credit Agreement (the First Amended and Restated Credit Agreement, after giving effect to the Second Amendment, the "Second Amended and Restated Credit Agreement").

The Second Amendment amends the consolidated leverage ratio financial covenant of the First Amended and Restated Credit Agreement and requires the Company to maintain a Consolidated Leverage Ratio (as defined in the Second Amended and Restated Credit Agreement) of (i) 3.50 to 1.00 or less for the fiscal quarter ending March 31, 2020, (ii) 4.50 to 1.00 or less for the fiscal quarter ending June 30, 2020, (iii) 4.25 to 1.00 or less for the fiscal quarter ending September 30, 2020, (iv) 3.50 to 1.00 or less for the fiscal quarter ending December 31, 2020, (v) 3.25 to 1.00 or less for the fiscal quarter ending March 31, 2021 through and including the fiscal quarter ending December 31, 2021, and (vi) 3.00 to 1.00 or less for the fiscal quarter ending March 31, 2022 and each fiscal quarter thereafter (subject to the Company's option to elect a consolidated leverage ratio increase in connection with certain acquisitions). The consolidated interest coverage ratio financial covenant of the First Amended and Restated Credit Agreement was not changed and continues to require the Company to maintain a Consolidated Interest Coverage Ratio (as defined in the Second Amended and Restated Credit Agreement) of not less than 3.00 to 1.00. If the Company does not comply with the covenants in the Second Amended and Restated Credit Agreement, the lenders may, subject to customary cure rights, require the immediate payment of all amounts outstanding under the Revolving Credit Facility.

Borrowings under the Second Amended and Restated Credit Agreement bear interest at a rate equal to either the sum of a base rate plus a margin ranging from 0.50% to 2.00% or the sum of a Eurodollar rate plus a margin ranging from 1.50% to 3.00%, with either such margin varying according to the Company's Consolidated Leverage Ratio (as defined in the Second Amended and Restated Credit Agreement). The Company is also required to pay a commitment fee in respect of unused commitments under the credit facility, if any, at a rate ranging from 0.20% to 0.50% per annum depending on the Company's Consolidated Leverage Ratio. The initial margin under the Second Amended and Restated Credit Agreement was 1.25% for base rate loans and 2.25% for Eurodollar rate loans and the applicable commitment fee rate is expected to be 0.35% per annum.

In addition, the Second Amendment also amended certain administrative provisions associated with the LIBOR Successor Rate (as defined in the Second Amended and Restated Credit Agreement).

The obligations under the Second Amended and Restated Credit Agreement are secured by a pledge of assets and liens on substantially all of the assets of AdvanSix.

The Second Amended and Restated Credit Agreement contains customary covenants limiting the ability of the Company and its subsidiaries to, among other things, pay cash dividends, incur debt or liens, redeem or repurchase stock of the Company, enter into transactions with affiliates, make investments, make capital expenditures, merge or consolidate with others or dispose of assets, as well as financial covenants that require the Company to maintain interest coverage and leverage ratios at levels specified in the Second Amended and Restated Credit Agreement. These covenants may limit how we conduct our business, and in the event of certain defaults, our repayment obligations may be accelerated. We were in compliance with all of our covenants at December 31, 2020 and through the date of the filing of this Form 10-K.

The situation surrounding COVID-19 remains fluid and unpredictable, and the potential for a material impact on the Company increases the longer the social and economic restrictions remain in place or are reinstituted, which impacts the overall level of consumer and business activity in the United States and globally. For this reason, the Company cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on the Company's results of operations, financial position, and liquidity. For further information regarding risk and the impact COVID-19 could have on our business, financial condition, results of operations and liquidity, including our ability to comply with financial covenants in our credit facility and our access to, and cost of, capital, see Part 1, Item 1A. "Risk Factors".

The Company had approximately $1.0 million of letter of credit agreements outstanding under the Revolving Credit Facility at December 31, 2020. There was no amount associated with bilateral letters of credit outside the Revolving Credit Facility.

Cash Flow Summary for the Years Ended December 31, 2020, 2019 and 2018

Our cash flows from operating, investing and financing activities for the years ended December 31, 2020, 2019 and 2018, as reflected in the audited Consolidated Financial Statements included in this Form 10-K, are summarized as follows:

	Years Ended December 31,		
	2020	2019	2018
(Dollars in thousands)			
Cash provided by (used for):			
Operating activities	$ 111,847	$ 120,385	$ 173,385
Investing activities	(84,103)	(153,125)	(112,191)
Financing activities	(24,188)	29,982	(106,818)
Net change in cash and cash equivalents	$ 3,556	$ (2,758)	$ (45,624)

2020 compared with 2019

Net cash provided by operating activities decreased by $8.5 million for the year ended December 31, 2020 versus the prior year period due primarily to a $20.2 million unfavorable impact from working capital (comprised of Accounts receivables, Inventories, Accounts payable and Deferred income and customer advances) for the year ended December 31, 2020 versus a $4.4 million unfavorable impact from working capital in the prior year period and a $9.5 million unfavorable cash impact from taxes receivable. These decreases were partially offset by a favorable impact from the timing of payments for Accrued liabilities of $13.9 million for year ended December 31, 2020 versus a $4.6 million impact the same period in the prior year and a $9.2 million favorable impact from deferred income taxes. A majority of the remaining variances were non-cash in nature, such as the 2019 Pottsville restructuring charge, loss on disposal of assets and depreciation and amortization.

Cash used for investing activities decreased by $69.0 million for the year ended December 31, 2020 versus the prior year period due to a decrease in cash paid for capital expenditures driven by disciplined capital deployment following the completion of several high-return growth and cost saving investments.

Cash used for financing activities increased by $54.2 million for the year ended December 31, 2020 versus the prior year due to net payments of $22.0 million for the year ended December 31, 2020 compared to net borrowings of $97.0 million during the prior year, offset by $1.1 million in cash outflows for share repurchases during the year ended December 31, 2020 compared to $62.2 million in cash outflows during the prior year, both of which are described above.

Contractual Obligations

(Dollars in thousands, unless otherwise noted)

	Payments due by period						
Contractual Obligations	Total	2021	2022	2023	2024	2025	Thereafter
Long-term debt – principal repayments [(1)]	$ 275,000	$ —	$ —	$ 275,000	$ —	$ —	$ —
Long-term debt – interest payments [(1)]	20,621	9,625	9,625	1,371	—	—	—
Leases	160,916	35,729	25,787	17,762	15,853	13,247	52,538
Estimated environmental compliance costs [(2)]	3,760	1,610	1,140	690	320	—	—
Purchase obligations [(3)]	328,457	138,464	74,092	10,499	10,362	5,940	89,100
Postretirement benefit obligations [(4)]	42,220	9,110	9,110	8,000	8,000	8,000	—
Total contractual obligations	$ 830,974	$ 194,538	$ 119,754	$ 313,322	$ 34,535	$ 27,187	$ 141,638

(1) Long-term Debt - Principal repayments: refer to "Note 9. Long-term Debt and Credit Agreement" to the Consolidated Financial Statements in Item 8 of this Form 10-K. Interest payments are estimated based on the interest rate applicable as of December 31, 2020.

(2) The payment amounts in the table only reflect the environmental compliance costs which we have accrued as probable and reasonably estimable as of December 31, 2020.

(3) Purchase obligations are entered into with various vendors in the normal course of business, which are consistent with our expected requirements and primarily relate to cumene, oleum, sulfur and natural gas, as well as a long-term agreement for loading, unloading and handling of a portion of our ammonium sulfate export volumes.

(4) Actual contribution payments will depend on several factors, including investment performance and discount rates, timing of benefits and changes in applicable local requirements. The Company plans to make pension plan contributions in future years sufficient to satisfy pension funding requirements in those periods.

Capital Expenditures

Our operations are capital intensive, requiring ongoing investments that have consisted, and are expected to continue to consist, primarily of capital expenditures required to maintain and improve equipment reliability, expand production output, further improve mix, yield and cost position and comply with environmental and safety regulations.

The following table summarizes ongoing and expansion capital expenditures.

	Years Ended December 31,		
	2020	2019	2018
(Dollars in thousands)			
Purchases of property, plant and equipment	$ 82,918	$ 150,322	$ 109,215

Capital expenditures decreased $67.4 million from 2019 to 2020 due to disciplined capital deployment following the completion of several high-return growth and cost saving investments.

For 2021, we expect our total capital expenditures to be approximately $80 million to $90 million. Capital expenditures are deployed for various ongoing investments and initiatives to improve reliability, yield and quality, expand production capacity and comply with HSE regulations.

Off-Balance Sheet Arrangements

At December 31, 2020, 2019 and 2018, the Company did not have any off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of Regulation S-K or financing activities with special-purpose entities. The Company has not guaranteed any debt or commitments of other entities or entered into any options on non-financial assets.

Critical Accounting Policies and Estimates (Dollars in thousands, unless otherwise noted)

The Company’s significant accounting policies are more fully described in "Note 2. Summary of Significant Accounting Policies" to the Consolidated Financial Statements included in Item 8 of this Form 10-K. Management believes that the application of these policies on a consistent basis enables the Company to provide the users of the financial statements with useful and reliable information about the Company’s operating results and financial condition.

The preparation of our Consolidated Financial Statements in conformity with U.S. GAAP is based on the selection and application of accounting policies that require management to make significant estimates and assumptions about the effects of matters that are inherently uncertain and that affect the reported amounts, including, but not limited to, inventory valuations, impairment of goodwill, stock-based compensation, long-term employee benefit obligations, income taxes and environmental matters. Management’s estimates are based on historical experience, facts and circumstances available at the time and various other assumptions that are believed to be reasonable. The Company reviews these matters and reflects changes in estimates as appropriate. Management believes that the following represents some of the more critical judgment areas in the applications of the Company’s accounting policies which could have a material effect on the Company’s financial position, results of operations or cash flows.

Cash and Cash Equivalents – Cash and cash equivalents include cash on hand and on deposit and highly liquid, temporary cash investments with an original maturity to the Company of three months or less. We reduce cash and extinguish liabilities when the creditor receives our payment and we are relieved of our obligation for the liability when checks clear the Company’s bank account. Liabilities to creditors to whom we have issued checks that remain outstanding aggregated $7.2 million at December 31, 2020 and are included in Cash and cash equivalents and Accounts payable in the Consolidated Balance Sheets.

Fair Value Measurement – ASC 820, Fair Value Measurement defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Financial Accounting Standards Board's ("FASB") guidance classifies the inputs used to measure fair value into the following hierarchy:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities
Level 2	Unadjusted quoted prices in active markets for similar assets or liabilities, or
	Unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or Inputs other than quoted prices that are observable for the asset or liability
Level 3	Unobservable inputs for the asset or liability

Derivative Financial Instruments – We minimize our risks from interest and foreign currency exchange rate fluctuations through our normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments. Derivative financial instruments are used to manage risk and are not used for trading or other speculative purposes. Derivative financial instruments that qualify for hedge accounting must be designated and effective as a hedge of the identified risk exposure at the inception of the contract. Accordingly, changes in fair value of the derivative contract must be highly correlated with changes in fair value of the underlying hedged item at inception of the hedge and over the life of the hedge contract.

All derivatives are recorded on the balance sheet as assets or liabilities and measured at fair value. For derivatives designated as hedges of the fair value of assets or liabilities, the changes in fair values of both the derivatives and the hedged items are recorded in current earnings. For derivatives designated as cash flow hedges, the changes in fair value of the derivatives are recorded in Accumulated other comprehensive income (loss) and subsequently recognized in earnings when the hedged items impact earnings. Cash flows of such derivative financial instruments are classified consistent with the underlying hedged item. For derivative instruments that are designated and qualify as a net investment hedge, the derivative's gain or loss is reported as a component of Other comprehensive income (loss) and recorded in Accumulated other comprehensive income (loss). The gain or loss will be subsequently reclassified into net earnings when the hedged net investment is either sold or substantially liquidated.

Inventories – Substantially all of the Company's inventories are valued at the lower of cost or market using the last-in, first-out ("LIFO") method. The Company includes spare and other parts in inventory which are used in support of production or production facilities operations and are valued based on weighted average cost.

Inventories valued at LIFO amounted to $180.1 million and $171.7 million at December 31, 2020 and 2019. Had such LIFO inventories been valued at current costs, their carrying values would have been approximately $35.4 million and $31.6 million higher at December 31, 2020 and 2019.

Property, Plant, Equipment – Property, plant, equipment asset values are recorded at cost, including any asset retirement obligations, less accumulated depreciation. For financial reporting, the straight-line method of depreciation is used over the estimated useful lives of 30 to 50 years for buildings and improvements and 5 to 40 years for machinery and equipment. Our machinery and equipment includes (1) assets used in short production cycles or subject to high corrosion, such as instrumentation, controls and insulation systems with useful lives up to 15 years, (2) standard plant assets, such as boilers and railcars, with useful lives ranging from 15 to 30 years and (3) major process equipment that can be used for long durations with effective preventative maintenance and repair, such as cooling towers, compressors, tanks and turbines with useful lives ranging from 30 to 40 years. Recognition of the fair value of obligations associated with the retirement of tangible long-lived assets is required when there is a legal obligation to incur such costs. Upon initial recognition of a liability, the cost is capitalized as part of the related long-lived asset and depreciated over the corresponding asset's useful life.

Repairs and maintenance, including planned major maintenance, are expensed as incurred. Costs which materially add to the value of the asset or prolong its useful life are capitalized and the replaced assets are retired.

Goodwill – The Company had goodwill of $15.0 million as of December 31, 2020 and 2019. Goodwill is subject to impairment testing annually as of March 31, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. Management first assesses qualitative factors as described in ASC 350 to determine whether it is necessary to perform the quantitative goodwill impairment test. Potential impairment is identified by comparing the fair value of a reporting unit to the carrying value, including goodwill. In the first quarter 2020, the Company concluded that, due to the negative effects of the COVID-19 pandemic on revenue and profitability, a triggering event existed for the Company's reporting unit as of March 31, 2020. Fair value for the reporting unit was determined based on a combination of the discounted future cash flow model (income approach) and the application of current market multiples for comparable publicly-traded companies (market approach). Under the income approach, the fair value of the reporting unit is estimated based on the discounted present value of the projected future cash flows. Management's cash flow projections for the reporting unit included significant judgements and assumptions, including revenue growth rate, EBITDA margin and WACC rate. Under the market approach, management uses selected financial information of publicly-traded companies that compare to the reporting unit to derive a market-based multiple. The Company completed its annual goodwill impairment test as of March 31, 2020 and, based on the results of the Company's assessment, we have concluded that the estimated fair value of the reporting unit was substantially in excess of its carrying value resulting in no impairment. Although management believes its estimate of fair value is reasonable, it is dependent on numerous economic and business assumptions and reflects management's best estimates at a particular point in time. Changes in the factors and assumptions used in assessing potential impairments can have a significant impact on the existence and magnitude of impairments, as well as the time in which such impairments are recognized. If future financial performance falls below our expectations or there are negative revisions to significant assumptions, or if our market capitalization declines, and if such a decline becomes indicative that the fair value of our reporting unit has declined below its carrying value, we may need to record a material, non-cash goodwill impairment charge in a future period.

Revenue Recognition – The Company recognizes revenue upon the transfer of control of goods or services to customers at amounts that reflect the consideration expected to be received. AdvanSix primarily recognizes revenues when title and control of the product transfers from the Company to the customer. Outbound shipping costs incurred by the Company are not included in revenues but are reflected as freight expense in Costs of goods sold in the Consolidated Statements of Operations.

Sales of our products to customers are made under a purchase order, and in certain cases in accordance with the terms of a master services agreement. These agreements typically contain formula-based pass-through pricing tied to key feedstock materials and volume ranges, but often do not specify the goods, including the quantities thereof, to be transferred. Certain master services agreements (including with respect to our largest customer) may contain minimum purchase volumes which can be satisfied by the customer on a periodic basis by choosing from various products offered by the Company. In these cases, a performance obligation is created when a customer submits a purchase order for a specific product at a specified price, typically providing for delivery within the next 60 days. Management considers the performance obligation with respect to such purchase order satisfied at the point in time when control of the product is transferred to the customer, which is indicated by shipment of the product and transfer of title and risk of loss to the customer. Transfer of control to the customer occurs through various modes of shipment, including trucks, railcars, and vessels, and follows a variety of commercially acceptable shipping or destination point terms pursuant to the arrangement with the customer. Variable consideration is estimated for future volume rebates and early pay discounts on certain products and product returns. The Company records variable consideration as an adjustment to the sale transaction price. Since variable consideration is generally settled within one year, the time value of money is not significant.

The Company applies the practical expedient in Topic 606 and does not include disclosures regarding remaining performance obligations that have original expected durations of one year or less, or amounts for variable consideration allocated to wholly-unsatisfied performance obligations or wholly-unsatisfied distinct goods that form part of a single performance obligation, if any.

The Company also utilizes the practical expedient in Topic 606 and does not include an adjustment for the effects of a significant financing component given the expected period duration of one year or less.

Environmental – The Company accrues costs related to environmental matters when it is probable that we have incurred a liability related to a contaminated site and the amount can be reasonably estimated.

Stock-Based Compensation Plans – The principal awards issued under our stock-based compensation plans, which are described in "Note 16. Stock-Based Compensation Plans" to the Consolidated Financial Statements included in Item 8 of this Form 10-K, are non-qualified stock options, performance share units and restricted stock units. The cost for such awards is measured at the grant date based on the fair value of the award. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods (generally the vesting period of the equity award) and is included in selling, general and administrative expenses. Forfeitures are estimated at the time of grant to recognize expense for those awards that are expected to vest and are based on our historical forfeiture rates.

Pension Benefits – We have a defined benefit plan covering certain employees primarily in the U.S. The benefits are accrued over the employees' service periods. We use actuarial methods and assumptions in the valuation of defined benefit obligations and the determination of net periodic pension income or expense. Differences between actual and expected results or changes in the value of defined benefit obligations and fair value of plan assets, if any, are not recognized in earnings as they occur but rather systematically over subsequent periods when net actuarial gains or losses are in excess of 10% of the greater of the fair value of plan assets or the plan's projected benefit obligation.

A 25 basis point increase in the discount rate would result in a decrease of approximately $0.5 million to the net periodic benefit cost for 2021, while a 25 basis point decrease in the discount rate would result in an increase of approximately $0.7 million to the net periodic benefit cost for 2021. The resulting impact on the pension benefit obligation would be a decrease of $3.5 million and an increase of $3.8 million, respectively.

Income Taxes – We account for income taxes pursuant to the asset and liability method which requires us to recognize current tax liabilities or receivables for the amount of taxes we estimate are payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts and their respective tax bases of assets and liabilities and the expected benefits of net operating loss and credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period enacted. A valuation allowance is provided when it is more likely than not that a portion or all of a deferred tax asset will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income and the reversal of deferred tax liabilities during the period in which related temporary differences become deductible.

We adopted the provisions of ASC 740 related to the accounting for uncertainty in income taxes recognized in an enterprise's consolidated financial statements. ASC 740 prescribes a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns.

The benefit of tax positions taken or expected to be taken in our income tax returns are recognized in the financial statements if such positions are more likely than not of being sustained upon examination by taxing authorities. Differences between tax positions taken or expected to be taken in a tax return and the benefit recognized and measured pursuant to the interpretation are referred to as "unrecognized benefits". A liability is recognized (or amount of net operating loss carryover or amount of tax refundable is reduced) for an unrecognized tax benefit because it represents an enterprise's potential future obligation to the taxing authority for a tax position that was not recognized as a result of applying the provisions of ASC 740. Interest costs and related penalties related to unrecognized tax benefits are required to be calculated, if applicable. Our policy is to classify tax related interest and penalties, if any, as a component of income tax expense. No interest or penalties related to unrecognized income tax benefits were recorded during the years ended December 31, 2020, 2019 and 2018. As of December 31, 2020 and 2019, no liability for unrecognized tax benefits was required to be reported. We do not expect any significant changes in our unrecognized tax benefits in the next year.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of US GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the 2017 Act. SAB 118 provides guidance for registrants under three scenarios where the measurement of certain tax items is either complete, can be reasonably estimated or cannot be reasonably estimated. The Company has completed its evaluation of the 2017 Act and the impacts of those items have been reflected in our Consolidated Financial Statements. The impacts of those changes are disclosed in "Note 4. Income Taxes" to the Consolidated Financial Statements included in Item 8 of this Form 10-K.

Leases – The Company enters into agreements to lease transportation equipment, storage facilities, office space, dock access and other equipment. Operating leases have initial terms of up to 20 years with some containing renewal options subject to customary conditions.

An arrangement is considered to be a lease if the agreement conveys the right to control the use of the identified asset in exchange for consideration.

Operating leases, which are reported as Operating lease right-of-use assets, and Operating lease liabilities – short-term and Operating lease liabilities – long-term are included in our Consolidated Balance Sheets. Finance leases are included as a component of Property, plant and equipment – net, Accounts payable and Other liabilities in our Consolidated Balance Sheets.

The Company adopted ASU 2016-02, Leases (Topic 842) effective January 1, 2019 and has elected the following practical expedients available in Topic 842:

- the package of three expedients which allows the Company to not re-assess (i) whether any expired or existing contracts are, or contain, leases, (ii) lease classification for any expired or existing leases, and (iii) initial direct costs for any expired or existing leases;
- the short-term lease practical expedient, which allows the Company to exclude leases with an initial term of 12 months or less ("short-term leases") from recognition in the unaudited Consolidated Balance Sheets;
- the bifurcation of lease and non-lease components practical expedients, which did not require the Company to bifurcate lease and non-lease components for real estate leases; and
- the land easements practical expedient, which allows the Company to carry forward the accounting treatment for land easements on existing agreements.

Earnings Per Share – Basic earnings per share is based on the weighted average number of common shares outstanding. Diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common shares outstanding.

Use of Estimates – The preparation of the Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in the Consolidated Financial Statements and related disclosures in the accompanying Notes. Actual results could differ from those estimates. Estimates and assumptions are periodically reviewed and the effects of changes are reflected in the Consolidated Financial Statements in the period they are determined to be necessary.

Recent Accounting Pronouncements

See “Note 2. Summary of Significant Accounting Policies” to the Consolidated Financial Statements included in Item 8 of this Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

Our exposure to risk based on changes in interest rates relates primarily to our Second Amended and Restated Credit Agreement. The Second Amended and Restated Credit Agreement bears interest at floating rates. For variable rate debt, interest rate changes generally do not affect the fair market value of such debt assuming all other factors remain constant, but do impact future earnings and cash flows. Accordingly, we may be exposed to interest rate risk on borrowings under the Second Amended and Restated Credit Agreement.

The Company has entered into two interest rate swap agreements for a total notional amount of $100 million to exchange floating for fixed rate interest payments for our LIBOR-based borrowings.

The interest rate swaps had a fair value of zero at inception and were effective November 30, 2018 and July 31, 2019 with respective maturity dates of November 30, 2021 and February 21, 2023. These interest rate swaps have been designated as cash flow hedges and convert the Company's interest rate payments on the first $100 million of variable-rate, 1-month LIBOR-based debt to a fixed interest rate. As a result of these interest rate swaps, interest payments on approximately 36% of our borrowings, as of December 31, 2020, have been swapped from floating rate to fixed rate for the life of the swaps, without an exchange of the underlying principal amount.

A hedge effectiveness assessment was completed by comparing the critical terms of the hedged items with the hedging instruments, and also by reviewing the credit standing of the counterparties. As of December 31, 2020, it was determined that the critical terms continued to exactly match, and that the counterparties still had the ability to honor their obligations. As a result, the hedges continue to be deemed effective.

Based on current borrowing levels at December 31, 2020, net of the interest rate swap, a 25-basis point fluctuation in interest rates for the year ended December 31, 2020 would have resulted in an increase or decrease to our interest expense of approximately $0.4 million.

See “Note 12. Derivative and Hedging Instruments” to the Consolidated Financial Statements included in this Form 10-K, for a discussion relating to credit and market, commodity price and interest rate risk management.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of AdvanSix Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of AdvanSix Inc. and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of operations, of comprehensive income, of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2020, 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, 2020, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

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

Change in Accounting Principle

As discussed in Note 2 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.

Goodwill Impairment Assessment

As described in Note 2 to the consolidated financial statements, the Company's goodwill balance was $15 million as of December 31, 2020. Goodwill is subject to impairment testing annually as of March 31, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. Management first assesses qualitative factors to determine whether it is necessary to perform the quantitative goodwill impairment test. Potential impairment is identified by comparing the fair value of a reporting unit to the carrying value, including goodwill. In the first quarter of 2020, the Company concluded that due to the negative effects of the COVID-19 pandemic on revenue and profitability, a triggering event existed for the Company's reporting unit as of March 31, 2020, and therefore performed a quantitative assessment. Fair value for the reporting unit was determined based on a combination of the discounted future cash flow model (income approach) and the application of current market multiples for comparable publicly-traded companies (market approach). Under the income approach, the fair value of the reporting unit is estimated based on the discounted present value of the projected future cash flows. Management's cash flow projections for the reporting unit included significant judgments and assumptions, including revenue growth rate, EBITDA margin, and WACC rate. Under the market approach, management uses selected financial information of publicly-traded companies that compare to the reporting unit to derive a market-based multiple.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment is a critical audit matter are (i) the significant judgment by management when determining the fair value of the reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the revenue growth rate, EBITDA margin, and WACC rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

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 management's goodwill impairment assessment, including controls over the valuation of the reporting unit. These procedures also included, among others (i) testing management's process for determining the fair value of the reporting unit; (ii) evaluating the appropriateness of the income and market approaches; (iii) testing the completeness and accuracy of underlying data used in the income and market approaches; and (iv) evaluating the significant assumptions used by management related to the revenue growth rate, EBITDA margin, and WACC rate. Evaluating management's assumptions related to the revenue growth rate and EBITDA margin involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of (i) the Company's income and market approaches and (ii) the WACC rate assumption.

/s/ PricewaterhouseCoopers LLP
Florham Park, New Jersey
February 19, 2021

We have served as the Company's auditor since 2015.

ADVANSIX INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in thousands, except share and per share amounts)

	Years Ended December 31,		
	2020	2019	2018
Sales	$ 1,157,917	$ 1,297,393	$ 1,514,984
Costs, expenses and other:			
Costs of goods sold	1,024,169	1,161,921	1,340,497
Selling, general and administrative expenses	70,870	75,375	81,224
Interest expense, net	7,792	5,454	7,492
Other non-operating expense (income), net	53	1,295	3
Total costs, expenses and other	1,102,884	1,244,045	1,429,216
Income before taxes	55,033	53,348	85,768
Income tax expense	8,956	12,001	19,524
Net income	$ 46,077	$ 41,347	$ 66,244
Earnings per common share			
Basic	$ 1.64	$ 1.47	$ 2.20
Diluted	$ 1.64	$ 1.43	$ 2.14
Weighted average common shares outstanding			
Basic	28,048,726	28,122,288	30,172,050
Diluted	28,157,062	28,898,836	30,978,291

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

ADVANSIX INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Dollars in thousands)

	Years Ended December 31,		
	2020	**2019**	**2018**
Net income	$ 46,077	$ 41,347	$ 66,244
Foreign exchange translation adjustment	(49)	(9)	(25)
Cash-flow hedges	(1,028)	(673)	(633)
Pension obligation adjustments	(5,604)	(6,295)	7,230
Other comprehensive income (loss), net of tax	(6,681)	(6,977)	6,572
Comprehensive income	$ 39,396	$ 34,370	$ 72,816

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

ADVANSIX INC.
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share and per share amounts)

	December 31, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 10,606	$ 7,050
Accounts and other receivables – net	123,554	104,613
Inventories – net	180,085	171,710
Taxes receivable	12,289	2,047
Other current assets	6,969	5,117
Total current assets	333,503	290,537
Property, plant and equipment – net	765,469	755,881
Operating lease right-of-use assets	114,484	135,985
Goodwill	15,005	15,005
Other assets	34,946	38,561
Total assets	$ 1,263,407	$ 1,235,969
LIABILITIES		
Current liabilities:		
Accounts payable	$ 190,227	$ 205,911
Accrued liabilities	41,152	28,114
Operating lease liabilities – short-term	29,279	38,005
Deferred income and customer advances	26,379	19,696
Total current liabilities	287,037	291,726
Deferred income taxes	125,575	110,071
Operating lease liabilities – long-term	85,605	98,347
Line of credit – long-term	275,000	297,000
Postretirement benefit obligations	39,168	32,410
Other liabilities	6,899	5,537
Total liabilities	819,284	835,091
COMMITMENTS AND CONTINGENCIES (Note 13)		
STOCKHOLDERS' EQUITY		
Common stock, par value $0.01; 200,000,000 shares authorized; 31,627,139 shares issued and 28,033,227 outstanding at December 31, 2020; 31,423,898 shares issued and 27,914,777 outstanding at December 31, 2019	316	314
Preferred stock, par value $0.01; 50,000,000 shares authorized; 0 shares issued and outstanding at December 31, 2020 and 2019	—	—
Treasury stock at par (3,593,912 shares at December 31, 2020; 3,509,121 shares at December 31, 2019)	(36)	(35)
Additional paid-in capital	184,732	180,884
Retained earnings	275,243	229,166
Accumulated other comprehensive loss	(16,132)	(9,451)
Total stockholders' equity	444,123	400,878
Total liabilities and stockholders' equity	$ 1,263,407	$ 1,235,969

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

ADVANSIX INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Years Ended December 31,		
	2020	**2019**	**2018**
Cash flows from operating activities:			
Net income	$ 46,077	$ 41,347	$ 66,244
Adjustments to reconcile net income to net cash (used for) provided by operating activities:			
Depreciation and amortization	60,832	56,826	53,233
Loss on disposal of assets	696	5,190	1,992
Deferred income taxes	17,611	8,442	9,558
Stock based compensation	4,902	8,349	10,131
Accretion of deferred financing fees	553	427	1,802
Restructuring charges	—	11,020	—
Changes in assets and liabilities:			
Accounts and other receivables	(18,990)	54,383	28,581
Inventories	(8,375)	(35,567)	(7,974)
Taxes receivable	(10,242)	(707)	7,131
Accounts payable	(1,337)	(20,333)	2,280
Accrued liabilities	13,892	(4,561)	(6,111)
Deferred income and customer advances	8,456	(2,860)	5,362
Other assets and liabilities	(2,228)	(1,571)	1,156
Net cash provided by operating activities	111,847	120,385	173,385
Cash flows from investing activities:			
Expenditures for property, plant and equipment	(82,918)	(150,322)	(109,215)
Other investing activities	(1,185)	(2,803)	(2,976)
Net cash used for investing activities	(84,103)	(153,125)	(112,191)
Cash flows from financing activities:			
Payments of long-term debt	—	—	(266,625)
Borrowings from line of credit	364,000	419,250	345,000
Payments of line of credit	(386,000)	(322,250)	(145,000)
Payment of line of credit facility fees	(425)	—	(1,361)
Principal payments of finance leases	(710)	(4,839)	(308)
Purchase of treasury stock	(1,055)	(62,196)	(38,524)
Issuance of common stock	2	17	—
Net cash provided by (used for) financing activities	(24,188)	29,982	(106,818)
Net change in cash and cash equivalents	3,556	(2,758)	(45,624)
Cash and cash equivalents at beginning of year	7,050	9,808	55,432
Cash and cash equivalents at the end of year	$ 10,606	$ 7,050	$ 9,808
Supplemental non-cash investing activities:			
Capital expenditures included in accounts payable	$ 6,178	$ 21,594	$ 27,258
Supplemental cash activities:			
Cash paid for interest	$ 7,290	$ 5,201	$ 5,855
Cash paid for income taxes	$ 2,005	$ 6,993	$ 7,315

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

ADVANSIX INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Dollars in thousands)

	Common Stock		Additional Paid-In Capital	Retained Earnings (Accumulated Deficit)	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Equity
	Shares	Amount					
Balance at December 31, 2017	**30,482,966**	**$ 305**	**$ 263,081**	**$ 121,985**	**$ —**	**$ (9,046)**	**$ 376,325**
Net Income	—	—	—	66,244	—	—	66,244
Comprehensive income							
Foreign exchange translation adjustments	—	—	—	—	—	(25)	(25)
Cash-flow hedges	—	—	—	—	—	(633)	(633)
Pension obligation adjustments	—	—	—	(410)	—	7,230	6,820
Total comprehensive income (loss), net of tax	—	—	—	(410)	—	6,572	6,162
Issuance of common stock	72,749	1	—	—	—	—	1
Acquisition of treasury stock (1,210,714 shares)		—	(38,513)	—	(12)	—	(38,525)
Stock-based compensation	—	—	10,131	—	—	—	10,131
Balance at December 31, 2018	**30,555,715**	**306**	**234,699**	**187,819**	**(12)**	**(2,474)**	**420,338**
Net Income	—	—	—	41,347	—	—	41,347
Comprehensive income							
Foreign exchange translation adjustments	—	—	—	—	—	(9)	(9)
Cash-flow hedges	—	—	—	—	—	(673)	(673)
Pension obligation adjustments	—	—	—	—	—	(6,295)	(6,295)
Other comprehensive income (loss), net of tax	—	—	—	—	—	(6,977)	(6,977)
Issuance of common stock	868,183	8	9	—	—	—	17
Acquisition of treasury shares (2,298,407 shares)		—	(62,173)	—	(23)	—	(62,196)
Stock-based compensation	—	—	8,349	—	—	—	8,349
Balance at December 31, 2019	**31,423,898**	**314**	**180,884**	**229,166**	**(35)**	**(9,451)**	**400,878**
Net Income	—	—	—	46,077	—	—	46,077
Comprehensive income							
Foreign exchange translation adjustments	—	—	—	—	—	(49)	(49)
Cash-flow hedges	—	—	—	—	—	(1,028)	(1,028)
Pension obligation adjustments	—	—	—	—	—	(5,604)	(5,604)
Other comprehensive income (loss), net of tax	—	—	—	—	—	(6,681)	(6,681)
Issuance of common stock	203,241	2	—	—	—	—	2
Acquisition of treasury shares (84,791 shares)		—	(1,054)	—	(1)	—	(1,055)
Stock-based compensation	—	—	4,902	—	—	—	4,902
Balance at December 31, 2020	**31,627,139**	**$ 316**	**$ 184,732**	**$ 275,243**	**$ (36)**	**$ (16,132)**	**$ 444,123**

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

ADVANSIX INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands, except share and per share amounts or unless otherwise noted)

Note 1. Organization, Operations and Basis of Presentation

Description of Business

AdvanSix Inc. ("AdvanSix", the "Company", "we" or "our") plays a critical role in global supply chains, innovating and delivering essential products for our customers in a wide variety of end markets and applications that touch people's lives, such as building and construction, fertilizers, plastics, solvents, packaging, paints, coatings, adhesives and electronics. Our reliable and sustainable supply of quality products emerges from the vertically integrated value chain of our three U.S.-based manufacturing facilities. AdvanSix strives to deliver best-in-class customer experiences and differentiated products in the industries of nylon solutions, chemical intermediates, and plant nutrients, guided by our core values of Safety, Integrity, Accountability and Respect.

We evaluated segment reporting in accordance with Accounting Standards Codification Topic ("ASC") 280. We concluded that AdvanSix is a single operating segment and a single reportable segment based on the operating results available which are evaluated regularly by the chief operating decision maker ("CODM") to make decisions about resource allocation and performance assessment. AdvanSix operations are managed as one integrated process spread across three manufacturing sites, including centralized supply chain and procurement functions. The production process is dependent upon one key raw material, cumene, as the input to the manufacturing of all finished goods produced for sale through the sales channels and end-markets the Company serves. Production rates and output volumes are managed across all three plants jointly to align with the overall Company operating plan. The CODM makes operational performance assessments and resource allocation decisions on a consolidated basis, inclusive of all of the Company's products.

AdvanSix operates through three integrated U.S.-based manufacturing sites located in Frankford, Pennsylvania, and Hopewell and Chesterfield, Virginia. The Company's headquarters is located in Parsippany, New Jersey.

Corporate History

On October 1, 2016, Honeywell International Inc. ("Honeywell") completed the separation of AdvanSix. The separation was completed by Honeywell distributing (the "Distribution") all of the then outstanding shares of common stock of AdvanSix on October 1, 2016 (the "Distribution Date") through a dividend in kind of AdvanSix common stock, par value $0.01 per share, to holders of Honeywell common stock as of the close of business on the record date of September 16, 2016 who held their shares through the Distribution Date (the "Spin-Off").

COVID-19

In March 2020, the World Health Organization categorized the novel coronavirus (COVID-19) as a global pandemic with numerous countries around the world declaring national emergencies, including the United States. Since early 2020, COVID-19 has continued to spread rapidly, with most countries and territories worldwide having confirmed cases, and with certain jurisdictions experiencing resurgences. The spread has resulted in authorities implementing numerous measures to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place orders and business shutdowns. The pandemic and these containment measures have had, and are expected to continue to have, a substantial negative impact on businesses around the world and on global, regional and national economies, including disruptions to supply chains, reduced demand and production sales across most industries, declines and volatility within global financial markets, and decreased workforces causing increased unemployment. The continuously evolving nature of this pandemic and the responses to combat the pandemic, such as governmental restrictions on non-essential business and travel, continue to have a negative impact on the United States and global economies. While various jurisdictions have ended, or have implemented policies to phase out, these containment measures, increases in new COVID-19 cases have caused certain jurisdictions to re-implement restrictions.

The Company's Consolidated Financial Statements reflect estimates and assumptions made by management that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements and reported amounts of revenue and expenses during the reporting periods presented. The Company considered the impact of COVID-19 on the assumptions and estimates used and determined that there was a material impact on the Company's second quarter 2020 results of operations. In particular, the Company experienced lower demand, particularly in nylon, caprolactam and phenol, resulting in a reduction of plant utilization rates and a decrease in overall sales volume (approximately 19%) in the second quarter of

2020 compared to the prior year period, primarily related to global markets and the economic impact of COVID-19. During the third quarter of 2020, the Company had experienced an improvement in demand to approximately pre-COVID-19 levels. During the fourth quarter of 2020, the Company experienced even greater demand than in the previous quarter whereby demand and volume exceeded pre-COVID-19 levels overall as compared to 2019. With states, regions and countries in various phases of re-opening, we expect demand to continue to gradually improve through 2021, although there is no assurance demand recovery will continue given the potential for increased restrictions imposed by governments due to a surge in infection rates. We will continue to monitor developments and execute our operational and safety mitigation plans.

The situation surrounding COVID-19 remains fluid and unpredictable, and the potential for a continued material impact on the Company increases the longer the social and economic restrictions which impact the overall level of consumer and business activity in the United States and globally, remain in place or are reinstituted. For this reason, the Company cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on the Company's results of operations, financial position, and liquidity.

Basis of Presentation

Unless the context otherwise requires, references in these Notes to the Consolidated Financial Statements to "we," "us," "our," "AdvanSix" and the "Company" refer to AdvanSix Inc. and its consolidated subsidiaries after giving effect to the Spin-Off. All intercompany transactions have been eliminated.

Note 2. Summary of Significant Accounting Policies

Accounting Principles – The financial statements and accompanying Notes are prepared in accordance with accounting principles generally accepted in the United States of America. The following is a description of AdvanSix's significant accounting policies.

Principles of Consolidation – The Consolidated Financial Statements include the accounts of AdvanSix and all of its subsidiaries in which a controlling financial interest is maintained. Our consolidation policy requires equity investments that we exercise significant influence over but do not control the investee and are not the primary beneficiary of the investee's activities to be accounted for using the equity method. Investments through which we are not able to exercise significant influence over the investee and which we do not have readily determinable fair values are accounted for under the cost method. All intercompany transactions and balances are eliminated in consolidation.

Cash and Cash Equivalents – Cash and cash equivalents include cash on hand and on deposit and highly liquid, temporary cash investments with an original maturity to the Company of three months or less. We reduce cash and extinguish liabilities when the creditor receives our payment and we are relieved of our obligation for the liability when checks clear the Company's bank account. Liabilities to creditors to whom we have issued checks that remain outstanding aggregated $7.2 million at December 31, 2020 and are included in Cash and cash equivalents and Accounts payable in the Consolidated Balance Sheets.

Fair Value Measurement – ASC 820, Fair Value Measurement defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Financial Accounting Standards Board's ("FASB") guidance classifies the inputs used to measure fair value into the following hierarchy:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities
Level 2	Unadjusted quoted prices in active markets for similar assets or liabilities, or
	Unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or Inputs other than quoted prices that are observable for the asset or liability
Level 3	Unobservable inputs for the asset or liability

Derivative Financial Instruments – We minimize our risks from interest and foreign currency exchange rate fluctuations through our normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments. Derivative financial instruments are used to manage risk and are not used for trading or other speculative purposes. Derivative financial instruments that qualify for hedge accounting must be designated and effective as a hedge of the identified risk exposure at the inception of the contract. Accordingly, changes in fair value of the derivative contract must be highly correlated with changes in fair value of the underlying hedged item at inception of the hedge and over the life of the hedge contract.

All derivatives are recorded on the balance sheet as assets or liabilities and measured at fair value. For derivatives designated as hedges of the fair value of assets or liabilities, the changes in fair values of both the derivatives and the hedged items are recorded in current earnings. For derivatives designated as cash flow hedges, the changes in fair value of the derivatives are recorded in Accumulated other comprehensive income (loss) and subsequently recognized in earnings when the hedged items impact earnings. Cash flows of such derivative financial instruments are classified consistent with the underlying hedged item. For derivative instruments that are designated and qualify as a net investment hedge, the derivative's gain or loss is reported as a component of Other comprehensive income (loss) and recorded in Accumulated other comprehensive income (loss). The gain or loss will be subsequently reclassified into net earnings when the hedged net investment is either sold or substantially liquidated.

Commodity Price Risk Management – The Company's exposure to market risk for commodity prices can result in changes in our cost of production. We primarily mitigate our exposure to commodity price risk by using long-term, formula-based price contracts with our suppliers and formula-based price agreements with customers. Our customer agreements provide for price adjustments based on relevant market indices and raw material prices, and generally they do not include take-or-pay terms. Instead, each customer agreement, the majority of which have a term of at least one year, is typically determined by monthly or quarterly volume estimates. We may also enter into forward commodity contracts with third parties designated as hedges of anticipated purchases of several commodities. Forward commodity contracts are marked-to-market, with the resulting gains and losses recognized in earnings, in the same category as the items being hedged, when the hedged transaction is recognized. At December 31, 2020 and 2019, we had no contracts with notional amounts related to forward commodity agreements.

Inventories – Substantially all of the Company's inventories are valued at the lower of cost or market using the last-in, first-out ("LIFO") method. The Company includes spare and other parts in inventory which are used in support of production or production facilities operations and are valued based on weighted average cost.

Inventories valued at LIFO amounted to $180.1 million and $171.7 million at December 31, 2020 and 2019. Had such LIFO inventories been valued at current costs, their carrying values would have been approximately $35.4 million and $31.6 million higher at December 31, 2020 and 2019.

Property, Plant, Equipment – Property, plant, equipment asset values are recorded at cost, including any asset retirement obligations, less accumulated depreciation. For financial reporting, the straight-line method of depreciation is used over the estimated useful lives of 30 to 50 years for buildings and improvements and 5 to 40 years for machinery and equipment. Our machinery and equipment includes (1) assets used in short production cycles or subject to high corrosion, such as instrumentation, controls and insulation systems with useful lives up to 15 years, (2) standard plant assets, such as boilers and railcars, with useful lives ranging from 15 to 30 years and (3) major process equipment that can be used for long durations with effective preventative maintenance and repair, such as cooling towers, compressors, tanks and turbines with useful lives ranging from 5 to 40 years. Recognition of the fair value of obligations associated with the retirement of tangible long-lived assets is required when there is a legal obligation to incur such costs. Upon initial recognition of a liability, the cost is capitalized as part of the related long-lived asset and depreciated over the corresponding asset's useful life.

Repairs and maintenance, including planned major maintenance, are expensed as incurred. Costs which materially add to the value of the asset or prolong its useful life are capitalized and the replaced assets are retired.

Long-Lived Assets – The Company evaluates the recoverability of the carrying amount of long-lived assets (including property, plant and equipment and intangible assets with determinable lives) whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. The Company evaluates events or changes in circumstances based on several factors including operating results, business plans and forecasts, general and industry trends, and economic projections and anticipated cash flows. An impairment is assessed when the undiscounted expected future cash flows derived from an asset are less than its carrying amount. Impairment losses are measured as the amount by which the carrying value of an asset exceeds its fair value and are recognized in the Consolidated Statements of Operations. The Company also evaluates the estimated useful lives of long-lived assets if circumstances warrant and revises such estimates based on current events.

Goodwill – The Company had goodwill of $15.0 million as of December 31, 2020 and 2019. Goodwill is subject to impairment testing annually as of March 31, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. Management first assesses qualitative factors as described in ASC 350 to determine whether it is necessary to perform the quantitative goodwill impairment test. Potential impairment is identified by comparing the fair value of a reporting unit to the carrying value, including goodwill. In the first quarter 2020, the Company concluded that, due to the negative effects of the COVID-19 pandemic on revenue and profitability, a triggering event existed for the Company's reporting unit as of March 31, 2020. Fair value for the reporting unit was determined based on a combination of the discounted future cash flow model (income approach) and the application of current market multiples for comparable publicly-traded companies (market approach). Under the income approach, the fair value of the reporting unit is estimated based on the discounted present value of the projected future cash flows. Management's cash flow projections for the reporting unit included significant judgements and assumptions, including revenue growth rate, EBITDA margin and WACC rate. Under the market approach, management uses selected financial information of publicly-traded companies that compare to the reporting unit to derive a market-based multiple. The Company completed its annual goodwill impairment test as of March 31, 2020 and we have concluded that there is no impairment.

Revenue Recognition – The Company recognizes revenue upon the transfer of control of goods or services to customers at amounts that reflect the consideration expected to be received. AdvanSix primarily recognizes revenues when title and control of the product transfers from the Company to the customer. Outbound shipping costs incurred by the Company are not included in revenues but are reflected as freight expense in Costs of goods sold in the Consolidated Statements of Operations.

Sales of our products to customers are made under a purchase order, and in certain cases in accordance with the terms of a master services agreement. These agreements typically contain formula-based pass-through pricing tied to key feedstock materials and volume ranges, but often do not specify the goods, including the quantities thereof, to be transferred. Certain master services agreements (including with respect to our largest customer) may contain minimum purchase volumes which can be satisfied by the customer on a periodic basis by choosing from various products offered by the Company. In these cases, a performance obligation is created when a customer submits a purchase order for a specific product at a specified price, typically providing for delivery within the next 60 days. Management considers the performance obligation with respect to such purchase order satisfied at the point in time when control of the product is transferred to the customer, which is indicated by shipment of the product and transfer of title and risk of loss to the customer. Transfer of control to the customer occurs through various modes of shipment, including trucks, railcars, and vessels, and follows a variety of commercially acceptable shipping or destination point terms pursuant to the arrangement with the customer. Variable consideration is estimated for future volume rebates and early pay discounts on certain products and product returns. The Company records variable consideration as an adjustment to the sale transaction price. Since variable consideration is generally settled within one year, the time value of money is not significant.

The Company applies the practical expedient in Topic 606 and does not include disclosures regarding remaining performance obligations that have original expected durations of one year or less, or amounts for variable consideration allocated to wholly-unsatisfied performance obligations or wholly-unsatisfied distinct goods that form part of a single performance obligation, if any.

The Company also utilizes the practical expedient in Topic 606 and does not include an adjustment for the effects of a significant financing component given the expected period duration of one year or less.

Environmental – The Company accrues costs related to environmental matters when it is probable that we have incurred a liability related to a contaminated site and the amount can be reasonably estimated.

Deferred Income and Customer Advances – AdvanSix has an annual pre-buy program for ammonium sulfate that is classified as deferred income and customer advances in the Consolidated Balance Sheets. Customers pay cash in advance to reserve capacity for ammonium sulfate to guarantee product availability during peak planting season. The Company recognizes a customer advance when cash is received for the advanced buy. Revenue is then recognized and the customer advance is relieved upon title transfer of ammonium sulfate.

Trade Receivables and Allowance for Doubtful Accounts – Trade accounts receivables are recorded at the invoiced amount as a result of transactions with customers. AdvanSix maintains allowances for doubtful accounts for estimated losses based on a customer’s inability to make required payments. AdvanSix estimates anticipated losses from doubtful accounts based on days past due, as measured from the contractual due date and historical collection history and incorporates changes in economic conditions that may not be reflected in historical trends such as customers in bankruptcy, liquidation or reorganization. Receivables are written-off against the allowance for doubtful accounts when they are determined uncollectible. Such determination includes analysis and consideration of the particular conditions of the account, including time intervals since last collection, customer performance against agreed upon payment plans, success of outside collection agencies activity, solvency of customer and any bankruptcy proceedings. The Company adopted ASU 2016-13 effective January 1, 2020, using a modified retrospective approach, which did not have a material impact on the Company's consolidated financial position or results of operations upon adoption.

Research and Development – AdvanSix conducts research and development (“R&D”) activities, which consist primarily of the development of new products and product applications consisting primarily of labor costs and depreciation and maintenance costs. R&D costs are charged to expense as incurred. Such costs are included in costs of goods sold and were $11.8 million, $13.9 million, and $14.8 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Debt Issuance Costs – Debt issuance costs are capitalized as a component of Other assets and are amortized through interest expense over the related term.

Stock-Based Compensation Plans – The principal awards issued under our stock-based compensation plans, which are described in "Note 16. Stock-Based Compensation Plans" to the Consolidated Financial Statements included in Item 8 of this Form 10-K, are non-qualified stock options, performance share units and restricted stock units. The cost for such awards is measured at the grant date based on the fair value of the award. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods (generally the vesting period of the equity award) and is included in selling, general and administrative expenses. Forfeitures are estimated at the time of grant to recognize expense for those awards that are expected to vest and are based on our historical forfeiture rates.

Pension Benefits – We have a defined benefit plan covering certain employees primarily in the U.S. The benefits are accrued over the employees' service periods. We use actuarial methods and assumptions in the valuation of defined benefit obligations and the determination of net periodic pension income or expense. Differences between actual and expected results or changes in the value of defined benefit obligations and fair value of plan assets, if any, are not recognized in earnings as they occur but rather systematically over subsequent periods when net actuarial gains or losses are in excess of 10% of the greater of the fair value of plan assets or the plan's projected benefit obligation.

Foreign Currency Translation – Assets and liabilities of subsidiaries operating outside the United States with a functional currency other than U.S. dollars are translated into U.S. dollars using year-end exchange rates. Sales, costs and expenses are translated at the average exchange rates in effect during the year. Foreign currency translation gains and losses are included as a component of Accumulated other comprehensive income (loss) in our Consolidated Balance Sheets.

Income Taxes – We account for income taxes pursuant to the asset and liability method which requires us to recognize current tax liabilities or receivables for the amount of taxes we estimate are payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts and their respective tax bases of assets and liabilities and the expected benefits of net operating loss and credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period enacted. A valuation allowance is provided when it is more likely than not that a portion or all of a deferred tax asset will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income and the reversal of deferred tax liabilities during the period in which related temporary differences become deductible.

We adopted the provisions of ASC 740 related to the accounting for uncertainty in income taxes recognized in an enterprise's consolidated financial statements. ASC 740 prescribes a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns.

The benefit of tax positions taken or expected to be taken in our income tax returns are recognized in the financial statements if such positions are more likely than not of being sustained upon examination by taxing authorities. Differences between tax positions taken or expected to be taken in a tax return and the benefit recognized and measured pursuant to the interpretation are referred to as "unrecognized benefits". A liability is recognized (or amount of net operating loss carryover or amount of tax refundable is reduced) for an unrecognized tax benefit because it represents an enterprise's potential future obligation to the taxing authority for a tax position that was not recognized as a result of applying the provisions of ASC 740. Interest costs and related penalties related to unrecognized tax benefits are required to be calculated, if applicable. Our policy is to classify tax related interest and penalties, if any, as a component of income tax expense. No interest or penalties related to unrecognized income tax benefits were recorded during the years ended December 31, 2020, 2019 and 2018. As of December 31, 2020 and 2019, no liability for unrecognized tax benefits was required to be reported. We do not expect any significant changes in our unrecognized tax benefits in the next year.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of US GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the 2017 Act. SAB 118 provides guidance for registrants under three scenarios where the measurement of certain tax items is either complete, can be reasonably estimated or cannot be reasonably estimated. The Company has completed its evaluation of the 2017 Act and the impacts of those items have been reflected in our Consolidated Financial Statements. The impacts of those changes are disclosed in "Note 4. Income Taxes".

Leases – The Company enters into agreements to lease transportation equipment, storage facilities, office space, dock access and other equipment. Operating leases have initial terms of up to 20 years with some containing renewal options subject to customary conditions.

An arrangement is considered to be a lease if the agreement conveys the right to control the use of the identified asset in exchange for consideration.

Operating leases, which are reported as Operating lease right-of-use assets, and Operating lease liabilities – short-term and Operating lease liabilities – long-term are included in our Consolidated Balance Sheets. Finance leases are included as a component of Property, plant and equipment – net, Accounts payable and Other liabilities in our Consolidated Balance Sheets.

The Company adopted ASU 2016-02, Leases (Topic 842) effective January 1, 2019 and has elected the following practical expedients available in Topic 842:

- the package of three expedients which allows the Company to not re-assess (i) whether any expired or existing contracts are, or contain, leases, (ii) lease classification for any expired or existing leases, and (iii) initial direct costs for any expired or existing leases;
- the short-term lease practical expedient, which allows the Company to exclude leases with an initial term of 12 months or less ("short-term leases") from recognition in the unaudited Consolidated Balance Sheets;
- the bifurcation of lease and non-lease components practical expedients, which did not require the Company to bifurcate lease and non-lease components for real estate leases; and
- the land easements practical expedient, which allows the Company to carry forward the accounting treatment for land easements on existing agreements.

Earnings Per Share – Basic earnings per share is based on the weighted average number of common shares outstanding. Diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common shares outstanding.

Treasury Stock – The Company has elected to account for treasury stock purchased under the constructive retirement method. For shares repurchased in excess of par, the company will allocate the excess value to additional paid-in capital.

Use of Estimates – The preparation of the Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in the Consolidated Financial Statements and related disclosures in the accompanying Notes. Actual results could differ from those estimates. Estimates and assumptions are periodically reviewed and the effects of changes are reflected in the Consolidated Financial Statements in the period they are determined to be necessary.

Reclassifications – Certain prior period amounts have been reclassified for consistency with the current period presentation. All reclassified amounts have been immaterial.

Recent Accounting Pronouncements - The Company considers the applicability and impact of all Accounting Standards Updates (“ASUs”) issued by the Financial Accounting Standards Board (“FASB”). ASUs not discussed below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial position or results of operations.

On August 5, 2020, the FASB issued ASU No. 2020-06, Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity’s Own Equity (Subtopic 815-40). The amendments in the ASU remove certain separation models for convertible debt instruments and convertible preferred stock that require the separation of a convertible debt instrument into a debt component and an equity or derivative component. Therefore, the embedded conversion features no longer are separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, Derivatives and Hedging, or that do not result in substantial premiums accounted for as paid-in-capital. This will result in more convertible debt instruments being accounted for as a single liability measured at its amortized cost and more convertible preferred stock being accounted for as a single equity instrument measured at its historical cost, as long as no other features require bifurcation and recognition as derivatives. The ASU also amends the derivative scope exception guidance for contracts in an entity’s own equity. The amendments remove three settlement conditions that are required for equity contracts to qualify for the derivative scope exception. The guidance is effective for public business entities for fiscal years, and interim terms within those fiscal years, beginning after December 15, 2021. Early adoption of the amendments in this update is permitted, but no earlier than fiscal years, including interim periods within those fiscal years, beginning after December 15, 2020. The Company is evaluating the impact that the amendments of this standard would have on the Company's consolidated financial position or results of operations upon adoption.

In March 2020, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting. The amendments of ASU No. 2020-04 are effective for companies as of March 12, 2020 through December 31, 2022. An entity may elect to apply the amendments for contract modifications by Topic or Industry Subtopic as of any date from the beginning of an interim period that includes or is subsequent to March 12, 2020, or prospectively from a date within an interim period that includes or is subsequent to March 12, 2020, up to the date that the financial statements are available to be issued. The amendments in this update apply only to contracts, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform and provide optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. The Company is evaluating the impact that the amendments of this standard would have on the Company's consolidated financial position or results of operations upon adoption.

On December 18, 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. The ASU removes the exception to the general principles in ASC 740, Income Taxes, associated with the incremental approach for intra-period tax allocation, accounting for basis differences when there are ownership changes in foreign investments and interim-period income tax accounting for year-to-date losses that exceed anticipated losses. In addition, the ASU improves the application of income tax related guidance and simplifies U.S. GAAP when accounting for franchise taxes that are partially based on income, transactions with government resulting in a step-up in tax basis goodwill, separate financial statements of legal entities not subject to tax, and enacted changes in tax laws in interim periods. Different transition approaches, retrospective, modified retrospective, or prospective, will apply to each income tax simplification provision. The guidance is effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption of the amendments in this update is permitted, including adoption in any interim period. The Company adopted ASU 2019-12 effective January 1, 2021, which did not have a material impact on the Company’s consolidated financial position or results of operations upon adoption.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement. The amendments of ASU No. 2018-13 are effective for companies for fiscal years beginning after December 15, 2019. The Company adopted ASU 2018-13 effective January 1, 2020, which did not have a material impact on the Company's consolidated financial position or results of operations upon adoption.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, which eliminates step 2, which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill, from the goodwill impairment test. The amendments of ASU No. 2017-04 are effective for companies for fiscal years beginning after December 15, 2019 and requires a one-step impairment test in which an entity compares the fair value of a reporting unit with its carrying amount and recognizes an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value, if any. The Company adopted ASU 2017-04 effective January 1, 2020, which did not have a material impact on the Company's consolidated financial position or results of operations upon adoption.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The amendments of ASU No. 2016-13 are effective for companies for fiscal years beginning after December 15, 2019 and modify existing guidance related to the measurement of credit losses on financial instruments, including trade and loan receivables. The new guidance requires impairments to be measured based on expected losses over the life of the asset rather than incurred losses. The Company adopted ASU 2016-13 effective January 1, 2020, using a modified retrospective approach, which did not have a material impact on the Company's consolidated financial position or results of operations upon adoption.

Note 3. Revenue

We serve approximately 400 customers annually in more than 50 countries and across a wide variety of industries. For 2020, 2019 and 2018, the Company's ten largest customers accounted for approximately 43%, 47% and 45% of total sales, respectively.

We typically sell to customers under master services agreements, with primarily one-year terms, or by purchase orders. We have historically experienced low customer turnover and have an average customer relationship of approximately 20 years. Our largest customer is Shaw Industries Group Inc. ("Shaw"), a significant consumer of caprolactam and Nylon 6 resin. We sell Nylon 6 resin and caprolactam to Shaw under a long-term agreement. Sales to Shaw were 14% of our total sales for the year ended December 31, 2020 and 22% of our total sales for each of the years ended December 31, 2019 and 2018.

Each of the Company’s product lines represented the following approximate percentage of total sales for 2020, 2019 and 2018:

	Years Ended December 31,		
	2020	**2019**	**2018**
Nylon	24%	27%	28%
Caprolactam	19%	22%	19%
Chemical Intermediates	32%	28%	33%
Ammonium Sulfate	25%	23%	20%
	100%	100%	100%

The Company’s revenues by geographic area for 2020, 2019 and 2018 were as follows (in millions):

	Years Ended December 31,		
	2020	**2019**	**2018**
United States	$ 891	$ 1,057	$ 1,271
International	267	240	244
Total	$ 1,158	$ 1,297	$ 1,515

Deferred Income and Customer Advances

The Company defers revenues when cash payments are received in advance of our performance. Customer advances relate primarily to sales from the ammonium sulfate business. Below is a roll-forward of Deferred income and customer advances for the twelve months ended December 31, 2020:

Deferred Income and Customer Advances		**2020**
Opening balance January 1, 2020	$	19,696
Additional cash advances		35,262
Less amounts recognized in revenues		(28,579)
Ending balance December 31, 2020	$	26,379

The Company expects to recognize as revenue the December 31, 2020 ending balance of Deferred income and customer advances within one year or less.

Note 4. Income Taxes

	Years Ended December 31,					
		2020		**2019**		**2018**
Income (loss) before taxes						
U.S.	$	54,902	$	53,231	$	85,596
Non-U.S.		131		117		172
	$	55,033	$	53,348	$	85,768

Income taxes

Income tax expense (benefit) consists of:

	Years Ended December 31,					
		2020		**2019**		**2018**
Current Provision:						
Federal	$	(10,289)	$	2,519	$	7,529
State		1,605		1,007		2,442
Non-U.S.		20		24		27
Total current provision	$	(8,664)	$	3,550	$	9,998
Deferred Provision:						
Federal	$	17,853	$	7,536	$	8,081
State		(240)		907		1,435
Non-U.S.		7		8		10
Total deferred provision		17,620		8,451		9,526
Total income tax expense (benefit)	$	8,956	$	12,001	$	19,524

The U.S. federal statutory income tax rate is reconciled to the effective income tax rate as follows:

	Years Ended December 31,		
	2020	2019	2018
U.S. federal statutory income tax rate	21.0 %	21.0 %	21.0 %
2017 Act	— %	— %	(1.9)%
U.S. state income taxes	2.0 %	2.8 %	3.5 %
Energy credit	(6.2)%	— %	— %
Forfeitures, cancellations and shortfalls of equity compensation	0.3 %	— %	— %
Executive compensation limitations	0.9 %	1.5 %	1.2 %
Research and other tax credits	(2.6)%	(3.0)%	(0.5)%
Other, net	0.9 %	0.2 %	(0.5)%
	16.3 %	22.5 %	22.8 %

On December 22, 2017 the U.S. government passed the Tax Cuts and Jobs Act (the "2017 Act"). In 2017, the Company reasonably estimated the accounting for the effects of the 2017 Act. In 2018, under Staff Accounting Bulletin No. 118 ("SAB 118"), we finalized the accounting for the 2017 Act and our financial statements for the year ended December 31, 2018 reflect certain effects of the 2017 Act including a reduction in the corporate tax rate to 21% from 35% and changes made to executive compensation rules. As a result of the 2017 Act, the Company recorded a reduction in income tax expense of $1,651 during the year ended December 31, 2018.

The CARES Act includes various modifications to current tax law and is intended to provide economic relief in response to the COVID-19 pandemic. One provision included in the CARES Act allows for a five-year carryback of Federal net operating losses (NOLs) generated in tax years beginning in 2018, 2019 and 2020. The Company finalized its 2019 U.S. federal income tax return which reflected a net operating loss, on a tax basis, and certain tax credits which were carried back to earlier tax years. This carryback claim generated a refund of previously paid taxes in the amount of $12.2 million which is recorded in Taxes receivable. We anticipate receiving the refund in the first half of 2021. Although the carryback claim generates a $12.2 million refund, it also results in the loss of prior year permanent tax benefits, the impact of which, is reflected in the above table under "Other, net" above.

The Company's effective income tax rate for 2020 was lower compared to the U.S. Federal statutory rate of 21% due primarily to the impact of research tax credits as well as an energy tax credit described in more detail below. This was partially offset by state taxes, executive compensation deduction limitations and a shortfall on the vesting of equity compensation.

The Company's effective income tax rate for 2019 was slightly higher compared to the U.S. Federal statutory rate of 21% due primarily to state taxes and executive compensation deduction limitations, partially offset by the vesting of restricted stock units and research tax credits.

The Company's effective income tax rate for 2018 was higher compared to the U.S. Federal statutory rate of 21% due primarily to state taxes and executive compensation deduction limitations resulting from the 2017 Act, partially offset by income tax benefits associated with the filing of the 2017 U.S. Federal income tax return and the related completion of the accounting for the impacts of the 2017 Act.

As of December 31, 2020, 2019 and 2018, there were no unrecognized tax benefits recorded by the Company (see below for further information on unrecognized tax benefits). Although there are no unrecognized income tax benefits, when applicable, the Company's policy is to report interest expense and penalties related to unrecognized income tax benefits in the income tax provision.

The Company uses the flow-through method to account for investment tax credits, including certain energy credits. Under this method, investment tax credits are recognized as a reduction to income tax expense in the year they are earned.

The Company is subject to taxation in the United States and various states and foreign jurisdictions. For tax years 2020, 2019, 2018 and 2017 there are no material examinations by tax authorities; however, these periods remain open under the statute of limitations and are subject to examination by the tax authorities.

Deferred tax assets (liabilities)

The tax effects of temporary differences which give rise to future income tax benefits and expenses are as follows:

	December 31,	
	2020	2019
Deferred tax assets:		
Net Operating Loss	$ 107	$ 8,167
Accruals and Reserves	4,966	2,802
Interest expense limitation	—	2,655
Inventory	4,439	—
Pension Obligation	8,028	7,318
Operating lease liability	27,358	32,626
Equity Compensation	1,793	1,695
Other	900	1,314
Total gross deferred tax assets	47,591	56,577
Less: Valuation Allowance	—	—
Total deferred tax assets	$ 47,591	$ 56,577
Deferred tax liabilities:		
Property, plant & equipment	$ (140,735)	$ (123,915)
Intangibles	(3,744)	(3,713)
Operating lease asset	(27,262)	(32,569)
Inventory	—	(5,503)
Other	(1,417)	(931)
Total deferred tax liabilities	(173,158)	(166,631)
Net deferred taxes	$ (125,567)	$ (110,054)

The net deferred taxes are primarily related to U.S. operations. The federal net operating loss ("NOL") generated as of December 31, 2019 was carried back to previous tax periods under the CARES Act and the amount was fully utilized in the carryback claim. As of 2020, we also recognized state NOL carryforwards in multiple jurisdictions for $1,406 which generally begin to expire in 2032. The Company has a foreign NOL of $25 and $70, respectively, at December 31, 2020 and 2019 which is not subject to expiration. All 2019 federal tax credits were carried back and utilized in prior periods or expected to be utilized in the current year such that there are no remaining federal tax credit carryforwards. As of December 31, 2020, we have state tax credit carryforwards of approximately $105 that begin to expire in 2030. We believe that the foreign and state NOL carryforwards, tax credit carryforwards and other deferred tax assets are more likely than not to be realized and we have not recorded a valuation allowance against the deferred tax assets.

The 2019 Deferred tax assets and liabilities reflected in the above table have been adjusted to reflect deferred taxes on the gross up of the Operating lease right-of-use assets and the Operating lease liabilities under ASU 2016-02, Leases (Topic 842) implemented on January 1, 2019. This update had the effect of increasing both the total deferred tax assets and the deferred tax liabilities by $32,569 for the year ending December 31, 2019. These adjustments have no net impact on the net Deferred taxes or on the consolidated financial statements and the Company does not believe they are material to the annual consolidated financial statements.

As a result of the early adoption of ASU 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220), Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, during the three months ended March 31, 2018, the Company elected to reclassify $0.4 million from Accumulated other comprehensive income to Retained earnings. The reclassification results from the remeasurement of deferred taxes pursuant to the Tax Cuts and Jobs Act related to the Company’s pension plan that was recognized as a component of Income taxes related to continuing operations for the year ended December 31, 2017 which was originally recognized in Other comprehensive income. The Company elected the optional transition method and recorded the adjustment at the beginning of the period of adoption of ASU 2018-02. The Company’s current accounting policy related to stranded tax effects in Accumulated other comprehensive income is to review and reclassify on an item by item basis.

The Company's accounting policy is to record the tax impacts of Global intangible low-taxed income as a period cost.

As of December 31, 2020 and 2019, there were no material undistributed earnings of the Company's non-U.S. subsidiaries and, as such, we have not provided a deferred tax liability for undistributed earnings.

Unrecognized tax benefits

The following table sets forth the change in the Company's unrecognized tax benefits (UTBs) for year ended December 31, 2020. There are no unrecognized tax benefits in 2019 and 2018.

	2020
Unrecognized tax benefits - January 1	$ —
Gross amounts of decreases in UTBs for tax positions related to the prior year	(3,804)
Gross amounts of increases in UTBs for tax positions related to the prior year	3,804
Gross amounts of increases and decreases in UTBs for tax positions taken during the current period	—
Unrecognized tax benefits - December 31	$ —

At the end of fiscal 2019, it was unclear whether we qualified for a certain energy tax credit. After performing a detailed review during the second quarter of 2020, we concluded it was appropriate to recognize a tax benefit (credit) of $3.8 million. However, based on information available at the time, we also recorded a corresponding unrecognized tax benefit reserve for the same amount. A portion of this credit which was claimed on the 2019 U.S. federal income tax return of approximately $2.2 million was utilized in the carryback claim under the CARES Act and the remaining is expected to be utilized in 2020. In the fourth quarter of 2020, based on new information and technical guidance, the Company reassessed its position which resulted in the reversal of the unrecognized tax benefit as reflected in the above table. As such, the full amount of the energy credit is reflected in the effective income tax rate reconciliation table above for the year ended December 31, 2020.

Note 5. Accounts and Other Receivables – Net

	December 31, 2020	December 31, 2019
Accounts receivables	$ 122,357	$ 105,275
Other	2,668	1,661
Total accounts and other receivables	125,025	106,936
Less – allowance for doubtful accounts	(1,471)	(2,323)
Total accounts and other receivables – net	$ 123,554	$ 104,613

The roll-forward of allowance for doubtful accounts are summarized in the table below:

	Balance at Beginning of Year	Charged to Costs	Charged to Other Accounts (1)	Bad Debt Write-Offs (1)	Balance at End of Year
Year ended December 31, 2020	$ 2,323	$ 33	$ (559)	$ (326)	$ 1,471
Year ended December 31, 2019	7,467	274	(396)	(5,022)	2,323
Year ended December 31, 2018	1,410	6,226	(187)	18	7,467

(1) No Impact to Statement of Operations

Note 6. Inventories

	December 31, 2020	December 31, 2019
Raw materials	$ 88,612	$ 63,644
Work in progress	54,291	56,065
Finished goods	45,345	58,527
Spares and other	27,198	25,035
	215,446	203,271
Reduction to LIFO cost basis	(35,361)	(31,561)
Total inventories	$ 180,085	$ 171,710

Note 7. Property, Plant, Equipment – Net

	December 31,	
	2020	2019
Land and improvements	$ 6,396	$ 6,396
Machinery and equipment	1,430,192	1,337,234
Buildings and improvements	201,728	184,951
Construction in progress	47,000	97,143
	1,685,316	1,625,724
Less – accumulated depreciation	(919,847)	(869,843)
Total property, plant, equipment – net	$ 765,469	$ 755,881

Capitalized interest was $5,580, $6,359 and $3,619 for the years ended December 31, 2020, 2019 and 2018, respectively.

Depreciation expense was $57,240, $53,424 and $49,729 for the years ended December 31, 2020, 2019 and 2018, respectively.

Note 8. Leases

We determine if an arrangement is a lease at inception. Operating leases, which are reported as Operating lease right-of-use assets ("ROU"), Operating lease liabilities – short-term, and Operating lease liabilities – long-term are included in our Consolidated Balance Sheets. Finance leases are included in Property, plant and equipment – net, Accounts payable, and Other liabilities in our Consolidated Balance Sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. We use the implicit rate when readily determinable. The operating lease ROU asset also includes any lease pre-payments made and excludes lease incentives. Our lease terms may include options to extend or terminate the lease and, when it is reasonably certain that such an option will be exercised, it is included in the determination of the corresponding assets and liabilities. Short-term leases are not recognized on our Consolidated Balance Sheets. Lease expense for all operating lease payments is recognized on a straight-line basis over the lease term.

We have lease agreements with lease and non-lease components, which are generally accounted for separately. Additionally, for certain equipment leases, we apply a portfolio approach to effectively account for the operating lease ROU assets and liabilities. The Company has entered into agreements to lease transportation equipment, storage facilities, office space, dock access and other equipment. The operating leases have initial terms of up to 20 years with some containing renewal options subject to customary conditions. The term and length of the various agreements, as well as the timing of any renewals, will impact the ROU asset calculation and related liability.

The components of lease expense were as follows:

	Years Ended December 31,	
	2020	2019
Finance lease cost:		
Amortization of right-of-use asset	$ 697	$ 661
Interest on lease liabilities	48	70
Total finance lease cost	745	731
Operating lease cost	44,513	36,454
Short-term lease cost	7,832	12,885
Total lease cost	$ 53,090	$ 50,070

Supplemental cash flow information related to leases was as follows:

	Years Ended December 31, 2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 44,445	$ 36,165
Operating cash flows from finance leases	51	65
Financing cash flows from finance leases	710	4,839
Non-cash information:		
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	16,082	45,541
Finance leases	16	1,031

Supplemental balance sheet information related to leases was as follows:

	Years Ended December 31, 2020	2019
Operating Leases		
Operating lease right-of-use assets	$ 114,484	$ 135,985
Operating lease liabilities – short term	29,279	38,005
Operating lease liabilities – long term	85,605	98,347
Total operating lease liabilities	$ 114,884	$ 136,352
Finance Leases		
Property, plant and equipment – gross	$ 1,978	$ 2,793
Accumulated depreciation	(1,257)	(1,391)
Property, plant and equipment – net	$ 721	$ 1,402
Accounts payable	509	712
Other liabilities	215	708
Total finance lease liabilities	$ 724	$ 1,420
Weighted Average Remaining Lease Term		
Operating leases	9.8 years	9.1 years
Finance leases	1.5 years	2.2 years
Weighted Average Discount Rate		
Operating leases	6.07 %	5.72 %
Finance leases	4.65 %	4.79 %

Maturities of lease liabilities are as follows:

Year Ending December 31,	**Operating Leases**	**Finance Leases**
2021	$ 35,199	$ 530
2022	25,588	199
2023	17,749	13
2024	15,845	8
2025	13,247	—
Thereafter	52,538	—
Total lease payments	160,166	750
Less imputed interest	(45,282)	(26)
Total	$ 114,884	$ 724

As of December 31, 2020, we have an additional operating lease that has not yet commenced for $17.1 million. This lease will commence during 2021 with a lease term of 3 years.

Note 9. Long-term Debt and Credit Agreement

The Company's debt at December 31, 2020 consisted of the following:

Total term loan outstanding	$	—
Amounts outstanding under the Revolving Credit Facility		275,000
Total outstanding indebtedness		275,000
Less: amounts expected to be repaid within one year		—
Total long-term debt due after one year	$	275,000

At December 31, 2020, the Company assessed the Revolving Credit Facility (defined below) and determined that such amounts approximated fair value. The fair values of the debt are based on quoted inactive market prices and are therefore classified as Level 2 within the valuation hierarchy.

Scheduled principal repayments under the Long-term Debt and Credit Agreement subsequent to December 31, 2020 are as follows:

2021	$	—
2022		—
2023		275,000
2024		—
2025		—
Thereafter		—
Total	$	275,000

Credit Agreement

On February 21, 2018 (the "First Amendment Date"), the Company entered into Amendment No. 1 (the "First Amendment") to the Credit Agreement among the Company, the guarantors, the lenders party thereto and Bank of America, N.A., as administrative agent (the Original Credit Agreement, after giving effect to the First Amendment, the "First Amended and Restated Credit Agreement").

The credit facilities under the Original Credit Agreement consisted of a senior secured term loan in an aggregate principal amount of $270 million, of which $267 million was outstanding just prior to entering into the First Amendment, and a senior secured revolving credit facility in a principal amount of $155 million. Pursuant to the First Amendment, (i) the term loan facility under the Original Credit Agreement was terminated and the entire outstanding balance of the term loan facility (the "Term Loan") thereunder was paid in full and (ii) the maximum aggregate principal amount of the senior secured revolving credit facility (the "Revolving Credit Facility") was increased to $425 million.

On the First Amendment Date, the Company borrowed $242 million under the Revolving Credit Facility. The proceeds of such loans, as well as cash on hand, were used to repay the outstanding Term Loan under the Original Credit Agreement. The Revolving Credit Facility under the First Amended and Restated Credit Agreement has a 5-year term with a scheduled maturity date of February 21, 2023. The First Amendment resulted in an increase in the Revolving Credit Facility to replace the Term Loan and provided increased borrowing flexibility and reduced overall borrowing costs with an approximate 50 basis point reduction in the interest rate spread.

The First Amended and Restated Credit Agreement permits the Company to utilize up to $40 million of the Revolving Credit Facility for the issuance of letters of credit and up to $40 million for swing line loans. The Company has the option to incur incremental term loans and/or increase the amount of the Revolving Credit Facility in an aggregate principal amount for all such incremental term loans and increases of the Revolving Credit Facility of up to the sum of (x) $175 million plus (y) an amount such that the Company's Consolidated Senior Secured Leverage Ratio (as defined in the First Amended and Restated Credit Agreement) would not be greater than 1.75 to 1.00, in each case, to the extent that any one or more lenders, whether or not currently party to the First Amended and Restated Credit Agreement, commits to be a lender for such amount. Borrowings under the First Amended and Restated Credit Agreement bore interest at a rate equal to either the sum of a base rate plus a margin ranging from 0.50% to 1.50% or the sum of a Eurodollar rate plus a margin ranging from 1.50% to 2.50%, with either such margin varying according to the Company's Consolidated Leverage Ratio (as defined in the First Amended and Restated Credit Agreement). The Company was also required to pay a commitment fee in respect of unused commitments under the Revolving Credit Facility, if any, at a rate ranging from 0.20% to 0.40% per annum depending on the Company's Consolidated Leverage Ratio. The initial margin under the First Amended and Restated Credit Agreement was 0.75% for base rate loans and 1.75% for Eurodollar rate loans and the initial commitment fee rate was 0.25% per annum.

The First Amended and Restated Credit Agreement contained customary covenants limiting the ability of the Company and its subsidiaries to, among other things, pay cash dividends, incur debt or liens, redeem or repurchase stock of the Company, enter into transactions with affiliates, make investments, make capital expenditures, merge or consolidate with others or dispose of assets. The First Amended and Restated Credit Agreement also contained financial covenants that required the Company to maintain a Consolidated Interest Coverage Ratio (as defined in the First Amended and Restated Credit Agreement) of not less than 3.00 to 1.00 and to maintain a Consolidated Leverage Ratio of (i) 3.50 to 1.00 or less for the fiscal quarter ending March 31, 2018, through and including the fiscal quarter ending December 31, 2019, (ii) 3.25 to 1.00 or less for the fiscal quarter ending March 31, 2020, through and including the fiscal quarter ending December 31, 2020, (iii) 3.00 to 1.00 or less for the fiscal quarter ending March 31, 2021, through and including the fiscal quarter ending December 31, 2021, and (iv) 2.75 to 1.00 or less for the fiscal quarter ending March 31, 2022 and each fiscal quarter thereafter (subject to the Company's option to elect a consolidated leverage ratio increase in connection with certain acquisitions). If the Company did not comply with the covenants in the First Amended and Restated Credit Agreement, the lenders could have, subject to customary cure rights, required the immediate payment of all amounts outstanding under the Revolving Credit Facility.

On February 19, 2020, the Company entered into Amendment No. 2 (the "Second Amendment") to the First Amended and Restated Credit Agreement (the First Amended and Restated Credit Agreement, after giving effect to the Second Amendment, the "Second Amended and Restated Credit Agreement").

The Second Amendment amends the consolidated leverage ratio financial covenant of the First Amended and Restated Credit Agreement and requires the Company to maintain a Consolidated Leverage Ratio (as defined in the Second Amended and Restated Credit Agreement) of (i) 3.50 to 1.00 or less for the fiscal quarter ending March 31, 2020, (ii) 4.50 to 1.00 or less for the fiscal quarter ending June 30, 2020, (iii) 4.25 to 1.00 or less for the fiscal quarter ending September 30, 2020, (iv) 3.50 to 1.00 or less for the fiscal quarter ending December 31, 2020, (v) 3.25 to 1.00 or less for the fiscal quarter ending March 31, 2021 through and including the fiscal quarter ending December 31, 2021, and (vi) 3.00 to 1.00 or less for the fiscal quarter ending March 31, 2022 and each fiscal quarter thereafter (subject to the Company's option to elect a consolidated leverage ratio increase in connection with certain acquisitions). The consolidated interest coverage ratio financial covenant of the First Amended and Restated Credit Agreement was not changed and continues to require the Company to maintain a Consolidated Interest Coverage Ratio (as defined in the Second Amended and Restated Credit Agreement) of not less than 3.00 to 1.00. If the Company does not comply with the covenants in the Second Amended and Restated Credit Agreement, the lenders may, subject to customary cure rights, require the immediate payment of all amounts outstanding under the Revolving Credit Facility. The Company was compliant with all financial related covenants at December 31, 2020.

Borrowings under the Second Amended and Restated Credit Agreement bear interest at a rate equal to either the sum of a base rate plus a margin ranging from 0.50% to 2.00% or the sum of a Eurodollar rate plus a margin ranging from 1.50% to 3.00%, with either such margin varying according to the Company's Consolidated Leverage Ratio (as defined in the Second Amended and Restated Credit Agreement). The Company is also required to pay a commitment fee in respect of unused commitments under the credit facility, if any, at a rate ranging from 0.20% to 0.50% per annum depending on the Company's Consolidated Leverage Ratio. The initial margin under the Second Amended and Restated Credit Agreement was 1.25% for base rate loans and 2.25% for Eurodollar rate loans and the applicable commitment fee rate is expected to be 0.35% per annum.

In addition, the Second Amendment also amended certain administrative provisions associated with the LIBOR Successor Rate (as defined in the Second Amended and Restated Credit Agreement).

The Company had approximately $1.0 million of letter of credit agreements outstanding under the Revolving Credit Facility at December 31, 2020. There was no amount associated with bilateral letters of credit outside of the Revolving Credit Facility.

Note 10. Postretirement Benefit Obligations

Defined Contribution Benefit Plan

On January 1, 2017, the Company established a defined contribution plan which covers all eligible U.S. employees. Our plan allows eligible employees to contribute a portion of their cash compensation to the plan on a tax-deferred basis to save for their future retirement needs. The Company matches 50% of the first 8% of contributions for employees covered by a collective bargaining agreement and matches 75% of the first 8% of the employee's contribution election for all other employees. The plan's matching contributions vest after three years of service with the Company. The Company may also provide an additional discretionary retirement savings contribution which is at the sole discretion of the Company. The Company made contributions to the defined contribution plan of $6,142, $5,944 and $5,514 for the years ended December 31, 2020, 2019 and 2018, respectively.

Defined Benefit Pension Plan

Prior to the Spin-Off certain of our employees participated in a defined benefit pension plan (the "Shared Plan") sponsored by Honeywell which includes participants of other Honeywell subsidiaries and operations. We accounted for our participation in the Shared Plan as a multi-employer benefit plan. Accordingly, we did not record an asset or liability to recognize the funded status of the Shared Plan. The related pension expense was allocated based on annual service cost of active participants and reported within Costs of goods sold and Selling, general and administrative expenses in the Statements of Operations.

As of the date of separation from Honeywell, these employees' entitlement to benefits in Honeywell's plans was frozen and they will accrue no further benefits in Honeywell's plans. Honeywell retained the liability for benefits payable to eligible employees, which are based on age, years of service and average pay upon retirement.

Upon consummation of the Spin-Off, AdvanSix employees who were participants in a Honeywell defined benefit pension plan became participants in the AdvanSix defined benefit pension plan ("AdvanSix Retirement Earnings Plan"). The AdvanSix Retirement Earnings Plan has the same benefit formula as the Honeywell defined benefit pension plan. Moreover, vesting service, benefit accrual service and compensation credited under the Honeywell defined benefit pension plan apply to the determination of pension benefits under the AdvanSix Retirement Earnings Plan. Benefits earned under the AdvanSix Retirement Earnings Plan shall be reduced by the value of benefits accrued under the Honeywell plans.

The following tables summarize the balance sheet impact, including the benefit obligations, assets and funded status associated with the AdvanSix Retirement Earnings Plan.

Change in benefit obligation:	**2020**	**2019**	**2018**
Benefit obligation at January 1,	$ 69,281	$ 48,450	$ 51,018
Service Cost	8,021	6,855	8,008
Interest Cost	2,175	2,084	1,875
Actuarial losses (gains)	10,507	12,364	(12,324)
Benefits Paid	(847)	(472)	(127)
Benefit obligation at December 31,	$ 89,137	$ 69,281	$ 48,450
Change in plan assets:			
Fair value of plan assets at January 1,	$ 35,979	$ 26,789	$ 17,321
Actual return on plan assets	5,212	5,462	$ (2,205)
Benefits paid	(847)	(472)	(127)
Company Contributions	8,100	4,200	11,800
Fair value of plan assets at December 31,	48,444	35,979	26,789
Under-Funded status of plan	$ 40,693	$ 33,302	$ 21,661
Amounts recognized in Balance Sheet consists of:			
Accrued pension liabilities-current (1)	$ 1,525	$ 892	$ 581
Accrued pension liabilities-noncurrent (2)	39,168	32,410	21,080
Total pension liabilities recognized	$ 40,693	$ 33,302	$ 21,661

(1) Included in accrued liabilities on Balance Sheet
(2) Included in postretirement benefit obligations on Balance Sheet

Pension amount recognized in accumulated other comprehensive loss (income) associated with the Company's pension plan are as follows for:

	Years Ended December 31,		
	2020	**2019**	**2018**
Transition obligation	$ —	$ —	$ —
Prior service cost	—	—	—
Net actuarial (gain) loss	11,405	4,012	(4,226)
Pension amounts recognized in other comprehensive loss (income)	$ 11,405	$ 4,012	$ (4,226)

The components of net periodic benefit cost and other amounts recognized in other comprehensive income for our pension plan include the following components:

	Years Ended December 31,		
	2020	2019	2018
Net periodic pension cost (benefit)			
Service cost	$ 8,021	$ 6,855	$ 8,008
Interest cost	2,175	2,084	1,875
Expected return on plan assets	(2,098)	(1,336)	(1,151)
Recognition of actuarial losses	—	—	—
Net periodic Pension Cost	8,098	7,603	8,732
Other changes in benefits obligations recognized in other comprehensive loss (income)			
Actuarial losses (gains)	7,393	8,238	(8,969)
Total recognized in other comprehensive income	7,393	8,238	(8,969)
Total net periodic pension cost (benefit) recognized in Other comprehensive income	$ 15,491	$ 15,841	$ (237)

The estimated actuarial loss (gain) that will be amortized from accumulated other comprehensive income (loss) into net periodic benefit cost in 2020 and 2019 was nil.

Significant actuarial assumptions used in determining the benefit obligations and net periodic benefit cost for our pension plan were as follows:

Key actuarial assumptions used to determine benefit obligations at December 31,	**2020**	**2019**	**2018**
Effective discount rate for benefit obligation	2.9%	3.5%	4.6%
Expected annual rate of compensation increase	2.4%	2.4%	2.8%

Key actuarial assumptions used to determine the net periodic benefit cost for the years ended December 31,	**2020**	**2019**	**2018**
Effective discount rate for service cost	3.5%	4.6%	3.9%
Effective discount rate for interest cost	3.2%	4.3%	3.7%
Expected long-term rate of return	6.8%	7.0%	7.0%
Expected annual rate of compensation increase	2.4%	2.8%	2.8%

The discount rate for our pension plan reflects the current rate at which the associated liabilities could be settled at the measurement date of December 31 of a given year. To determine discount rates for our pension plan, we use a modeling process that involves matching the expected cash outflows of our benefit plan to a yield curve constructed from a portfolio of high quality, fixed-income debt instruments. We use the single weighted-average yield of this hypothetical portfolio as a discount rate benchmark.

The long-term expected rate of return on funded assets is developed by using forward-looking long-term return assumptions for each asset class. Management incorporates the expected future investment returns on current and planned asset allocations using information from external investment consultants as well as management judgment. A single rate is then calculated as the weighted average of the target asset allocation percentages and the long-term return assumption for each asset class.

The accumulated benefit obligation for our pension plan was $73.2 million, $54.4 million and $36.7 million as of December 31, 2020, 2019 and 2018, respectively.

Benefit payments, including amounts to be paid from Company assets, and reflecting expected future service, as appropriate, are expected to be paid during the following years:

2021	$ 1,525
2022	1,901
2023	2,366
2024	2,863
2025	3,354
Thereafter	24,003

Our general funding policy for our pension plan is to contribute amounts at least sufficient to satisfy regulatory funding standards. The Company made pension plan contributions sufficient to satisfy pension funding requirements under the AdvanSix Retirement Earnings Plan as follows:

	Years Ended December 31,		
	2020	2019	2018
1st Quarter	$ 1,700	$ —	$ 1,950
2nd Quarter	—	500	6,600
3rd Quarter	—	3,700	3,250
4th Quarter	6,400	—	—
Total	$ 8,100	$ 4,200	$ 11,800

The Company plans to make pension plan contributions during 2021 sufficient to satisfy pension funding requirements of $8.0 million to $10.0 million as well as additional contributions in future years sufficient to satisfy pension funding requirements in those periods.

The pension plan assets are invested through a master trust fund. The strategic asset allocation for the trust fund is selected by the Company's Investment Committee reflecting the results of comprehensive asset and liability modeling. The Investment Committee establishes strategic asset allocation percentage targets and appropriate benchmarks for significant asset classes with the aim of achieving a prudent balance between return and risk.

The target asset allocation percent for the Company's pension plan assets is summarized as follows:

	Years Ended December 31,	
	2020	2019
Cash and cash equivalents	2%	2%
US and non-US equity securities	65%	65%
Fixed income / real estate / other securities	33%	33%
Total Pension Assets	100%	100%

Fixed income and other securities include investment grade securities covering the Treasury, agency, asset-backed, mortgage-backed and credit sectors of the U.S. Bond Market, as well as listed real estate companies and real estate investment trusts located in both developed and emerging markets.

	Fair Value at December 31,		
Fair Value Measurements	2020	2019	2018
Investments valued using NAV per share			
Emerging Markets Region Equities	$ 3,199	$ 2,264	$ 1,538
International Region Equities	9,274	6,755	4,535
United States Equities	20,528	15,377	11,071
United States Bonds	12,506	9,477	7,878
Real Estate	2,312	1,767	1,357
Cash Fund	625	339	410
Total Pension Plan Assets at Fair Value	$ 48,444	$ 35,979	$ 26,789

The pension plan assets are invested in collective investment trust funds as shown above. These investments are measured at fair value using the net asset value per share practical expedient and have not been classified in the fair value hierarchy.

Note 11. Fair Value Measurements

Financial and non-financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. During the fourth quarter of 2018, the Company acquired a royalty stream which has been treated as an asset acquisition. The purchase price of the royalty stream for $1 million approximated fair value at December 31, 2018 and is considered a Level 3 asset. The fair value measurement is based on the expected future cash flows and, as there is no reason to believe that the asset is impaired, it is assumed that the valuation remains unchanged at December 31, 2020. In November 2018 and July 2019, the Company entered into two interest rate swap transactions related to its credit agreement. The fair value of the interest rate swaps at December 31, 2020, 2019 and 2018 was a loss of approximately $3.1 million, $1.7 million and $0.8 million, respectively, and is considered a Level 2 liability.

The pension plan assets are invested in collective investment trust funds. These investments are measured at fair value using the net asset value per share practical expedient. Investments valued using the net asset value method (NAV) (or its equivalent) practical expedient are excluded from the fair value hierarchy disclosure.

The Company's Consolidated Balance Sheets also include Cash and cash equivalents, Accounts receivable and Accounts payable all of which are recorded at amounts which approximate fair value.

The Company also has assets that are required to be recorded at fair value on a non-recurring basis. These assets are evaluated when certain triggering events occur (including a decrease in estimated future cash flows) that indicate the asset should be evaluated for impairment. Goodwill and indefinite lived intangible assets must be evaluated at least annually.

Note 12. Derivative and Hedging Instruments

The specific credit and market, commodity price and interest rate risks to which the Company is exposed in connection with its ongoing business operations are described below. This discussion includes an explanation of the hedging instrument and interest rate swap agreements, used to manage the Company's interest rate risk associated with a fixed and floating-rate borrowing.

For cash flow hedges, the entire change in the fair value of the hedging instrument included in the assessment of hedge effectiveness is recorded in Other comprehensive income. Those amounts are reclassified to earnings in the same income statement line item that is used to present the earnings effect of the hedged item when the hedged item affects earnings.

Credit and Market Risk – Financial instruments, including derivatives, expose the Company to counterparty credit risk for non-performance and to market risk related to changes in commodity prices, interest rates and foreign currency exchange rates. The Company manages its exposure to counterparty credit risk through specific minimum credit standards, diversification of counterparties, and procedures to monitor concentrations of credit risk. The Company's counterparties in derivative transactions are substantial investment and commercial banks with significant experience using such derivative instruments. The Company monitors the impact of market risk on the fair value and cash flows of its derivative and other financial instruments considering reasonably possible changes in commodity prices, interest rates and foreign currency exchange rates and restricts the use of derivative financial instruments to hedging activities.

The Company continually monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business. The terms and conditions of credit sales are designed to mitigate or eliminate concentrations of credit risk with any single customer. The Company did not have any customers with significant concentrations of trade accounts receivable – net at December 31, 2020 and December 31, 2019, respectively. Allowance for doubtful accounts is calculated based upon the Company's estimate of expected credit losses over the life of exposure based upon both historical information as well as future expected losses.

Commodity Price Risk Management – The Company's exposure to market risk for commodity prices can result in changes in the cost of production. We primarily mitigate our exposure to commodity price risk by using long-term, formula-based price contracts with our suppliers and formula-based price agreements with customers. Our customer agreements provide for price adjustments based on relevant market indices and raw material prices and generally do not include take-or-pay terms. We may also enter into forward commodity contracts with third-parties designated as hedges of anticipated purchases of several commodities. Forward commodity contracts are marked-to-market, with the resulting gains and losses recognized in earnings, in the same category as the items being hedged, when the hedged transaction is recognized. At December 31, 2020 and 2019, we had no contracts with notional amounts related to forward commodity agreements.

Interest Rate Risk Management – The Company has entered into two interest rate swap agreements for a total notional amount of $100 million to exchange floating for fixed rate interest payments for our LIBOR-based borrowings. These interest rate swaps had a fair value of zero at inception and were effective November 30, 2018 and July 31, 2019 with respective maturity dates of November 30, 2021 and February 21, 2023. In accordance with FASB Accounting Standards Codification ("ASC") 815, the Company designated the interest rate swaps as cash flow hedges of floating-rate borrowings. These interest rate swaps convert the Company's interest rate payments on the first $100 million of variable-rate, 1-month LIBOR-based debt to a fixed interest rate. These interest rate swaps involve the receipt of floating rate amounts in exchange for fixed rate interest payments over the life of the interest rate swap without an exchange of the underlying principal amount.

	Liability Derivatives					
	2020		2019		2018	
	Balance Sheet Classification	Fair Value	Balance Sheet Classification	Fair Value	Balance Sheet Classification	Fair Value
Derivatives designated as hedging instruments under ASC 815:						
Interest Rate Contracts	Accrued liabilities and Other liabilities	$ (3,063)	Accrued liabilities and Other liabilities	$ (1,718)	Accrued liabilities and Other liabilities	$ (833)
Total Derivatives		$ (3,063)		$ (1,718)		$ (833)

The following table summarizes adjustments related to cash flow hedge included in "Cash flow hedges", in the Consolidated Statements of Comprehensive Income:

	December 31, 2020
Loss on derivative instruments included in Accumulated other comprehensive income at December 31, 2019	$ (1,718)
Fair value adjustment	(1,345)
Loss on derivative instruments included in Accumulated other comprehensive income at December 31, 2020	$ (3,063)

At December 31, 2020, the Company expects to reclassify approximately $2.1 million of net losses on derivative instruments from Accumulated other comprehensive income ("AOCI") to earnings during the next 12 months due to the payment of variable interest associated with the floating rate debt with the remainder recognized in future periods through the expiration date. The following table summarizes the reclassification of net losses on derivative instruments from AOCI into earnings:

	Amount of Loss Recognized in Earnings	
	Twelve Months Ended December 31,	
	2020	2019
Derivatives:		
Interest Rate Contracts	$ 2,240	$ 705
Total Derivatives	$ 2,240	$ 705

Note 13. Commitments and Contingencies

Litigation

The Company is subject to a number of lawsuits, investigations and disputes, some of which involve substantial amounts claimed, arising out of the conduct of the Company or other third-parties in the normal and ordinary course of business. A liability is recognized for any contingency that is probable of occurrence and reasonably estimable. The Company continually assesses the likelihood of adverse judgments or outcomes in these matters, as well as potential ranges of possible losses (taking into consideration any insurance recoveries), based on an analysis of each matter with the assistance of legal counsel and, if applicable, other experts.

Given the uncertainty inherent in such lawsuits, investigations and disputes, the Company does not believe it is possible to develop estimates of reasonably possible loss in excess of current accruals for these matters. Considering the Company's past experience and existing accruals, the Company does not expect the outcome of these matters, either individually or in the aggregate, to have a material adverse effect on the Company's Consolidated Balance Sheets, results of operations or cash flows. Potential liabilities are subject to change due to new developments, changes in settlement strategy or the impact of evidentiary requirements, which could cause the Company to pay damage awards or settlements (or become subject to equitable remedies) that could have a material adverse effect on the Company's consolidated results of operations, balance sheet and/or operating cash flows in the periods recognized or paid.

We assumed from Honeywell all health, safety and environmental ("HSE") liabilities and compliance obligations related to the past and future operations of our current business, as well as all HSE liabilities associated with our three current manufacturing locations and the other locations used in our current operations, including any cleanup or other liabilities related to any contamination that may have occurred at such locations in the past. Honeywell retained all HSE liabilities related to former business locations or the operation of our former businesses. Although we have ongoing environmental remedial obligations at certain of our facilities, in the past three years, the associated remediation costs have not been material, and we do not expect our known remediation costs to be material for 2021.

Unconditional Purchase Obligations:

In the normal course of business, the Company makes commitments to purchase goods with various vendors in the normal course of business which are consistent with our expected requirements and primarily relate to cumene, oleum, sulfur and natural gas as well as a long-term agreement for loading, unloading and the handling of a portion of our ammonium sulfate export volumes.

Future minimum payments for these unconditional purchase obligations as of December 31, 2020 are as follows (dollars in thousands):

Year		Amount
2021	$	138,464
2022		74,092
2023		10,499
2024		10,362
2025		5,940
Thereafter		89,100
	$	328,457

Note 14. Changes in Accumulated Other Comprehensive Income (Loss)

The components of accumulated other comprehensive income (loss) are as follows:

		Currency Translation Adjustment		Postretirement Benefit Obligations Adjustment		Changes in Fair Value of Effective Cash Flow Hedges		Accumulated Other Comprehensive Income (loss)
Balance at December 31, 2017	$	(4,986)	$	(4,060)	$	—	$	(9,046)
Other comprehensive income (loss)		(25)		8,969		(833)		8,111
Amounts reclassified from accumulated other comprehensive income (loss)		—		410		—		410
Income tax expense (benefit)		—		(2,149)		200		(1,949)
Current period change		(25)		7,230		(633)		6,572
Balance at December 31, 2018		(5,011)		3,170		(633)		(2,474)
Other comprehensive income (loss)		(9)		(8,238)		(1,589)		(9,836)
Amounts reclassified from accumulated other comprehensive income (loss)		—		—		705		705
Income tax expense (benefit)		—		1,943		211		2,154
Current period change		(9)		(6,295)		(673)		(6,977)
Balance at December 31, 2019		(5,020)		(3,125)		(1,306)		(9,451)
Other comprehensive income (loss)		(49)		(7,393)		(3,586)		(11,028)
Amounts reclassified from accumulated other comprehensive income (loss)		—		—		2,240		2,240
Income tax expense (benefit)		—		1,789		318		2,107
Current period change		(49)		(5,604)		(1,028)		(6,681)
Balance at December 31, 2020	$	(5,069)	$	(8,729)	$	(2,334)	$	(16,132)

Note 15. Earnings Per Share

The details of the earnings per share calculations for the years ended December 31, 2020, 2019 and 2018 are as follows:

	Years Ended December 31,		
	2020	2019	2018
Basic			
Net Income	$ 46,077	$ 41,347	$ 66,244
Weighted average common shares outstanding	28,048,726	28,122,288	30,172,050
EPS – Basic	$ 1.64	$ 1.47	$ 2.20

	Years Ended December 31,		
	2020	2019	2018
Diluted			
Net Income	$ 46,077	$ 41,347	$ 66,244
Weighted average common shares outstanding – Basic	28,048,726	28,122,288	30,172,050
Dilutive effect of unvested equity awards	108,336	776,548	806,241
Weighted average common shares outstanding – Diluted	28,157,062	28,898,836	30,978,291
EPS – Diluted	$ 1.64	$ 1.43	$ 2.14

Diluted EPS is computed based upon the weighted average number of common shares outstanding for the year plus the dilutive effect of common stock equivalents using the treasury stock method and the average market price of our common stock for the year.

The diluted EPS calculations exclude the effect of stock options when the options' assumed proceeds exceed the average market price of the common shares during the period. For the years ended December 31, 2020, 2019 and 2018, stock options of 951,607, 544,635 and 349,312, respectively, were anti-dilutive and excluded from the computations of dilutive EPS.

In September 2017, the Board of Directors (the "Board") adopted the AdvanSix Inc. Deferred Compensation Plan (the "DCP"), effective January 1, 2018. Pursuant to the DCP, our directors may elect to defer their cash retainer fees and allocate their deferrals to the AdvanSix stock unit fund. Each unit allocated under the stock unit fund represents the economic equivalent of one share of common stock. Units are paid out in shares of AdvanSix common stock upon distribution. As of December 31, 2020, a total of 52,426 units were allocated to the AdvanSix stock unit fund under the DCP.

On May 4, 2018, the Company announced that the Board authorized a share repurchase program of up to $75 million of the Company's common stock. On February 22, 2019, the Company announced that the Board authorized a share repurchase program of up to an additional $75 million of the Company's common stock, which was in addition to the remaining capacity available under the May 2018 share repurchase program. Repurchases may be made, from time to time, on the open market, including through the use of trading plans intended to qualify under Rule 10b5-1 of the Exchange Act of 1934, as amended (the "Exchange Act"). The size and timing of these repurchases will depend on pricing, market and economic conditions, legal and contractual requirements and other factors. The share repurchase program has no expiration date and may be modified, suspended or discontinued at any time. The par value of the shares repurchased is applied to Treasury stock and the excess of the purchase price over par value is applied to Additional paid in capital. During 2020, the Company had repurchased 84,791 shares of common stock to cover the tax withholding obligations in connection with the vesting awards, for an aggregate of $1.1 million at a weighted average market price of $12.44 per share. The purchase of shares reduces the weighted average number of shares outstanding in the basic and diluted earnings per share calculations.

Note 16. Stock-Based Compensation Plans

On September 8, 2016, prior to the Spin-Off, our Board adopted, and Honeywell, as our sole stockholder, approved, the 2016 Stock Incentive Plan of AdvanSix Inc. and its Affiliates, and the material terms of performance-based compensation were approved by the Company's stockholders for tax purposes at our 2017 annual meeting of stockholders (the "Original Plan"). The Original Plan was amended and restated as the 2016 Stock Incentive Plan of AdvanSix Inc. and its Affiliates, as Amended and Restated, which was approved by stockholders of the Company at the Annual Meeting of Stockholders held on June 23, 2020 (the "Equity Plan"). As a result, no further grants will be made under the Original Plan. The Equity Plan provides for the grant of stock options, stock appreciation rights, performance awards, restricted stock units, restricted stock, other stock-based awards and non-share-based awards. The maximum aggregate number of shares of our common stock that may be issued under all stock-based awards granted under the Equity Plan is 2,937,209, subject to adjustment in accordance with the terms of the Equity Plan. Under the Equity Plan, the shares underlying all full-value awards, including those granted to non-employee directors, will be counted against the share reserve on a 1.85-for-one basis. Shares underlying stock option awards and SARs will be counted against the share reserve on a one-for-one basis.

Under the terms of the Equity Plan, there were approximately 2,800,000 shares of AdvanSix common stock available for future grants of full-value awards at December 31, 2020.

Restricted Stock Units – The Company granted RSUs to key management employees and directors that generally vest over periods ranging from 1 to 3 years. Upon vesting, the RSUs entitle the holder to receive one share of AdvanSix common stock for each RSU at time of vesting and are payable in AdvanSix common stock upon vesting. The fair value of all stock-settled RSUs is based upon the market price of the underlying common stock as of the grant date.

The following table summarizes information about RSU activity related to the Equity Plan:

	Number of Restricted Stock Units (In Thousands)	Weighted Average Grant Date Fair Value (Per Share)
Non-vested at December 31, 2017	1,004	$ 17.46
Granted	65	41.58
Vested	(73)	19.31
Forfeited	(2)	32.59
Non-vested at December 31, 2018	994	18.90
Granted	131	29.42
Vested	(864)	16.78
Forfeited	(7)	32.93
Non-vested at December 31, 2019	254	30.97
Granted	331	13.11
Vested	(120)	24.28
Forfeited	(33)	32.11
Non-vested at December 31, 2020	432	$ 18.94

As of December 31, 2020, there was approximately $4.1 million of total unrecognized compensation cost related to non-vested RSUs granted under the Equity Plan which is expected to be recognized over a weighted-average period of 1.7 years.

The following table summarizes information about the income statement impact from RSUs for the years ended December 31, 2020, 2019 and 2018:

	Years Ended December 31,		
	2020	2019	2018
Compensation expense	$ 3,018	$ 6,125	$ 6,606
Future income tax benefit recognized	$ 1,025	$ 678	$ 1,262

Stock Options – The exercise price, term and other conditions applicable to each option granted under the Equity Plan are generally determined by the Compensation Committee of the Board. The exercise price of stock options is set on the grant date and may not be less than the fair market value per share of our stock on that date. The fair value is recognized as an expense over the employee's requisite service period (generally the vesting period of the award). Options generally vest over periods ranging from 1 to 3 years.

The following table summarizes information about the income statement impact from stock options for the years ended December 31, 2020, 2019 and 2018.

	Years Ended December 31,		
	2020	2019	2018
Compensation expense	$ 1,520	$ 1,989	$ 1,470
Future income tax benefit recognized	$ 441	$ 745	$ 466

The fair value related to stock options granted was determined using Black-Scholes option pricing model and the weighted average assumptions are shown in the table below:

	Years Ended December 31,		
Key Black-Scholes Assumptions	**2020**	**2019**	**2018**
Risk-free interest rate	1.2%	2.5%	2.7%
Expected term (years)	6	6	6
Volatility	32.2%	30.9%	29.7%
Dividend yield	—	—	—
Fair value per stock option	$4.74	$11.67	$14.44

The fair value of each option award is estimated on the date of grant using the Black-Scholes option pricing model. Volatility is determined based on the average volatility of peer companies with similar option terms. The expected term is determined using a simplified approach, calculated as the mid-point between the vesting period and the contractual term of the award. The risk-free interest rate is determined based upon the yield of an outstanding U.S. Treasury note with a term equal to the expected term of the option granted.

The following table summarizes information about stock option activity related to the Equity Plan:

	Number of Shares (In Thousands)	Weighted Average Exercise Price (Per Share)	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2017	172	26.66	9.31	$ 2,651
Exercisable at December 31, 2017	—	$ —	—	$ —
Granted	129	41.97		
Exercised	—	—		
Forfeited	(3)	33.64		
Expired	—	—		
Outstanding at December 31, 2018	298	33.24	8.80	$ —
Exercisable at December 31, 2018	57	$ 33.23	8.30	$ —
Granted	196	33.34		
Exercised	1	26.66		
Forfeited	(4)	31.75		
Expired	—	—		
Outstanding at December 31, 2019	491	33.28	8.22	$ —
Exercisable at December 31, 2019	156	$ 30.83	7.45	$ —
Granted	306	14.29		
Exercised	—	—		
Forfeited	(38)	35.53		
Expired	—	—		
Outstanding at December 31, 2020	759	25.54	7.97	$ —
Exercisable at December 31, 2020	326	$ 32.16	6.84	$ —

The aggregate intrinsic values in the table above represent the total pre-tax intrinsic value (the difference between the Company’s closing stock price on the last trading day of the year and the exercise price, multiplied by the number of in-the-money options) that would have been received had all option holders exercised their in-the-money options at year-end. The amount changes based on the fair market value of the Company's stock.

As of December 31, 2020, there was $1.0 million of unrecognized stock-based compensation expense related to stock options that is expected to be recognized over a weighted average period of approximately 1.1 years.

Performance Stock Units – The Company has issued PSUs to key senior management employees which, upon vesting, convert one-for-one to AdvanSix common stock. The actual number of shares an employee receives for each PSU depends on the Company's performance against cumulative Earnings Per Share and average annual Return on Investment goals over three-year performance and vesting periods. Each grantee is granted a target level of PSUs and may earn between 0% and 200% of the target level depending on the Company's performance against the financial goals.

The following table summarizes information about PSU activity related to the Equity Plan:

	Number of Performance Stock Units (In Thousands)	Weighted Average Grant Date Fair Value (Per Share)
Non-vested at December 31, 2017	89	$ 26.66
Granted	58	41.97
Vested	—	—
Forfeited	(2)	31.68
Non-vested at December 31, 2018	145	32.73
Granted	88	33.34
Vested	—	—
Forfeited	(3)	35.04
Non-vested at December 31, 2019	230	30.03
Granted	248	13.99
Vested	(91)	26.66
Forfeited	(40)	35.72
Non-vested at December 31, 2020	347	$ 20.77

The fair value of the PSUs is based on the fair market value of the Company's stock at the grant date. The number of underlying shares to be issued will be based on actual performance achievement over the performance period. The fair value of each PSU grant is amortized monthly into compensation expense on a straight-line basis over a vesting period of 36 months. The accrual of compensation costs is based on our estimate of the final expected value of the award and is adjusted as required for the performance-based condition. The Company assumes that forfeitures will be minimal, and estimates forfeitures at time of issuance, which results in a reduction in compensation expense. As the payout of PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The Company currently does not pay dividends.

As of December 31, 2020, there was approximately $2.2 million of total unrecognized compensation cost related to non-vested PSUs granted under the Equity Plan which is expected to be recognized over a weighted-average period of 1.8 years.

The following table summarizes information about the income statement impact from PSUs for the year ended December 31, 2020, 2019 and 2018.

	Years Ended December 31,		
	2020	2019	2018
Compensation expense	$ 366	$ 236	$ 2,057
Future income tax benefit recognized	$ 327	$ 271	$ 252

Note 17. Unaudited Selected Quarterly Financial Data

The following tables show selected unaudited quarterly results of operations for 2020 and 2019. The quarterly data has been prepared on the same basis as the audited annual financial statements and include all adjustments, which include only normal recurring adjustments, necessary for the fair statement of our results of operations for these periods.

	2020				
	March 31,	June 30,	September 30,	December 31,	Year Ended December 31,
Net Sales	$ 302,713	$ 233,022	$ 281,910	$ 340,272	$ 1,157,917
Gross Profit	30,705	34,283	16,152	52,608	133,748
Net Income	8,576	11,429	(692)	26,764	46,077
Earnings per share – basic (1)	0.31	0.41	(0.02)	0.95	1.64
Earnings per share – diluted (1)	0.31	0.41	(0.02)	0.94	1.64

	2019				
	March 31,	June 30,	September 30,	December 31,	Year Ended December 31,
Net Sales	$ 314,895	$ 345,215	$ 310,633	$ 326,650	$ 1,297,393
Gross Profit	48,015	42,087	30,510	14,860	135,472
Net Income	20,174	15,346	7,921	(2,094)	41,347
Earnings per share – basic (1)	0.70	0.54	0.29	(0.08)	1.47
Earnings per share – diluted (1)	0.68	0.53	0.28	(0.08)	1.43

(1) Total for the full year may differ from the sum of the individual quarters due to the requirement to use weighted average shares each quarter which may fluctuate with share repurchases and share issuances.

Note 18. Restructuring

On May 2, 2019, the Company approved the closure of its Pottsville, Pennsylvania films plant as part of its broader strategic efforts to improve the Company's competitive position in providing quality film products and services to its customers. The Company also announced a strategic alliance with Oben Holding Group S.A. ("Oben"), a third-party producer of films for the flexible packaging industry, leveraging the Company's sales channels and Nylon 6 supply with Oben's new state-of-the-art manufacturing facility. The Company ceased operations at the Pottsville, Pennsylvania plant in July 2019.

Restructuring costs consist of long-lived asset impairments, facility exit costs, employee separations and inventory write-downs. Facility exit costs include demolition, equipment relocation, contract terminations and project management costs. These costs are included in Cost of goods sold in the Consolidated Statements of Operations. The Company recorded a restructuring charge of $12.6 million in the second quarter of 2019 which was reduced to $11.0 million in the fourth quarter of 2019. As of December 31, 2020, all related restructuring liabilities have been paid.

Restructuring costs for the year ended December 31, 2020 were as follows:

	Years Ended December 31,	
	2020	2019
Write-off of equipment and facility	$ —	$ 7,164
Facility exit costs	—	1,326
Employee separations	—	1,491
Inventory write-downs	—	1,039
Total restructuring charges	$ —	$ 11,020

The following table summarizes the components of restructuring activities and the remaining balances of accrued restructuring charges as of December 31, 2020:

	Employee Separation Benefits	Facility Exit Costs	Total
Accrual balance at December 31, 2018	$ —	$ —	—
Charges	1,491	1,326	2,817
Cash payments	(1,364)	(916)	(2,280)
Accrual balance at December 31, 2019	$ 127	$ 410	$ 537
Charges	—	—	—
Cash payments	(127)	(410)	(537)
Accrual balance at December 31, 2020	$ —	$ —	$ —

Note 19. Subsequent Events

In January 2021, the Company acquired certain assets associated with ammonium sulfate packaging, warehousing and logistics services in Virginia for approximately $9.5 million, net of assumed liabilities of approximately $0.4 million. The acquisition builds on the Company's expertise in ammonium sulfate and sulfate nutrition and enables its ability to directly supply packaged ammonium sulfate to customers, while bolstering logistics and operational efficiency for the Virginia sites.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not Applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed in reports filed or submitted under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives. Because there are inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud have been, or will be, detected.

Our Chief Executive Officer and Chief Financial Officer, with the assistance of other members of our management, conducted an evaluation of the effectiveness of the Company’s disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures are effective at a reasonable assurance level as of December 31, 2020, the end of the period covered by this report.

Management’s Report on Internal Control over Financial Reporting

The Company’s management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, and for its assessment of the effectiveness of internal control over financial reporting. The 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. The Company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of Company assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework* (2013).

Based on this assessment, management determined that the Company maintained effective internal control over financial reporting as of December 31, 2020.

PricewaterhouseCoopers LLP, the Company’s independent registered public accounting firm, has audited the effectiveness of the Company’s internal control over financial reporting as of December 31, 2020, as stated in their report, which is included in "Item 8. Financial Statements and Supplementary Data" of this Form 10-K.

Changes in Internal Control over Financial Reporting

Management has not identified any change in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting. The Company has not experienced any material impact to the Company’s internal control over financial reporting due to the fact that certain of the Company’s employees responsible for financial reporting are working remotely during the

COVID-19 pandemic. The Company continually monitors and assesses the potential impact of the COVID-19 pandemic on the Company’s internal control over financial reporting to mitigate any impact to design and operating effectiveness.

Item 9B. Other Information

None.

PART III.

Item 10. Directors and Executive Officers of the Registrant

Information relating to the directors and executive officers of the Company, as well as information relating to compliance with Section 16(a) of the Securities Exchange Act of 1934, as required by this Item 10, will be contained in our definitive Proxy Statement to be filed with the SEC in connection with our 2021 annual meeting of stockholders pursuant to Regulation 14A not later than 120 days after December 31, 2020 (the "2021 Proxy Statement"), and such information is incorporated herein by reference. Certain other information relating to the Executive Officers of AdvanSix appears in Part I of this Annual Report on Form 10-K under the heading Executive Officers of the Registrant.

The members of the Audit Committee of our Board of Directors (the "Board") are: Paul E. Huck (Chair), Darrell K. Hughes and Daniel F. Sansone. The Board has determined that each of Mr. Huck and Mr. Sansone has been designated as an audit committee financial expert as defined by applicable SEC rules and that each of Mr. Huck, Mr. Hughes and Mr. Sansone satisfies the accounting or related financial management expertise criteria established by the NYSE. All members of the Audit Committee are independent as that term is defined in applicable SEC rules and NYSE listing standards.

AdvanSix's corporate governance policies and procedures, including the Code of Business Conduct, Corporate Governance Guidelines and Charters of the Committees of the Board are available, free of charge, on our website under the heading Investor Relations (see Corporate Governance) at https://investors.advansix.com/corporate-governance/governance-documents, or by writing to AdvanSix Inc., 300 Kimball Drive, Suite 101, Parsippany, New Jersey 07054, c/o Corporate Secretary. AdvanSix's Code of Business Conduct applies to all AdvanSix directors, officers (including the Chief Executive Officer, Chief Financial Officer and Controller) and employees. Amendments to or waivers of the Code of Business Conduct granted to any of AdvanSix's directors or executive officers will be published on our website within four business days of such amendment or waiver.

Item 11. Executive Compensation

Information relating to executive compensation and the Compensation Committee, as required by this Item 11, will be contained in the 2021 Proxy Statement, and such information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to certain beneficial ownership of certain stockholders and management, as well as certain other information required by this Item 12, will be contained in the 2021 Proxy Statement, and such information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions

Information relating to certain relationships and related transactions, as required by this Item 13, will be contained in the 2021 Proxy Statement, and such information is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

Information relating to fees paid to and services performed by PricewaterhouseCoopers LLP and our Audit Committee's pre-approval policies and procedures with respect to non-audit services, as required by this Item 14, will be contained in the 2021 Proxy Statement, and such information is incorporated herein by reference.

PART IV.

Item 15. Exhibits and Financial Statement Schedules

(a)(2) Financial Statement Schedules
None

(a)(3) Exhibits
See the Exhibit Index of this Annual Report on Form 10-K

Item 16. Form 10-K Summary

The Company has elected not to include a Form 10-K summary under this Item 16.

EXHIBIT INDEX

Exhibit No.	Description
2.1	Separation and Distribution Agreement, dated as of September 22, 2016, between Honeywell International Inc. and AdvanSix Inc. (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on September 28, 2016).
3.1	Amended and Restated Certificate of Incorporation of AdvanSix Inc. (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on August 1, 2019).
3.2	Amended and Restated By-laws of AdvanSix Inc. (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q filed on August 1, 2019).
4.1	Description of Securities of the Registrant (incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K filed on February 21, 2020).
10.1	Transition Services Agreement, dated as of September 28, 2016, between Honeywell International Inc. and AdvanSix Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 28, 2016).
10.2	Tax Matters Agreement, dated as of September 22, 2016, between Honeywell International Inc. and AdvanSix Inc. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on September 28, 2016).
10.3	Employee Matters Agreement, dated as of September 22, 2016, between Honeywell International Inc. and AdvanSix Inc. (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on September 28, 2016).
10.4	Chesterfield Site Sharing and Services Agreement, dated as of October 1, 2016, between Honeywell International Inc. and AdvanSix Resins & Chemicals LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 3, 2016).
10.5	Colonial Heights Site Sharing and Services Agreement, dated as of October 1, 2016, between Honeywell International Inc. and AdvanSix Resins & Chemicals LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on October 3, 2016).
10.6	Pottsville Site Sharing and Services Agreement, dated as of October 1, 2016, between Honeywell International Inc. and AdvanSix Resins & Chemicals LLC (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on October 3, 2016).
10.7	Credit Agreement, dated as of September 30, 2016, among AdvanSix Inc., each lender from time to time party thereto, each swing line lender party thereto, each L/C issuer party thereto and Bank of America, N.A. as the administrative agent (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on October 3, 2016).
10.8	Amendment No. 1 to Credit Agreement, dated as of February 21, 2018, among AdvanSix Inc., the guarantors, the lenders signatory thereto and Bank of America, N.A., as the administrative agent (with annexed Amended and Restated Credit Agreement) (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 23, 2018).
10.9	Amendment No. 2 to Credit Agreement, dated as of February 19, 2020, among AdvanSix Inc., the guarantors, the lenders signatory thereto and Bank of America, N.A., as the administrative agent (with annexed Amended and Restated Credit Agreement) (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 21, 2020).
10.10	Offer of Employment Letter between Honeywell International Inc. and Erin N. Kane, dated April 19, 2016 (incorporated by reference to Exhibit 10.9 to the Company's Amendment No. 1 to Form 10 filed on July 25, 2016). †

Exhibit No.	Description
10.11	Offer of Employment Letter between Honeywell International Inc. and Michael Preston, dated May 13, 2016 (incorporated by reference to Exhibit 10.11 to the Company’s Amendment No. 1 to Form 10 filed on July 25, 2016). †
10.12	Offer of Employment Letter between Honeywell International Inc. and John M. Quitmeyer, dated May 25, 2016 (incorporated by reference to Exhibit 10.12 to the Company’s Amendment No. 1 to Form 10 filed on July 25, 2016). †
10.13	Offer of Employment Letter between Honeywell International Inc. and Jonathan Bellamy, dated May 16, 2016 (incorporated by reference to Exhibit 10.10 to the Company’s Amendment No. 1 to Form 10 filed on July 25, 2016). †
10.14	Offer of Employment Letter between AdvanSix Inc. and Christopher Gramm, dated as of August 19, 2016 (incorporated by reference to Exhibit 10.5 to the Company’s Current Report on Form 8-K filed on October 3, 2016). †
10.15	Offer of Employment Letter between AdvanSix Inc. and Willem L. Blindenbach, dated as of October 2, 2019. †
10.16	2016 Stock Incentive Plan of AdvanSix Inc. and its Affiliates (incorporated by reference to Exhibit 10.6 to the Company’s Current Report on Form 8-K filed on October 3, 2016). †
10.17	2016 Stock Incentive Plan of AdvanSix Inc. and its Affiliates, as Amended and Restated (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on June 23, 2020).
10.18	Form of Restricted Stock Unit Agreement for Non-Employee Directors under the AdvanSix Inc. 2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.8 to the Company’s Current Report on Form 8-K filed on October 3, 2016). †
10.19	Form of Restricted Stock Unit Agreement for Executive Officers under the AdvanSix Inc. 2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company’s Quarterly Report on Form 10-Q filed on May 11, 2017). †
10.20	Form of Performance Stock Unit Agreement under the AdvanSix Inc. 2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company’s Quarterly Report on Form 10-Q filed on May 11, 2017). †
10.21	Form of Stock Option Award Agreement under the AdvanSix Inc. 2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Company’s Quarterly Report on Form 10-Q filed on May 11, 2017). †
10.22	AdvanSix Inc. Deferred Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 26, 2017). †
10.23	Executive Severance Pay Plan of AdvanSix Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 15, 2017). †
10.24	Form of Noncompete Agreement for Senior Executives (incorporated by reference to Exhibit 10.1 of the Company’s Quarterly Report on Form 10-Q filed on August 3, 2018). †
10.25	Amended and Restated Caprolactam and Polymer Supply Agreement dated as of April 1, 2013, by and between Honeywell Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.4 to Amendment No. 1 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on July 25, 2016). *
10.26	First Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of July 18, 2013, by and between Honeywell Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.5 to Amendment No. 1 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on July 25, 2016). *

Exhibit No.	Description
10.27	Second Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of November 15, 2013, by and between Honeywell Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.6 to Amendment No. 1 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on July 25, 2016). *
10.28	Third Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of December 12, 2014, by and between Honeywell Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.7 to Amendment No. 1 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on July 25, 2016). *
10.29	Fourth Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of January 13, 2016, by and between Honeywell Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.8 to Amendment No. 1 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on July 25, 2016). *
10.30	Fifth Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of March 1, 2017, by and between AdvanSix Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.21 to the Company's Annual Report on Form 10-K dated and filed with the SEC on March 6, 2017). *
10.31	Sixth Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of March 1, 2017, by and between AdvanSix Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K dated and filed with the SEC on March 6, 2017). *
10.32	Seventh Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of February 22, 2018, by and between AdvanSix Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.28 to the Company’s Annual Report on Form 10-K filed with the SEC on February 27, 2018) *
10.33	Eighth Amendment to the Amended and Restated Caprolactam and Polymer Supply Agreement dated as of February 22, 2018, by and between AdvanSix Resins & Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.29 to the Company’s Annual Report on Form 10-K filed with the SEC on February 27, 2018) *
10.34	Amended and Restated Caprolactam and Polymer Supply Agreement dated as of Jan 1, 2019, by and between AdvanSix Resins Chemicals LLC and Shaw Industries Group, Inc. (incorporated by reference to Exhibit 10.31 to the Company’s Annual Report on Form 10-K filed with the SEC on February 22, 2019) *
10.35	Offer of Employment Letter between AdvanSix Inc. and Achilles B. Kintiroglou, dated February 24, 2020 (incorporated by reference to Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q filed with the SEC on May 1, 2020) †
10.36	Employment Separation Agreement and Release between AdvanSix Inc. and Jonathan Bellamy, dated March 12, 2020 (incorporated by reference to Exhibit 10.3 to the Company’s Quarterly Report on Form 10-Q filed with the SEC on May 1, 2020) †
10.37	Offer of Employment Letter between AdvanSix Inc. and John M. Quitmeyer, dated April 1, 2020 (incorporated by reference to Exhibit 10.4 to the Company’s Quarterly Report on Form 10-Q filed with the SEC on May 1, 2020) †
10.38	Offer of Employment Letter between AdvanSix Inc. and Kelly Slieter, dated May 25, 2020 (incorporated by reference to Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q filed with the SEC on July 31, 2020) †
21.1	List of subsidiaries of AdvanSix Inc. (incorporated by reference to Exhibit 21.1 to Amendment No. 4 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on August 31, 2016 and effective as of September 8, 2016).
23.1	Consent of PricewaterhouseCoopers LLP.
24.1	Power of Attorney (included on the signature page of this Annual Report on Form 10-K).

Exhibit No.	Description
31.1	Rule 13a-14(a)/15d-14(a) Certification of the Company's Principal Executive Officer.
31.2	Rule 13a-14(a)/15d-14(a) Certification of the Company's Principal Financial Officer.
32.1	Section 1350 Certification of the Company's Principal Executive Officer. The information contained in this Exhibit shall not be deemed filed with the SEC nor incorporated by reference in any registration statement filed by the registrant under the Securities Act of 1933, as amended.
32.2	Section 1350 Certification of the Company's Principal Financial Officer. The information contained in this Exhibit shall not be deemed filed with the SEC nor incorporated by reference in any registration statement filed by the registrant under the Securities Act of 1933, as amended.
99.1	Information Statement of AdvanSix Inc. (incorporated by reference to Exhibit 99.1 to Amendment No. 5 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on September 7, 2016 and effective as of September 8, 2016).
99.2	Pertinent pages from Honeywell International Inc.'s Proxy Statement, dated March 10, 2016, filed pursuant to Rule 14a-6 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 99.2 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on May 12, 2016).
99.3	Pertinent pages from the Annual Report of Honeywell International Inc. on Form 10-K for the fiscal year ended December 31, 2015, filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 99.3 to the Registration Statement of AdvanSix Inc. on Form 10 dated and filed with the SEC on May 12, 2016).
101.INS	Inline XBRL Instance Document - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

† Indicates management contract or compensatory plan.

* Confidential treatment has been granted for certain information contained in Exhibits 10.25 through 10.34, and the omitted portions have been filed separately with the SEC.

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.

ADVANSIX INC.

Date: February 19, 2021

By: /s/ Michael Preston
Michael Preston
Senior Vice President and Chief Financial Officer
(on behalf of the Registrant and as the Registrant's Principal Financial Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Erin N. Kane, Michael Preston, and Achilles Kintiroglou, or any of them, his or her attorneys-in-fact, for such person in any and all capacities, to sign any amendments to this report and to file the same, with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that either of said attorneys-in-fact, or substitute or substitutes, may do or cause to be done by virtue hereof.

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

/s/ Erin N. Kane
Erin N. Kane
Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Michael L. Marberry
Michael L. Marberry
Independent Chairman of the Board

/s/ Paul E. Huck
Paul E. Huck
Director

/s/ Darrell K. Hughes
Darrell K. Hughes
Director

/s/ Todd D. Karran
Todd D. Karran
Director

/s/ Daniel F. Sansone
Daniel F. Sansone
Director

/s/ Sharon S. Spurlin
Sharon S. Spurlin
Director

/s/ Patrick S. Williams
Patrick S. Williams
Director

/s/ Michael Preston
Michael Preston
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

/s/ Christopher Gramm
Christopher Gramm
Vice President and Controller
(Principal Accounting Officer)

February 19, 2021