



2019

# Annual Report and Form 10-K

PURIFY | PROTECT | ENHANCE



# About Ingevity

## Purify | Protect | Enhance

Ingevity provides specialty chemicals, high-performance carbon materials and engineered polymers that purify, protect and enhance the world around us. Through a team of talented and experienced people, Ingevity develops, manufactures, and brings to market products and processes that help customers solve complex problems. These products are used in a variety of demanding applications, including asphalt paving, oil exploration and production, agrochemicals, adhesives, lubricants, publication inks, coatings, elastomers, bioplastics and automotive components that reduce gasoline vapor emissions. Headquartered in North Charleston, South Carolina, Ingevity operates from 25 locations around the world and employs approximately 1,850 people. The company is traded on the New York Stock Exchange (NYSE: NGVT). For more information visit [www.ingevity.com](http://www.ingevity.com).

**1,850**

Employees

**9**

Manufacturing Sites

**6**

Technical Centers

**9**

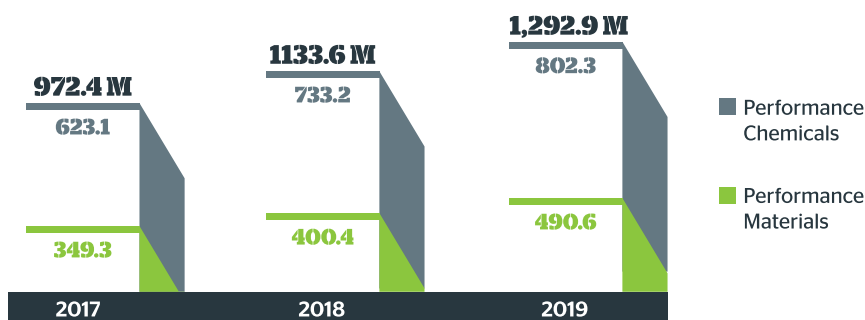
Principal Offices

## Financial Highlights

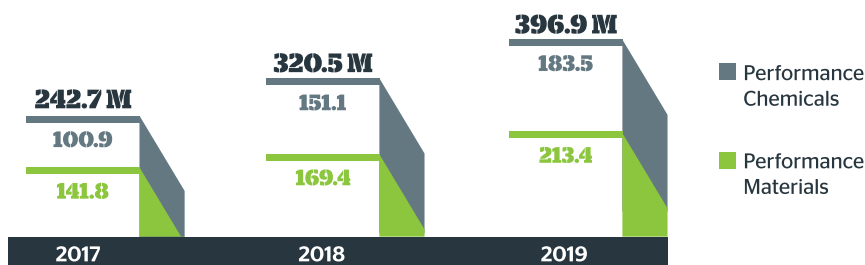
### Total Shareholder Return (January 1, 2019 to December 31, 2019)



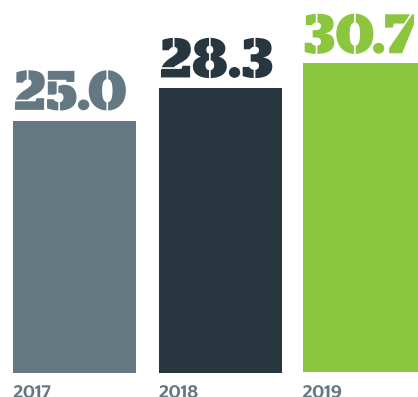
### Total Revenue in Millions (U.S. \$)



### Total Adjusted Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) in Millions (U.S. \$)<sup>1</sup>



### Adjusted EBITDA Margin<sup>1</sup>



### Net Debt Ratio<sup>1</sup>

**2.79x**

### Adjusted Earnings per Share<sup>1</sup>

**\$4.93**

<sup>1</sup>See page 128 for the reconciliation of this non-GAAP financial measure to the nearest GAAP financial measure.



# A message from the Chairman.

Dear Shareholders,

During 2019, we made significant progress on our strategic initiatives aimed at delivering organic and inorganic growth. And, despite a sluggish global industrial economy, our execution was crisp. We delivered significant revenue and earnings growth, margin accretion, lower core selling, general & administrative (SG&A) expenses, improved working capital and outstanding cash flow.

Our Performance Chemicals segment delivered mixed results in the face of weak demand, particularly in industrial specialties applications. Sales to oilfield applications were down modestly and sales to pavement technologies customers grew modestly as strength in North America was partially offset by reduced volumes from overseas. Our team did an excellent job of integrating our new engineered polymers product line, formed through the acquisition in January 2019 of the Capa® caprolactones business from Perstorp AG. The addition of this new product line was responsible for most of the segment's growth and contributed to margin accretion. Revenues were up 9%, yet segment EBITDA were up 21% versus the prior year. Remarkably, since our spinoff in May 2016, this segment has achieved a 1,000 basis-point improvement in segment EBITDA margins.

Our Performance Materials segment delivered another year of record revenue and earnings as adoption of more stringent regulations related to gasoline vapor emission control, particularly in China, drove volumes. In fact, annual sales in China for the segment were up 240%. In addition, ongoing growth in "honeycomb" scrubbers used in the U.S. and Canada to comply with U.S. EPA Tier 3 / LEV III standards contributed significantly. Our team continues to advocate for stronger emission controls with regulatory bodies around the world; our research group continues to advance the technology and develop and register new patents; and we are exploring new applications, most notably related to the use of adsorbed natural gas in cars and trucks. We achieved strong financial performance despite higher legal costs stemming from our patent infringement litigations against two competitors. Revenues were up 23%, and segment EBITDA were up 26% versus the prior year.

For the company overall, in light of the global macroeconomic headwinds we encountered, our financial performance was strong. Revenues for the year were \$1.293 billion, up 14%. Our adjusted EBITDA of \$397 million was up 24% versus the prior year. Adjusted EBITDA margin accreted to 30.7% of sales, up approximately 240 basis points from 2018.

Cash flow was robust at \$161 million. Capital plan execution was on-schedule and on-budget and included installation and start-up of two lines in Changshu, China, and work at the Warrington, England, engineered polymers plant, among other projects. Trade working capital was lower than plan by \$6 million. We ended the year with leverage of 2.8x after a concerted effort to pay down debt after closing the Capa acquisition. We expect to be back in our 2-2.5x range by mid-year 2020.

After what was a disappointing year for safety in 2018, our occupational safety performance in 2019 showed significant improvement. Our total employee case incident rate (TCIR) was 0.41, representing a 36% improvement over the prior year. This should place Ingevity in the top quartile of American Chemistry Council (ACC) companies. Still, we had eight employees injured in 2019, and one injury is one too many. We continue to work to accelerate the current positive trend toward zero injuries.

# Ingevity by the Numbers

We continue to make significant strides in the implementation of our sustainability program. As environmental, social and governance (ESG) factors grow in importance to investors, we believe that we are uniquely positioned given not only our longstanding commitments to operate responsibly, but also due to the way in which our products and technologies benefit the planet and its people. From the beginning, our stated purpose has been to “purify, protect and enhance the world around us.” In 2019, we worked to contain if not reduce our operational footprint; updated our first sustainability report; and, focused considerable effort on establishing and improving third-party ratings. In 2019, we received a Silver rating from EcoVadis for Corporate Social Responsibility.

In 2019, we continued our employee engagement efforts. We firmly believe that an engaged workforce – based on a clear understanding of our purpose, vision and values – will enhance our productivity and profitability. In the year, we renovated our performance management system to focus on more frequent, meaningful conversations; we launched our INGage training program for supervisors in response to feedback via an all-employee survey; and we established an Inclusion and Diversity Task Force to develop strategies to leverage the benefits of a broader employee base. Lastly, our IngeviWay Leadership Council significantly ramped up its activities aimed at embedding the IngeviWay into the culture and fabric of the organization.

As we look toward 2020, our outlook and guidance reflect little to no improvement in the global macroeconomic environment. That said, we expect our Performance Materials segment to deliver double-digit revenue growth and accretion in adjusted EBITDA margins based on the completion of the step changes in regulation in the U.S., Canada and China. We expect our Performance Chemicals segment to continue to work against headwinds, but we anticipate continued growth in end-use applications that are driven more by regulation, technology adoption and infrastructure spending. And despite these challenges, we expect to deliver strong results in 2020.

Looking longer term, we believe that given the attractiveness of our markets, the soundness of our strategy, and the strength of our people, our future has never been brighter.

Best regards,



Rick Kelson  
Chairman of the Board, and  
Interim President and CEO

**76%**

of Ingevity's  
revenue comes from  
sustainable products

**2.9 B**

gallons of gasoline  
recovered by our  
activated carbon  
each year

**90%**

reduction in VOC  
emissions by using  
Evotherm® warm mix  
asphalt

**70 K**

miles of reflective  
traffic striping  
enhanced with  
WestRez® resins

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

**FORM 10-K**

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

**For the fiscal year ended December 31, 2019  
OR**

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

**Commission File Number 001-37586**

  
**INGEVITY CORPORATION**  
(Exact name of registrant as specified in its charter)

**Delaware**

**47-4027764**

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

**5255 Virginia Avenue**

**North Charleston**

**South Carolina**

**29406**

(Address of principal executive offices)

(Zip code)

**843-740-2300**

(Registrant's telephone number)

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

Title of Each Class:

Trading Symbol(s)

Name of Each Exchange on Which Registered:

**Common Stock (\$0.01 par value)**

**NGVT**

**New York Stock Exchange**

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports); and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

At June 30, 2019, the aggregate market value of common stock held by non-affiliates of the Registrant was \$4,383,674,696. The market value held by non-affiliates excludes the value of those shares held by executive officers and directors of the Registrant.

The Registrant had 41,832,444 shares of common stock, \$0.01 par value, outstanding at February 24, 2020.

**Documents Incorporated by Reference**

Portions of the Company's definitive 2020 Annual Meeting Proxy Statement are incorporated by reference into Part III of this report.

**Ingevity Corporation**  
**Form 10-K**  
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## PART I

### Item 1. Business

#### General

Ingevity's business originated as part of the operations of its initial parent company, Westvaco Corporation, a paper and packaging company, using co-products of the kraft pulping process, primarily crude tall oil ("CTO"), and lignin, as well as hardwood sawdust from lumber manufacturing. Ingevity operated as a division of Westvaco Corporation and its corporate successors, including MeadWestvaco Corporation ("MeadWestvaco") and WestRock Company ("WestRock"), since 1964.

Ingevity Corporation was incorporated in Delaware on March 27, 2015. On May 15, 2016, we completed the separation of Ingevity from WestRock (herein referred to as the "Separation"). The Separation was completed by way of a distribution of all of the then outstanding shares of common stock of Ingevity through a dividend in kind of Ingevity's common stock (par value \$0.01) to holders of record of WestRock common stock (par value \$0.01) as of the close of business on May 4, 2016. Ingevity's common stock began "regular-way" trading on the New York Stock Exchange ("NYSE") on May 16, 2016 under the symbol "NGVT."

The address of Ingevity's principal executive offices is 5255 Virginia Avenue, North Charleston, South Carolina 29406. Ingevity maintains a website at [www.ingevity.com](http://www.ingevity.com). Ingevity's website and the information contained in or connected to the website will not be deemed to be incorporated in this document.

Throughout this Annual Report on Form 10-K, except where otherwise stated or indicated by the context, "Ingevity", the "Company", "we", "us", or "our" means Ingevity Corporation and its consolidated subsidiaries and their predecessors. Copies of the annual, quarterly, and current reports we file with the Securities and Exchange Commission ("SEC"), and any amendments to those reports, are available on our website at [www.ingevity.com](http://www.ingevity.com) as soon as practicable after we furnish such materials to the SEC. Apart from SEC filings, we also use our website to publish information, which may be important to investors, such as presentations to analysts. Reports filed with the SEC may be viewed at [www.sec.gov](http://www.sec.gov).

#### Ingevity

Ingevity is a leading global manufacturer of specialty chemicals and high performance activated carbon materials. We provide innovative solutions to meet our customers' unique and demanding requirements through proprietary formulated products. We report in two business segments, Performance Materials and Performance Chemicals.

Our Performance Materials segment consists of our automotive technologies and process purifications product lines. Performance Materials manufactures products in the form of powder, granules, extruded pellets, extruded honeycombs, and activated carbon sheets. Automotive technologies products are sold into gasoline vapor emission control applications within the automotive industry, while process purification products are sold into the food, water, beverage, and chemical purification industries.

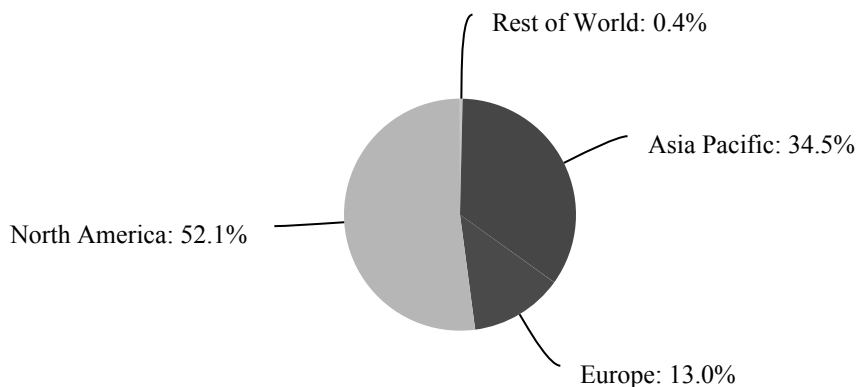
Our Performance Chemicals segment consists of our pavement technologies, oilfield technologies, industrial specialties, and engineered polymers product lines. Performance Chemicals manufactures products derived from CTO and lignin extracted from the kraft paper making process as well as caprolactone monomers and derivatives derived from cyclohexanone and hydrogen peroxide. Performance Chemicals products serve as critical inputs used in a variety of high performance applications, including pavement preservation, pavement adhesion promotion, and warm mix paving (pavement technologies product line), oil well service additives, oil production, and downstream application chemicals (oilfield technologies product line), printing inks, adhesives, agrochemicals, lubricants, and industrial intermediates (industrial specialties product line), coatings, resins, elastomers, adhesives, and bio-plastics (engineered polymers product line).

Our global engineering, technical, sales, and application support teams closely collaborate with our customers, and, importantly, with their customers. With our deep technical expertise and experience in our customers' applications and end markets, we have the capacity and flexibility to anticipate and respond to changing market conditions and customer demands and to develop proactive solutions that provide our customers, and therefore us, with a distinct competitive advantage. Additionally, the quality and diversity of our product portfolio, and the flexibility of our manufacturing assets, gives us the capability to direct our resources towards their most profitable and attractive uses and geographies in response to changing market conditions.

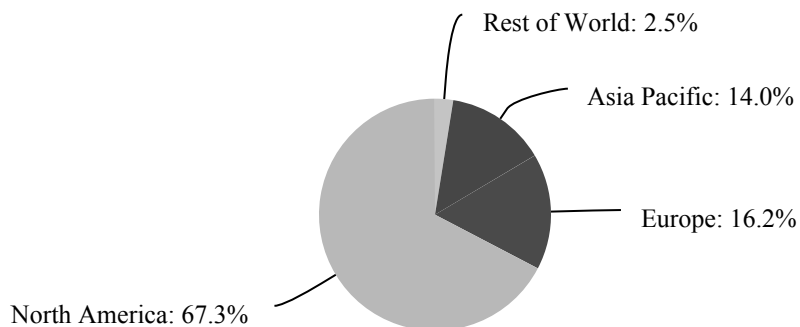
The charts below illustrate our revenue by segment, product line and geography in 2019 for all product lines. For more information on our U.S. and foreign operations, see Notes 5 and 20, to the Consolidated Financial Statements included within Part II, Item 8 of this Form 10-K.

Product Lines	Performance Materials		Performance Chemicals			
	Automotive Technologies	Process Purification	Pavement Technologies	Oilfield Technologies	Industrial Specialties	Engineered Polymers
Primary End Uses	Gasoline vapor emissions control	Purification of food, water, beverages and chemicals	Pavement preservation Adhesion promotion Warm mix asphalt technology	Well service additives Production and downstream application chemicals	Printing inks Adhesives Agrochemicals Lubricants Industrial intermediates	Coatings Resins Elastomers Adhesives Bio-plastics
Revenue	\$490.6 million		\$802.3 million			

**Sales by Geography - Performance Materials**



**Sales by Geography - Performance Chemicals**



Sales are assigned to geographic areas based on location to which product was shipped to a third-party.



## **Our Core Strengths**

Ingevity is committed to continued value creation by focusing on its core strengths:

### ***Leading Global Market Positions***

We are a leader in the global pine chemicals industry, further distinguished by our focus on target markets that offer the potential for profitable growth, supported by long-term secular growth trends such as infrastructure preservation and development, innovation in unconventional oil drilling and production, and increasing global food production demands. Our products serve as critical inputs used in a variety of high performance applications, including pavement preservation, pavement adhesion promotion, warm mix asphalt, oil well service additives, oil production, downstream applications chemicals, printing inks, adhesives, agrochemicals, and lubricants. The quality and diversity of our product portfolio, and the flexibility of our manufacturing assets, gives us the capability to direct our differentiated products towards their most profitable and attractive uses and geographies.

We are the global leader in caprolactone technologies, as shown by our invested capital base that represents approximately 60 percent of the global manufacturing capacity. Caprolactone is a critical input to many high-growth end-use applications such as thermoplastic additives for biodegradables and polyols in coatings, as well as other coatings, resins, elastomers, adhesives, and bioplastics. Our manufacturing footprint allows us to produce caprolactone monomer, and further derivatize it into the more profitable and faster growing market segments and geographies.

We are the leading global manufacturer of activated carbon used in gasoline vapor emission control systems in cars, trucks, motorcycles, and boats. Our activated carbon business is expected to benefit from increasingly stringent vehicle emission standards worldwide that our products are designed and qualified to meet. The annual global sales of light duty vehicles (i.e., passenger and light commercial vehicles) that are powered with gasoline are forecasted to grow from approximately 77 million to approximately 83 million vehicles, an increase of eight percent, from 2018 to 2028. Most of this growth is expected to occur outside of the U.S., Canada, and China in countries and regions where gasoline vapor emission standards significantly lag the new modern, highly effective standards that are currently being implemented in the U.S., Canada, and China. This provides significant upside potential in addition to the already favorable macroeconomic growth trends of the global automotive industry.

### ***Flexible Manufacturing Capabilities Optimize Asset Utilization***

The quality and diversity of our product portfolio, and the flexibility of our manufacturing assets, gives us the capability to direct our resources to their most profitable uses and geographies. Our Performance Chemicals assets include multipurpose chemical reactors that are capable of manufacturing products of varying chemistries that can serve multiple markets. For example, our North Charleston, South Carolina facility is capable of producing products for pavement, oilfield, and adhesives applications, while our DeRidder, Louisiana facility can be redirected with relative ease among various applications including printing inks, adhesives, oilfield, and asphalt. In our Warrington, U.K. facility, we have reactors for thermoplastic and polyol applications. These Warrington, U.K. reactors can produce products for a variety of applications: adhesives, bioplastics, and medical devices in thermoplastics and adhesives, coatings, and elastomers in polyols.

Our Performance Materials facilities, which primarily produce automotive grade carbon, are also capable of producing a number of other activated carbon products for food, water, beverage, and chemical purification applications, maximizing the productivity of these assets.

### ***Deep Technical Expertise and Product Innovation Capability and Experience***

We have deep technical expertise and market knowledge and insights, derived from customer relationships and research and development capabilities, that drive our ability to innovate. Innovation efforts are led and supported by our teams of technical experts and industry veterans, many of whom are considered the foremost experts in their fields, spread throughout our organization in key positions from product development to manufacturing to sales. Each of our business units has its own development and application laboratories that work in partnership with our customers to refine existing products and develop new innovative products that will drive value for Ingevity and our customers.

With our technical expertise and product innovation capability and experience, and by working closely with our customers, our technical experts offer application solutions that address our customers' most difficult challenges. For example, when our pavement contractor customers vary the aggregate and/or asphalt to be used in a particular job mix, they call on our

expertise to quickly reformulate the Ingevity additive chemistry needed for the revised mix, enabling them to meet the original job specifications on time, regardless of the change. Also, we aid our automotive customers in designing and testing gasoline evaporative emissions canisters. Not only do we advise our direct customers (typically tier 1 and 2 automotive suppliers), we advise the automobile Original Equipment Manufacturers, or “OEMs”, as well. We have complex testing equipment in both the United States and China to help our customers address their challenges in meeting mandated evaporative emissions thresholds. In engineered polymers, we work with our customers to educate them about the unique performance characteristics of our caprolactone and caprolactone derivatives. One of the unique product characteristics of caprolactone is its biodegradability. We recently achieved a home compostability certification for our caprolactone based thermoplastics. We believe this certification will help to accelerate adoption of our thermoplastics for use in biodegradable plastics. Our ability to swiftly understand and address our customers’ performance needs allows Ingevity to maintain and grow its partnerships with its customer base.

### ***Unique Decades-Long Track Record of Automotive Carbon Products Meeting Emission Compliance Standards***

Current U.S. Federal, California, and Canadian regulatory standards and the China 6 national standard, promulgated in December 2016, require that gasoline vapor control devices remain effective for the entire life of the vehicles on which they are installed. Ingevity has a substantial, decades-long track record of providing life-of-vehicle product performance in a properly designed gasoline vapor control system. Our capability to engineer very specific mesoporous carbons on a large commercial scale allows the system designers to minimize the system’s size based on our carbon’s ability to remain highly effective over a vehicle’s lifetime. Given the imperative for automotive manufacturers to produce vehicles capable of meeting these long-term requirements, or potentially face expensive recalls and unfavorable publicity, our proven history provides our customers with assurance that Ingevity’s activated carbon will provide life-of-vehicle product performance.

### ***Global Supply Chain Reach***

We have a global reach that allows us to effectively service multinational customers through a combination of our manufacturing facilities located in the U.S., China, and the United Kingdom as well as local talent strategically placed around the globe. In addition, our technology centers located in the U.S., China, the United Kingdom, Europe, and India give us the ability to service our customers throughout these regions, and provide us with market insights that allow us to develop customized solutions for local and regional markets. Our global engineering, technical, sales, and application support teams serve customers in approximately 75 countries.

This capability also allows us to take advantage of future market trends.

### ***Collaborative Customer and End User Relationships Drive Profitable Growth Opportunities***

We take a partnership approach with our customers, investing resources to deeply understand their customers’ needs so that we can provide technologically advanced, tailored solutions that allow our customers to maintain a competitive advantage in the markets they serve. Our knowledge of our customers’ end markets provides us with insights that enable us to develop solutions that address opportunities or challenges and create value for our customers. For example, through our relationships with several automobile OEMs (often, our customers’ customer), we learned that certain vehicles were having trouble passing emissions certification tests based on a small amount of volatile organic compounds (“VOCs”) migrating from the engine via the vehicles’ air intake systems. To address this issue, we developed several generations of activated carbon-based solutions, including activated carbon extruded honeycombs and engineered activated carbon sheets, that manage these emissions while minimizing pressure drop in the air intake system—a key performance advantage to the OEMs. This drove demand for our product by addressing the needs of our customers’ customer. We believe this approach-driven demand for our products by developing solutions for our customers’ end markets has been, and will continue to be, a significant driver of profitable growth.

### ***Education of Government and Regulatory Bodies on Scientifically Based Policies and Specifications***

Many of our customers are subject to increasing regulatory standards and mandates. With our technical expertise and experience, our teams are a valued resource and work directly with government and regulatory bodies, in support of our customers, as experts in their field to educate regulators about existing and innovative technologies that support their objectives or solve specific challenges. As the trend continues both in mature and emerging markets towards more advanced solutions, we believe the ability to leverage our expertise to educate, advocate, and promote sensible regulatory solutions will benefit our customers while driving incremental value within those markets. For example, Ingevity has globally recognized expertise in the highly specialized field of automotive gasoline vapor emissions. While tailpipe emissions on vehicles are well recognized,

understood and regulated, gasoline vapor emissions from vehicles have been lightly regulated in many countries outside the U.S., Canada, Brazil, and China. Our experts have educated authorities in other countries to help them understand and quantify the magnitude of these emissions and evaluate the highly effective solutions currently being adopted in the U.S., Canada, Brazil and China that can significantly reduce these gasoline vapor emissions at a relatively low cost per vehicle.

Our engagement with regulators allows us to then work with our customers in order to help them respond and adapt to evolving and varying regulatory standards. For example, because of the stringent and differing regulatory compliance standards applicable to the global oilfield industry, our oilfield customers often turn to us instead of smaller, less sophisticated suppliers in order to help them manage the complexities of compliance risk in chemical distribution and use throughout the world.

### ***Highly Engaged, Performance and Safety-Driven Culture***

We have assembled a highly talented, collaborative, committed, and creative team which drives the success of our business. Our collective ambition is keenly focused on creating value for today and tomorrow. Further, we are committed to protecting human health and the environment while using resources in a responsible and sustainable manner. As a long-standing member of the American Chemistry Council ("ACC"), we subscribe to the Guiding Principles of the Responsible Care program—a global chemical industry performance initiative that is implemented in the U.S. through the ACC. Our ISO 9001, IATF 16949 and Responsible Care Certifications are internationally recognized measures of consistent superior performance and responsibility to health, safety, security, and the environment.

### ***Long-term Secured Raw Material Supply***

We have a long-term supply agreement with WestRock pursuant to which we purchase all of the CTO output from WestRock's kraft mills, subject to certain exceptions. In 2018, we entered into a 20-year supply agreement with Georgia-Pacific LLC ("Georgia-Pacific"), pursuant to which we purchase the lesser of 125,000 tons of CTO and the aggregate output of CTO produced and originating at certain of Georgia-Pacific's paper mills.

These relationships with WestRock and Georgia-Pacific are strategically important to our Performance Chemicals business due to the limited supply of CTO globally, of which we believe a significant portion is already under long-term supply agreements with other consumers of CTO. Under these agreements, we currently expect to source approximately 60 to 70 percent of our CTO requirements through 2025 based on the maximum operating rates of our three Performance Chemicals' pine chemicals facilities.

We believe the supply from Georgia-Pacific, WestRock, and with our other contracted sources of CTO, will allow us to serve expected customer demand.

Solvay Interlox Limited ("Solvay") is the primary provider of hydrogen peroxide to our Warrington, U.K. facility pursuant to a long-term supply agreement. Hydrogen peroxide is also widely available and we believe that the supply from Solvay will allow us to serve our expected demand.

### ***Our Plans for Additional Growth***

We have a demonstrated history of profitable growth. Looking ahead, we believe we will continue to deliver profitable growth by taking the following steps:

#### ***Expanding Sales to Existing Customers and into New Geographies***

We believe we are well positioned to organically expand our sales through a combination of continued global market growth, leveraging our significant application knowledge to apply our existing products to new applications and capitalizing on the investments we have made in our global manufacturing, sales, technical centers, and distribution network. Our global reach allows us to effectively compete in new geographies by efficiently delivering proven innovative solutions where opportunities to apply our technologies exist. We continue to leverage our significant application knowledge and intimate customer relationships to target opportunities where we know our products perform well and to create demand for our products by driving value for our customers.

We intend to continue to strengthen our position in emerging markets where there are significant opportunities for growth. Opportunities include the expansion of sales of our pavement products into areas increasingly in need of newly paved

roads and increased sales of activated carbon solutions driven by anticipated regulatory changes in global automotive gasoline emissions control standards.

### ***Increasing Our Offering of Specialized, Higher Margin Products***

We employ a world-class team of engineering, technical, sales, and application specialists, along with experienced industry professionals, which provide us with deep technical knowledge and the ability to be a leading provider of specialty products in the markets we serve. We have the experience and capability to further develop and expand upon the products we currently produce, further differentiating them into higher value, increasingly specialized products, or developing new applications and end uses.

We have a history of success in product development and differentiation. For example, our oilfield technologies product line focuses on development and marketing of specialized tall oil based emulsifiers and corrosion inhibitors as well as marketing base tall oil fatty acid ("TOFA") refinery products.

We believe that there is significant upside in further developing and expanding upon products produced from TOFA, displacing some of our lower margin business where we sell TOFA directly to certain customers. This will have the added benefit of improved insulation from the cyclical nature of the direct natural fats and oils market of which TOFA is a part. Our goal is to increase the portion of our sales of specialized, higher value products derived from TOFA, including addressing new markets or opportunities to upgrade TOFA into product categories where we might not participate today.

Additionally, we search to supply the right chemistry for the applications within our market segments regardless of the raw materials required. Applying our unique insights into the end use applications of our products, our team searches to find novel solutions, outside of our current CTO-based materials, to problems and our team also works to create the supply chain needed to provide those products to our customers. As an example, we develop, manufacture, and sell product solutions in our pavement technologies product line that are TOFA and hydrocarbon based.

We also believe that there is significant upside in further developing and expanding caprolactone-based products and derivatives. The end-markets in which we are expanding have favorable trends that we believe will support growth rates higher than global gross domestic product ("GDP"). For example, caprolactone's performance properties give it superior performance in biodegradable plastics, medical devices, and aerospace coatings, among other applications.

### ***Innovating to Enable Our Customers to Adapt to Increasingly Stringent Regulatory Standards***

We are a valued resource to government and regulatory agencies around the world, from California to China, including national, regional, and local environmental regulatory bodies. We work directly with such bodies, in support of our customers, to help them develop sensible standards based on the availability of technological solutions that make such standards commercially achievable. As standards are adopted and become increasingly demanding, the products that can be used to achieve compliance with such standards become increasingly technologically complex to design and manufacture on a commercial level. Our ability to meet these complexities provides Ingevity with a distinctive commercial edge-as our customers in many applications depend on us to help them meet their compliance standards. We also work closely with automotive companies and their suppliers to ensure that they understand and can meet increasingly stringent vehicle emission standards.

### ***Investing Organically and Selectively Pursue Acquisitions that Further Strengthen Our Product Portfolio***

We plan to continue to invest capital organically in attractive cost reduction projects and in capacity expansions as necessary to meet demand growth. For example, in 2016, to meet the growing demand for our activated extruded honeycomb products that help meet the U.S. and Canadian Low Emission Vehicle, or LEV III, and Tier 3 regulations, we began a multi-year capital expansion at our Waynesboro, Georgia facility that will effectively quadruple the capacity output of that facility by the end of 2020. Also, in 2020, we will complete a brownfield expansion and infrastructure upgrades at our Covington, Virginia facility in order to meet the growing activated carbon demand for the China 6 regulation. We will also complete growth expansion work at our Warrington, U.K. facility that includes streamlining and replacing monomer production equipment with equipment that is more modern and efficient. As demand for our products grows, we will continue to evaluate additional capacity expansion as needed.

In addition, we intend to pursue value-creating acquisitions, such as the acquisition (the "Caprolactone Acquisition") of Perstorp Holding AB's caprolactone division (the "Caprolactone Business"), the acquisition (the "Pine Chemical Acquisition") of Georgia-Pacific's Pine Chemical business ("Pine Chemical Business"), and the acquisition of the remaining 30

percent ownership interest of our Purification Cellutions, LLC joint venture (now known as Ingevity Georgia, LLC), all of which represented attractive opportunities in our target markets as well as in high-value niche applications that complemented our product portfolio and capabilities. We continue to seek to add product lines and portfolios which we believe serve end-markets with growth rates significantly greater than global GDP, as well as having the potential to be a platform for additional bolt-on acquisitions. We will also continue marketing and manufacturing alliances that will play an important role in strengthening our leadership positions. We are evaluating acquisitions both domestically and globally.

## Segments

### Performance Materials

We engineer, manufacture, and sell hardwood-based, chemically activated carbon products, produced through a highly technical and specialized process primarily for use in gasoline vapor emission control systems in cars, trucks, motorcycles, and boats. We are a global leader in this automotive application. We also produce a number of other activated carbon products for food, water, beverage, and chemical purification applications, to maximize the productivity of our manufacturing assets.

Our automotive carbon products capture gasoline vapor emissions that would otherwise be released into the atmosphere as VOCs, which contain hazardous air pollutants and can photochemically react to form ozone and secondary organic aerosols. These gasoline vapor emissions (which are distinct from tailpipe emissions) are released primarily (i) during refueling, (ii) when a vehicle is parked during the daytime, as a result of evaporation and expansion of vapors in the fuel tank in warmer daytime temperatures and (iii) as “running loss,” as a result of evaporation and expansion of vapors in the fuel tank from increased temperatures as a result of operation of the vehicle.

Our automotive carbon products are typically part of vehicle-based gasoline vapor emissions control systems which can range from systems equipped with an approximately one liter carbon canister that captures one day of diurnal parking emissions, to more sophisticated Onboard Refueling Vapor Recovery (“ORVR”), running loss and multi-day diurnal parking systems with a two to three-liter carbon canister that is over 98 percent efficient. The captured gasoline vapors are largely purged from the carbon and directed to the engine where they are used as supplemental power for the vehicle. In this way, our automotive carbon products are part of a system that provides for both environmental control and energy recovery. We estimated, based upon 2016 data, that our products collectively prevented over 20,000 metric tons of VOC emissions each day from being lost to the atmosphere and returned the equivalent of 8 million gallons of gasoline each day to power vehicles.

Environmental standards drive the implementation of gasoline vapor emission control systems by automotive manufacturers. While tailpipe emissions on vehicles are well recognized, understood, and regulated, gasoline vapor emissions from vehicles have been lightly regulated in many countries outside the U.S., Canada, Brazil, and China. For those countries that have not significantly regulated gasoline vapor emissions, enacting more stringent regulations represents a low-cost, high-return opportunity to address their air quality issues. The annual global sales of light duty vehicles (i.e., passenger and light commercial vehicles) that are powered with gasoline are forecast to grow from approximately 77 million to approximately 83 million vehicles, an increase of eight percent from 2018 to 2028. Most of this growth is expected to occur outside of the U.S., Canada, and China in countries and regions where gasoline vapor emission standards significantly lag the new modern, highly effective standards that are currently being implemented in the U.S., Canada, and China. Adoption of modern gasoline vapor emission standards in these regions would have significant, positive environmental and energy efficiency impacts and provide significant upside growth potential for our automotive carbon business.

The U.S. and Canada have led the world in recognizing and addressing the harm to air quality caused by gasoline vapor emissions, and in early 2014 enacted regulatory standards that will further reduce these emissions to “near zero” levels by phasing in Tier 3 and LEV III evaporative emission standards through 2022, which will result in significant increases in the use of our “canister bleed emissions” system patent over that same period. The Tier 3 and LEV III phase in schedule requires compliance with the standard as follows: 40 percent of model year 2017’s vehicles, 60 percent of model year 2018’s vehicles, 80 percent of model year 2020’s vehicles and 100 percent of model year 2022’s vehicles. The most commonly applied embodiment of the patent uses our activated carbon in the main part of the canister and our activated carbon extruded honeycomb(s) as a “scrubber” on the outlet side of the canister to reduce the canister’s emissions to “near zero.” One of our significant “canister bleed emissions” patents expires in March 2022. The extruded honeycombs are manufactured through an activated carbon ceramic extrusion process at our Waynesboro, Georgia facility. We have a 100 percent controlling ownership

and operating responsibility at this facility, after having purchased the remaining 30 percent ownership interest in the Purification Cellutions, LLC joint venture (now known as Ingevity Georgia, LLC) from our partner in August of 2018.

Most countries outside the U.S., Canada, China, and Brazil have significantly lagged in the adoption of regulatory standards that would reduce these gasoline vapor emissions, focusing instead on regulating the more “visible” tailpipe emissions. These countries are using a gasoline vapor emission standard that is functionally equivalent to a 1981 U.S. regulatory standard. As a result, in Europe, Asia, Africa, and Latin America, gasoline vapor emissions are the primary source of automotive VOC emissions. China has begun implementation of a new national standard, China 6, that is functionally equivalent to the 2009 alignment of U.S. Tier 2 with California LEV II. This new national standard, containing ORVR and multi-day diurnal parking emission controls, is scheduled to be fully phased in by July 2020 with the announced early implementation in several large, provincial, and municipal regions that began in 2019.

As recognized experts in the field of gasoline vapor emission control, Ingevity has been working with regulatory bodies and relevant third parties in Brazil, China, Japan, Mexico, and the European Union to help them understand and move towards more effective regulatory standards similar to those in place in the U.S. and Canada. Regulatory indications of adoption and implementation of more stringent vapor emissions standards outside of the U.S. and Canada include the following:

- The European Commission has adopted more stringent gasoline vapor emission regulations with its Euro 6d standard, which requires full implementation by September 2019. This new standard is more stringent than the current standards and includes a 2-day diurnal parking emission test that will generally result in a 30 - 70 percent increase in canister capacities and a shift in some volumes to pellets and higher activity carbon.
- In its November 2007 session, the World Forum for Harmonization of Vehicles Regulations (WP 29) established an Informal Working Group (IWG) under the Working Party on Pollution and Energy (GRPE) to prepare a road map for Worldwide Harmonized Light Vehicle Test Procedures (WLTP), including those for evaporative emissions as part of Phase 2 of the effort. Global Technical Regulation (GTR) No. 19 established a 48-hour test procedure, based upon the European 48-hour procedure, that can be adopted by contracting parties (i.e. participating countries) across the globe.
- On December 23, 2016, the China Ministry of Environmental Protection and the China State Administration of Quality Supervision, Inspection, and Quarantine released its China 6 National Standard on the Limits and Measurement Methods for Emissions from Light-Duty Vehicles (GB 18352 6-2016). In the new standard, diurnal control is increased to 48 hours, running loss conditions are simulated, and ORVR is added. Emissions limits are also reduced and will be similar to those in U.S. Tier 2. As a result, canister volumes are expected to increase by 2 to 3 times and the majority of the canisters are expected to shift to high activity carbons and pellets. This new standard fully implements nationally on July 1, 2020.
- South Korea is currently phasing in some U.S. Tier 2 diurnal parking emission standards, which generally require activated carbon canister volumes greater than 1.3 liters and an increased use of pelletized carbon. In 2018, South Korea began phasing in portions of the U.S. Tier 3 “near zero” full vehicle diurnal parking emission standards that will favor the use of low emission and air induction system diurnal parking emission activated carbon technologies.
- In November 2018, Brazil’s National Council for the Environment (“CONAMA”) plenary finalized the Program for the Control of Air Pollution by Motor Vehicles (“PROCONVE”) L7 regulations that included a hot-soak and 48-hour diurnal requirement - with an emission limit similar to US Tier 2 - that must be fully implemented by January 2022. An ORVR requirement was also passed that will be implemented in stages in 2023 (20 percent of new vehicles), 2024 (60 percent of new vehicles), and 2025 (100 percent of new vehicles).

See also “Risk Factors-Risks Related to Ingevity’s Business-Adverse conditions in the automotive market may adversely affect demand for our automotive carbon products” and “Risk Factors-Risks Related to Ingevity’s Business-If increasingly more stringent air quality standards worldwide are not adopted, our growth could be impacted.”

Current regulatory standards in the U.S. and Canada require that gasoline vapor control devices remain effective for the entire life of the vehicles on which installed. The end of lifetime requirements for most vehicles is 10 years or 120,000 miles, but increased to 15 years or 150,000 miles for a large segment of these vehicles with the implementation of the Tier 3

standard. China 6 standards also include a lifetime requirement of 12 years or 160,000 kilometers (which changes to 200,000 kilometers beginning in July 2023). Ingevity has a substantial, decades long track record of providing life-of-vehicle product performance based on our unique capability to engineer a very specific mesoporous carbon on a large commercial scale. Given the imperative for automotive manufacturers to produce vehicles capable of meeting these long term requirements, or potentially face expensive recalls and unfavorable publicity, there is an increased risk to using other producers who do not have a comparable, proven history, particularly given the significant costs associated with non-compliance should an offering fail to maintain effectiveness over vehicle lifetimes. Additionally, because these gasoline vapor control systems are certified as “environmental devices” for models currently in production, it is time consuming and costly to replace our products within the vehicle’s control system with a competitive product during the vehicle’s model platform production life due to the high cost of recertification.

As a result of decades of innovation and production, Ingevity is able to produce products that are effective in smaller amounts than competitors’ offerings, meaning less product is required-which results in savings through the use of a smaller and less costly canister in the overall emissions control system. Continued innovation and manufacturing know-how may allow this advantage to continue even as competitors improve their product offerings.

Ingevity is further uniquely positioned to capitalize on the opportunity afforded by the adoption of these modern vapor emission regulatory standards, which will, as a practical matter (given current technology), require manufacturers of light duty vehicles in countries adopting these standards to incrementally install advanced gasoline vapor control technology with carbon capable of meeting the new regulatory standards. Based on the regulatory trends and growth in vehicle sales, the revenue for Ingevity's automotive emissions products has doubled since 2015. Ingevity, through its proprietary technology, trade secrets and confidential manufacturing know-how, has unparalleled capability and expertise to manufacture the high performance activated carbon products required to meet these regulatory standards, as well as more stringent standards likely to be imposed in the years to come. These same capabilities and expertise will help Ingevity to maintain its position in the U.S. and Canada automotive markets as they implement the adoption of “near zero” gasoline vapor emission levels.

Additionally, as automotive engine technology continues to evolve and engines become more efficient, the amount of engine airflow available to purge the gasoline vapors from the activated carbon products is expected to decline (“low-purge”). We believe that the pore structure characteristics of our activated carbon products additionally advantages us versus competitors’ offerings in low purge conditions. Ingevity is actively investing in product and process development, and has received patents designed to deal with low-purge engines.

We also produce a number of other activated carbon products for food, water, beverage, and chemical purification applications to maximize the productivity of our manufacturing assets.

### ***Raw Materials and Production***

The primary raw material (by volume) used in the manufacture of our activated carbon is hardwood sawdust. Sawdust is readily available, and is sourced through multiple suppliers to protect against supply disruptions and to maintain competitive pricing.

We also utilize phosphoric acid, which is used to chemically activate the hardwood sawdust. This phosphoric acid is sourced through multiple suppliers to protect against supply disruptions and to maintain competitive pricing. The market price of phosphoric acid is affected by the global agriculture market as the majority of global phosphate rock production is used for fertilizer production and only a portion of that production is used to manufacture purified phosphoric acid. In the recent past, there has been price volatility in phosphoric acid due to increased phosphate rock demands in global agriculture, which has in turn negatively affected our business.

Activated carbon is an amorphous form of carbon characterized by a high volume of nanoscale pores. “Activation” refers to the process of developing these pores. The size, shape, and volume of the pore structure and the surface chemistry of the pore are critical for driving performance in various applications.

Activated carbons are typically produced from either a thermal or chemical process utilizing a wide variety of carbonaceous raw materials. The thermal process, the most widely used activation process, uses rotary kilns or multi-hearth furnaces to carbonize and activate the raw material. This process operates at a much higher temperature and at a lower yield than the chemical activation process. Typical raw materials include bituminous coal, lignite, and coconut husks. Thermally activated carbons are usually used for “catch and dispose” applications, whereby the carbon is used to capture certain compounds and the carbon product is then disposed of or thermally regenerated.

Ingevity employs a more specialized activation process, whereby chemical catalyst - phosphoric acid - and various heating methods are used to facilitate the development of porosity. This process operates at a lower temperature and typically has higher yields than a thermal process. Carbons produced by this method typically have larger pores than thermally activated carbons and can be used in both “catch and dispose” applications and “catch and release” applications, whereby the carbon is used to capture and temporarily hold on to certain compounds which are then released in a controlled manner under specific operating conditions.

We use hardwood sawdust to produce chemically activated carbon, which, because of its larger pore volume, pore structure and high surface area, is well-matched for a variety of applications and ideally suited for the “catch and release” automotive application of capturing and reusing gasoline vapor emissions.

We further process activated carbon after it is activated into different forms using a variety of extrusion processes. One of our extrusion processes is to use activated carbon and various binders to make a formed pellet. Pelleted carbon is typically used in gasoline emission control canister applications where a low pressure drop system is required such as ORVR.

Another extrusion process we employ is with our honeycomb “scrubber.” We utilize an activated carbon infused ceramic extrusion process. These extruded honeycomb “scrubbers” are a component of the our patented system to reduce the canister’s emissions to “near zero” and are manufactured at our Waynesboro, Georgia facility.

### ***Customers***

We sell our automotive products to over 60 customers around the globe. In 2019, our ten largest customers accounted for approximately 80 percent of segment sales. We are the trusted source of these products for many of the world’s largest automotive parts manufacturers, including Aisan Industry, Delphi Technologies, MAHLE, and many other large and small component manufacturers throughout the global automotive supply chain. Our relationship with many of our customers and their customers-the vehicle manufacturers themselves-have been in place for most of our history in this application. Ingevity also produces activated carbon products for food, water, beverage and chemical purification applications, which are sold to approximately 80 customers throughout the world.

We operate primarily through a direct sales force in North America and our other major markets and also have a smaller, focused network of agents and distributors that have established a strong direct sales and marketing presence in Europe and Asia.

### ***Competition***

In automotive carbon, Ingevity has a unique decades-long track record of providing life-of-vehicle performance. Given the imperative for automotive manufacturers to produce vehicles for the U.S., Canadian, and Chinese markets capable of meeting life-of-vehicle emission standards, or potentially face expensive recalls and unfavorable publicity, our automotive carbon products provide our customers the low-risk choice in this high performance application. Our competitors in automotive carbon include Cabot Corp., Kuraray, and several Chinese manufacturers. Our process purification business competes mainly in the U.S. in the food, beverage, chemical, and water purification applications. Competitors in our process purification product line include Cabot Corp., Kuraray, Jacobi Carbons, and several domestic U.S. manufacturers and distributors of imported products. Refer to Item 1A - "Risk Factors- We face competition from producers of substitute products and new technologies, and new or emerging competitors." and "Risk Factors-We face competition from infringing intellectual property activity.”



## **Performance Chemicals**

Ingevity's Performance Chemicals segment, which is comprised of four product lines (pavement technologies, oilfield technologies, industrial specialties, and engineered polymers), develops, manufactures, and sells a wide range of specialty chemicals. Our products are utilized in pavement preservation, pavement adhesion promotion, warm mix asphalt, oil well service additives, oil production, and downstream, printing inks, adhesives, agrochemical dispersants, lubricants, coatings, resins, elastomers, bioplastics, and other diverse industrial uses. Our application expertise is often called upon to provide unique solutions to our customers that maximize resource efficiency. We have a broad and diverse customer base in this segment. In 2019, our top ten customers accounted for approximately 26 percent of our segment revenue; the next 100 customers made up approximately 45 percent of our segment revenue.

### ***Raw Materials and Production***

Our Performance Chemicals business serves customers globally from three manufacturing locations in the U.S. and one in the United Kingdom. Most of our pavement technologies, oilfield technologies, and industrial specialties products are derived from CTO, a co-product of the kraft pulping process, where pine is used as the source of the pulp. CTO is produced by acidulating black liquor soap skimmings ("BLSS"), which are recovered during the kraft pulping process. Consumers of CTO can purchase BLSS from pulping mills that do not have acidulation capacity (in which case the BLSS will need to be acidulated into CTO), and purchase CTO from pulping mills that do have acidulation capacity. The CTO is further separated by distillation into tall oil rosin ("TOR"), TOFA and other biofractions. As such products are further refined or chemically modified, higher value derivative products are created, making their way into a wide variety of industrial and consumer goods. We also produce products derived from lignin, extracted from black liquor, a co-product of the kraft pulping process. Our engineered polymers' products are caprolactone based, which is derived from cyclohexanone, a benzene derivative, and hydrogen peroxide, both of which are readily available in the market. Lignin, TOR, TOFA and caprolactone are sold directly to customers in some instances, or are further refined or chemically modified into higher value derivative products or performance chemicals.

The availability of CTO is directly linked to the production output of kraft mills using pine as their source of pulp, which is the predominant fiber source for packaging grades of paper as well as fluff pulp for personal care products. As a result, there is a finite global supply of CTO, with global demand for softwood kraft pulp driving the global supply of CTO, rather than demand for CTO itself. Most of the CTO made available for sale by its producers is covered by supply agreements, further constraining availability.

We have a long-term supply agreement with WestRock pursuant to which we purchase all of the BLSS and CTO output from WestRock's kraft mills, subject to certain exceptions. Beginning in 2025, either party may provide a notice to the other party terminating the agreement five years from the date of such notice. Beginning one year after such notice, the quantity of products provided by WestRock under the agreement will be gradually reduced over a four-year period based on the schedule set forth in the agreement. In addition, from 2022 until 2025, either party may provide one-year notice to remove a kraft mill as a supply source. The two largest kraft mills under the agreement currently are expected to supply approximately 17 to 19 percent and 15 to 17 percent, respectively, of the total amount of products expected to be supplied under our agreement with WestRock. In the event that WestRock exercises its right to terminate our supply agreement with them or remove a kraft mill as a supply source, we may be able to obtain substitute supplies of BLSS or CTO from other suppliers, spot purchases or a new contract with WestRock. The agreement with WestRock includes pricing terms based on market prices. Based on WestRock's current output, we currently expect to source approximately 30 to 40 percent of our CTO requirements from WestRock under this agreement through 2025 based on the maximum operating rates of our three U.S. Performance Chemicals' facilities.

In 2018, we entered into a 20-year supply agreement with Georgia-Pacific pursuant to which we will purchase the lesser of 125,000 tons or 100 percent of the CTO production from select Georgia-Pacific kraft mills during each contract year, subject to certain exceptions. The agreement with Georgia-Pacific includes a market pricing formula which is subject to quarterly adjustments. Under this agreement, we currently expect to source approximately 30 percent of our CTO requirements through 2025 based on the maximum operating rates of our three U.S. Performance Chemicals' facilities.

We have agreements with other suppliers to satisfy substantially all of the balance of our expected requirements of CTO through 2020.

We believe that we are well positioned to have sufficient CTO required to meet demand for our operations. However, if any of our suppliers (including WestRock or Georgia-Pacific) fail to meet their respective obligations under our supply

agreements or we are otherwise unable to procure an adequate supply of CTO, we would be unable to maintain our current levels of production. In addition, if WestRock exercises its rights to terminate the agreement or remove a kraft mill as a supply source, and we are unable to arrange a substitute supply of CTO, we would be unable to maintain our current levels of production. Additionally, there are other pressures on the availability of CTO. Some kraft pulp mills may choose to consume their production of CTO to meet their energy needs or reduce their carbon footprint rather than sell the CTO to third parties. Furthermore, weather conditions have in the past and may in the future affect the availability and quality of pine trees used in the kraft pulping process and therefore the availability of CTO meeting our quality standards. See “Risk Factors-Risks Related to Ingevity’s Business-Our Performance Chemicals segment is highly dependent on CTO, which is limited in supply; lack of access to sufficient CTO would impact our ability to produce CTO-based products.”

Also, regulatory mandates in Europe for the use of biofuel have placed additional pressure on CTO availability. See “Risk Factors-Risks Related to Ingevity’s Business-The European Union’s Directive 2009/28 on the promotion of the use of energy from renewable resources (“Renewable Energy Directive” or “RED”), which will be repealed on July 1, 2021 (the “RED”), and the new Directive replacing Directive 2009/28, which has to be implemented by Member States by June 30, 2021 (the “RED II”)) and similar legislation in the U.S. and elsewhere may incentivize the use of CTO as a feedstock for production of alternative fuels.”

Finally, CTO as a raw material may be subject to significant pricing pressures. See “Risk Factors- Risks Related to Ingevity’s Business-Pricing for CTO is subject to particular pricing pressures by reason of limited supply and competing demands for end use, and we may be limited in our ability to pass on increased costs to our customers” and “Risk Factors-Risks Related to Ingevity’s Business-The Company’s oilfield technologies business is significantly affected by trends in oil and natural gas prices that affect the level of exploration, development and production activity.”

The key raw materials in our Performance Chemicals caprolactone manufacturing are cyclohexanone and hydrogen peroxide. Cyclohexanone is derived from benzene and is widely available. We maintain multiple suppliers to protect against supply disruptions and to maintain competitive pricing. Hydrogen peroxide is also widely available and is currently supplied by a co-located supplier under a long-term supply agreement. However, Brexit may pose some risk to the supply chain for our Warrington, UK facility. See “Risk Factors- General Business and Economic Risk- Our engineered polymers product line may be adversely affected by the United Kingdom's withdrawal from the European Union.”

The other key raw materials used in the Performance Chemicals business are nonylphenol, pentaerythritol, and ethylene amines. These are sourced where possible through multiple suppliers to protect against supply disruptions and to maintain competitive pricing.

## ***Markets Served***

### *Pavement Technologies*

Our pavement technologies group supplies a broad line of innovative additives, systems and technologies for road construction, resurfacing, preservation, maintenance, and recycling globally. As a specialty asphalt additive supplier, we have a long history of work with transportation agencies, university research consortiums, paving contractors, and asphalt refiners around the world to design, develop, and implement innovative additives and novel paving systems that protect existing roadways and enhance the performance of new road construction.

Our pavement technologies team combines broad downstream technical, application, and construction experience with a strong direct sales and marketing presence. Our combined expertise in the disciplines of chemistry and civil engineering provides a comprehensive understanding of the relationship between molecular structure of our chemistries and their impact on the performance of pavement systems. This allows us to develop products customized to local markets and consistently deliver cost-effective solutions for our clients. We also introduce and commercialize new technologies globally through consulting relationships with ministries and departments of transportation to stimulate customer demand for our products.

### Customers

We supply asphalt additives and technologies to approximately 500 customers through the use of Ingevity sales representatives and distributors. In 2019, our ten largest customers accounted for 37 percent of the product line's sales. Technology centers located in the U.S., China, Europe, and India create market insights for product development customized to local and regional markets.

## Competition

We compete on the basis of deep knowledge of our customers' business and extensive insights into road building technologies and trends globally. We use these strengths to develop consulting relationships with government departments of transportation, facilitating new technology introduction into key markets around the world. Our combined expertise in the disciplines of chemistry and civil engineering provides a comprehensive understanding of the relationship between molecular structure of our chemistries and their impact on the performance of pavement systems. This allows us to develop products customized to local markets and to consistently deliver cost-effective solutions for our customers. Our primary competitors in pavement technologies are Nouryon and Arkema.

### *Oilfield Technologies*

Our oilfield technologies group produces and sells a wide range of innovative specialty chemical products for the global oilfield industry, including well service additives and chemical solutions for production and downstream applications.

*Well Service Additives.* Our well service additive products are formulated to increase emulsion stability and aid in fluid loss control for oil-based drilling fluids. Other additives include rheology modifiers, which are used to improve the viscosity properties of oil-based fluids, and are typically used in deep water applications and wetting agents, which provide improved wetting of solids and aid in the efficiency of the drilling process. This family of products aids in accessing difficult to reach oil and gas reserves, both on and offshore around the globe.

*Production and Downstream.* Our production and downstream products serve as corrosion inhibitors or their components. Crude oil and natural gas production is characterized by variable production rates and unpredictable changes due to the nature of the produced fluids including but not limited to water and salt content. Our corrosion inhibitors maximize production rates by reducing equipment downtime from corrosion of key equipment and pipe.

## Customers

We sell our oilfield technologies to approximately 70 customers around the globe through the use of Ingevity sales representatives and distributors. In 2019, our ten largest customers accounted for 74 percent of the product line's sales.

## Competition

We compete on the basis of our ability to understand our customers' applications and deliver solutions that aid in their improvement of the exploration and production of oil and gas for the end users. Additionally, this application expertise coupled with our strong understanding of CTO-based chemistry allows for rapid development of solutions to challenges in the field. Our scale and flexibility of manufacturing are the final piece that helps deliver the creativity, expedience, and confidence the customers in oilfield technologies require from their best suppliers. Our competitors in this field include Lamberti, Kraton, and several others.

### *Industrial Specialties*

Our industrial specialties group manufactures specialty chemicals including: adhesive tackifiers, agrochemical dispersants, lubricant additives, printing ink resins, and industrial intermediates. Our technical expertise and formulation capabilities allow us to develop innovative products to meet our customers' various needs.

*Adhesives.* We are a leading global supplier of tackifier resins, which provide superior adhesion to difficult-to-bond materials, to the adhesives industry. Adhesive applications for our products include construction, product assembly, packaging, pressure sensitive labels and tapes, hygiene products, and road markings.

*Agrochemicals.* We produce dispersants for crop protection products as well as other naturally derived products for agrochemicals. Crop protection formulations are highly engineered, specifically formulated and cover a range of different formulation types, from liquids to solids. We deliver a wide range of dispersants that are high performing and consistent. In addition, our crop protection products are approved for use as inert ingredients in agrochemicals by regulatory agencies throughout the world.

*Lubricants.* We supply lubricant additives and corrosion inhibitors for the metalworking and fuel additives markets. Our lubricant products are multi-functional additives that contribute to lubricity, wetting, corrosion inhibition, emulsification, and general performance improvement. Our products are valued because of their ease in handling, robust performance, and improved formulation stability.

*Printing Inks.* We are a leading supplier of ink resins from renewable resources to the global graphic arts industry for the preparation of printing inks. Our products improve gloss, drying speed, viscosity, adhesion, and rub resistance of the finished ink to the substrate. We produce a wide array of resins, typically specifically tailored to a customer's use, which can vary by application, pigment type, end use, formulation, manufacturing, and printing process.

*Industrial Intermediates.* Our functional chemistries are sold across a diverse range of industrial markets including, among others, paper chemicals, textile dyes, rubber, cleaners, mining, and nutraceuticals.

#### Customers

We sell our industrial specialty chemicals to approximately 500 customers around the globe through the use of Ingevity sales representatives and distributors. We have an over twenty-year relationship with many of our significant customers in this business. In 2019, our ten largest customers accounted for 42 percent of the product line's sales.

#### Competition

In industrial specialties, our customers select the product that provides the best balance of performance, consistency, and price. Reputation and commitment to our customer's industry are also valued by our customers and allow us to win business when other factors are equal. In our adhesives business, our products compete against other tackifiers, including other TOR-based tackifiers as well as tackifiers produced from gum rosin and hydrocarbon starting materials. In addition, the choice of polymer used in an adhesive formulation drives the selection of tackifier. In agrochemicals, the selection of a dispersant is made early in the product development cycle and the formulator has a choice among Ingevity's sulfonated lignin products, lower quality lignosulfonates and other surfactants such as naphthalene sulfonates. In lubricants, we compete against other producers of distilled tall oil and additives. In printing inks, our products compete against other resins that can be derived from TOR, gum rosin and, to a lesser extent, hydrocarbon sources. In our industrial intermediates business, our TOFA competes against widely available fats and oils derived from tallow, soy, rapeseed, palm, and cotton sources.

Competitors differ depending on the product, application, and region and include Kraton, Eastman Chemical, ExxonMobil, Borregaard, Lawter, Respol/Forchem, DRT, as well as several others.

#### *Engineered Polymers*

Our engineered polymers group produces caprolactone and caprolactone based specialty chemicals for use in coatings, resins, elastomers, adhesives, and bioplastics. Our technical expertise and formulation capabilities allow us to develop innovative products to meet our customers' various needs.

*Coatings.* We supply coating products that are used in automobile refinishing, sports floors, and marine applications. Our products enhance end product performance by providing abrasion resistance, long durability, high quality finish, and enhanced performance in resin modification. Our products are often preferred when they provide a combination of traits which allow customers to displace several combinations of other products.

*Resins.* We supply resin products that are used in acrylic resins, polyurethane, and inks. Our products enhance end product performance due to their protective properties, all weather performance and reduction or elimination of the need for solvents in formulations. Our products tend to be preferred where superior or particular performance levels are required by our customers.

*Elastomers.* We supply products that are used in wheel seals, mining screens, and polyurethane films. Our products enhance end product performance due to their resistance to wear and tear, the ability to maintain form and function under pressure and temperature and provide excellent UV resistance. Our products are often used in highly demanding applications where competitive products do not reach required performance levels.

*Adhesives.* We supply products that are used in hot-melts, fabric lamination, and miscellaneous footwear components. Our products enhance end product performance through their durability and substrate compatibility. Our products tend to be preferred because they are found to be easier to process and apply compared to competitive offerings.

*Bioplastics.* We supply products that are used in films, paper coatings, disposable cups, utensils, and packaging. Our products enhance end product performance due to the combination of their biodegradability and stability, strength properties, and food friendliness (some products EU food contact approved). Our products tend to improve processing of existing bioplastic solutions.

*Other.* We supply additives that are used in medical devices, 3-D printing, and miscellaneous footwear components. Our additives enhance end product performance due to their low melting point and ability to be thermoformed. Our products improve process conditions and improve the surface finish of the end product compared to competitive offerings.

#### Customers

We sell our engineered polymers chemicals to over 300 customers around the globe through the use of Ingevity sales representatives and distributors. We have a 40-year history in the business long-term relationships with some of our customers of more than ten years. In 2019, our ten largest customers accounted for 43 percent of the product line's sales.

#### Competition

In engineered polymers, we face competition from not only other producers of caprolactone, but other competing technologies. We compete on the basis of performance as compared to the other materials. In coatings, we compete against PTMEG, polycarbonates, and polyols. In resins, we also compete against hydroxy monomers, oxitanes, allyl ethers and hydroxy acrylates. In elastomers, we compete against PTMEG, HDO adipates, polycarbonates and polyesters. In adhesives, we compete against TPU, surlyn, polyesters, EVA, and polyamids. In bioplastics, we compete against PBAT, PBS, polylactide, and starch-based polymers.

The primary caprolactone competitors are Daicel and BASF.

#### Brexit

Our engineered polymers' commercial and manufacturing teams have been proactively planning for various contingencies related to the United Kingdom's ("U.K.") withdrawal from the European Union ("EU"), an event generally referred to as "Brexit". Such planning includes positioning additional raw materials in the U.K., as well as storing additional inventories of products in the EU, in order to minimize the impact of any short term Brexit related supply chain disruptions and potential liquidity impacts.

#### **Energy**

Our manufacturing processes require a significant amount of energy. We are dependent on natural gas to fuel the processes in our chemical refineries and activated carbon plants. Although we believe that we currently have a stable natural gas supply and infrastructure for our operations, we are subject to volatility in the market price of natural gas. All of our manufacturing processes also consume a significant amount of electricity. All of our facilities are located in regulated service areas that have stable rate structures with reliable electricity supply.

#### **Environment**

Our operations are subject to extensive regulation by federal, state, and local authorities, as well as regulatory authorities with jurisdiction over the foreign operations of Ingevity, including relating to the discharge of materials into the environment and the handling, disposal, and clean-up of waste materials, and otherwise relating to the protection of the environment. It is not possible to quantify with certainty the material effects that compliance with these regulations may have upon the capital expenditures, earnings or competitive position of Ingevity, but it is anticipated that such compliance will not have a material adverse effect on any of the foregoing. For a further discussion, see "Risk Factors-Risks Related to Ingevity's Business-Our business involves hazards associated with chemical manufacturing, storage, transportation and disposal" and "Risk Factors-Risks Related to Ingevity's Business-The Company's operations are subject to a wide range of general and industry specific environmental laws and regulations." Environmental regulation and legal proceedings have the potential to involve significant costs and liability for Ingevity.

#### **Backlog**

In general, we do not manufacture our products against a backlog of orders and do not consider backlog to be a significant indicator of the level of future sales activity. Production and inventory levels are based on the level of incoming orders as well as projections of future demand. Therefore, we believe that backlog information is not material to understanding our overall business and should not be considered a reliable indicator of our ability to achieve any particular level of revenue or financial performance.

## **Intellectual Property**

Intellectual property, including patents, closely guarded trade secrets and highly proprietary manufacturing know-how, as well as other proprietary rights, is a critical part of maintaining our technology leadership and competitive edge. Our business strategy includes filing patent and trademark applications where appropriate for proprietary developments, as well as protecting our trade secrets. We actively create, protect, and enforce our intellectual property rights. The protection afforded by our patents and trademarks varies based on country, scope, and coverage, as well as the availability of legal remedies. Although our intellectual property taken as a whole is material to the business, other than our “canister bleed emissions” patent, which is part of our automotive business and expires in March 2022, there is no individual patent or trademark the loss of which could have a material adverse effect on the business. The most commonly applied embodiment of the “canister bleed emissions” patent uses our activated carbon in the main part of the canister and our activated carbon extruded honeycomb(s) as a “scrubber” on the outlet side of the canister to reduce the canister’s emissions to “near zero.” We are filing for and being granted patents for product and process developments for our Performance Materials business that we believe are both novel and consistent with trends in the technological development of engines. Our Evotherm Warm Mix Asphalt technology is supported by numerous global patents. Additionally, our Caprolactone Business and related technologies are supported by numerous global patents and trademarks, as well as proprietary manufacturing and technical know-how. See “Risk Factors-Risks Related to Ingevity’s Business-From time to time we are called upon to protect our intellectual property rights and proprietary information through litigation and other means; if we are unable to successfully protect our rights we may be negatively impacted from a financial as well as competitive advantage standpoint,” “Risk Factors-Risks Related to Ingevity’s Business-As we rely on information technologies to conduct our business, security breaches and other disruptions could compromise our information and expose us to liability, which could cause our business and reputation to suffer.”, and “Risk Factors-We face competition from infringing intellectual property activity.”

## **Seasonality**

There are a variety of seasonal dynamics, including global climate and weather conditions, that impact our businesses, though none materially affect financial results, except in the case of the pavement technologies product line, where roughly 70 to 75 percent of revenue is generated between April and September. From a supply perspective, this seasonality is effectively managed through pre-season inventory build then active inventory management throughout the year.

## **Employees**

We currently employ approximately 1,850 employees, of whom approximately 76 percent are employed in the U.S. Approximately 20 percent are represented by domestic (i.e. U.S.) labor unions under various collective bargaining agreements (“CBA”). We engage in negotiations with labor unions for new CBAs from time to time based upon expiration dates of agreements and statutory requirements. We consider our relationships with all salaried, union hourly and non-hourly employees to be positive and collaborative.

The Company did not have any collective bargaining agreements expire in 2019. However, the Company ratified an agreement with the International Brotherhood of Electrical Workers (“IBEW”) at our North Charleston, South Carolina facility in January 2019.

The Company has two collective bargaining agreements that are set to expire in early 2020. At our Crossett, AR facility, the CBA with the International Association of Machinists and Aerospace Workers expired on January 15, 2020. At our Wickliffe, Kentucky facility, the CBA with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO-CLC expired on February 1, 2020. We have begun to negotiate with the unions at both facilities.

See “Risk Factors-Risks Related to Ingevity’s Business-Work stoppages and other labor relations matters may have an adverse effect on our financial condition and results of operations.”

For further information on measures of profitability used by managers of the business and its segments, refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

## **Item 1A. Risk Factors**

*Based on the information currently known to us, we believe that the following information identifies the most significant risk factors affecting our company. However, the risks and uncertainties our company faces are not limited to those set forth in the risk factors described below. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. In addition, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods.*

*If any of the following risks and uncertainties develops into actual events, these events could have a material adverse effect on our business, financial condition or results of operations. In such case, the trading price of our common stock could decline.*

### **General Business and Economic Risks**

***We may be adversely affected by general global economic and financial conditions beyond our control.***

Our businesses may be affected by a number of factors that are beyond our control such as general economic and business conditions, changes in tax laws or tax rates and conditions in the financial services markets including counterparty risk, insurance carrier risk, rising interest rates, inflation, deflation, fluctuations in the value of local currency versus the U.S. dollar or the impact of a stronger U.S. dollar which may negatively impact our ability to compete. Macro-economic challenges, including conditions in financial and capital markets and levels of unemployment, and the ability of the U.S. and other countries to deal with their rising debt levels may continue to put pressure on the economy or lead to changes in tax laws or tax rates. There can be no assurance that changes in tax laws or tax rates will not have a material impact on our future cash taxes, effective tax rate or deferred tax assets and liabilities. Adverse developments in global or regional economies could drive an increase or decrease in the demand for our products that could increase or decrease our revenues, increase or decrease our manufacturing costs and ultimately increase or decrease our results of operations, financial condition and cash flows. As a result of negative changes in the economy, customers, vendors or counterparties may experience significant cash flow problems or cause consumers of our products to postpone or refrain from spending in response to adverse economic events or conditions. If customers are not successful in generating sufficient revenue or cash flows or are precluded from securing financing, they may not be able to pay or may delay payment of accounts receivable that are owed to us or we may experience lower sales volumes. Our financial condition and results of operations could be materially and adversely affected by any of the foregoing.

***We are exposed to the risks inherent in international sales and operations.***

In 2019, sales outside of the U.S. made up approximately 40 percent of our total sales, and we sell our products to customers in approximately 75 countries. We have exposure to risks of operating in many foreign countries, including:

- fluctuations in foreign currency exchange rates, including the euro, pound sterling, Japanese yen and Chinese renminbi;
- restrictions on, or difficulties and costs associated with, the repatriation of cash from foreign countries to the U.S.;
- difficulties and costs associated with complying with a wide variety of complex laws, treaties and regulations;
- 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;
- unforeseen public health crises, such as pandemic and epidemic diseases (including the recent outbreak of coronavirus disease 2019 (COVID-19) ("Coronavirus") in China);
- import and export restrictions, tariffs, and other trade barriers or retaliatory actions;
- difficulties in maintaining overseas subsidiaries and international operations;
- difficulties in obtaining approval for significant transactions;
- government limitations on foreign ownership;

- government takeover or nationalization of business; and
- government mandated price controls.

Any one or more of the above factors could adversely affect our international operations and could significantly affect our financial condition and results of operations. We have also expanded our participation in certain markets. As our international operations and activities expand, we inevitably have greater exposure to the risks of operating in many foreign countries.

***Our reported results could be adversely affected by currency exchange rates and currency devaluation could impair our competitiveness.***

Due to our international operations, we transact in many foreign currencies, including but not limited to the euro, pound sterling, Japanese yen and Chinese renminbi. As a result, we are subject to the effects of changes in foreign currency exchange rates. During times of a strengthening U.S. dollar, our reported net revenues and operating income will be reduced because the local currency will be translated into fewer U.S. dollars. During periods of local economic crisis, local currencies may be devalued significantly against the U.S. dollar, potentially reducing our margin. Ingeivity may enter forward exchange contracts and other financial contracts in an attempt to mitigate the impact of currency rate fluctuations. However, there can be no assurance that such actions will eliminate any adverse impact from variation in currency rates. Also, actions to recover margins may result in lower volume and a weaker competitive position, which may have an adverse effect on our profitability.

***Our operations outside the U.S. require us to comply with a number of U.S. and foreign regulations, violations of which could have a material adverse effect on our financial condition and results of operations.***

Our operations outside the U.S. require us to comply with a number of U.S. and international regulations. For example, our operations in countries outside the U.S. are subject to the U.S. Foreign Corrupt Practices Act (“FCPA”), which prohibits U.S. companies and their agents and employees from providing anything of value to a foreign official for the purposes of influencing any act or decision of these individuals in their official capacity to help obtain or retain business, direct business to any person or corporate entity, or obtain any unfair advantage. Additionally, certain of our operations are subject to the UK Bribery Act, which prohibits public and commercial bribery. Our activities may create the risk of unauthorized payments or offers of payments by our employees, agents or joint venture partners that could be in violation of anti-corruption laws, even though these parties are not subject to our control. We have internal control policies and procedures and training and compliance programs for our employees and agents with respect to the FCPA, UK Bribery Act and other applicable anti-corruption laws. However, we cannot assure that our policies, procedures and programs always will protect us from reckless or criminal acts committed by our employees or agents. Allegations of violations of applicable anti-corruption laws may result in internal, independent or government investigations. Violations of anti-corruption laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could have a material adverse effect on our financial condition and results of operations.

In addition, the shipment of goods, services and technology across international borders subjects us to extensive trade laws and regulations. Our import activities are governed by the unique customs laws and regulations in each of the countries where we operate. Moreover, many countries, including the U.S., control the export and re-export of certain goods, services and technology and impose related export record-keeping and reporting obligations. Governments may also impose economic sanctions against certain countries, persons and entities that may restrict or prohibit transactions involving such countries, persons and entities, which may limit or prevent our conduct of business in certain jurisdictions. We are also required to comply with similar laws and regulations in other countries where we do business, with the same associated risks.

The laws and regulations concerning import activity, export record-keeping and reporting, export control and economic sanctions are complex and constantly changing. These laws and regulations can cause delays in shipments and unscheduled operational downtime. Moreover, any failure to comply with applicable legal and regulatory trading obligations could result in criminal and civil penalties and sanctions, such as fines, imprisonment, debarment from governmental contracts, seizure of shipments and loss of import and export privileges. In addition, investigations by governmental authorities as well as legal, social, economic and political issues in these countries could have a material adverse effect on our business, results of operations and financial condition. We are also subject to the risks that our employees, joint venture partners and agents outside of the U.S. may fail to comply with other applicable laws.



***Changes in trade policy, including the imposition of tariffs and the resulting consequences, could have a material adverse effect on our financial condition and results of operations.***

The U.S. has indicated its intent to renegotiate, or potentially terminate, certain existing bilateral or multi-lateral trade agreements. Additionally, the United Kingdom (“UK”) and the European Union (“EU”) will be negotiating a free trade agreement. Furthermore, the U.S. has recently imposed tariffs on certain U.S. imports and is considering the imposition of tariffs on other U.S. imports. China and other countries have responded with retaliatory tariffs on certain U.S. exports and additional tariffs could be imposed. The resulting trade war could have a significant adverse effect on world trade and the world economy. To the extent that changes in trade policies, trade tariffs and other restrictions imposed by the United States, EU, China and other countries increase the price of, or limit the amount of goods imported, the costs of our raw materials and products may be adversely affected and the demand from our customers for products may be diminished, which could adversely affect our revenues and profitability. We cannot predict future trade policy or the terms of any renegotiated trade agreements or their impact on our business. The adoption and expansion of trade restrictions, the occurrence of a trade war, or other governmental action related to tariffs or trade agreements or policies has the potential to adversely impact demand for our products, our costs, our customers, our suppliers, and the global economy, which in turn could adversely impact our business, financial condition and results of operations.

***Our engineered polymers product line may be adversely affected by the United Kingdom's withdrawal from the European Union.***

Our engineered polymers product line is manufactured in Warrington, UK. On January 31, 2020, the UK ceased to be a member of the EU, an event generally referred to as “Brexit”. The UK and the EU are currently in a transition period until December 31, 2020 during which time all EU law continues to apply to, and in, the UK as if it were an EU member state. The transition period may be extended for up to two years, however recent UK legislation provides that the UK cannot agree to any such extension. Currently, the UK and the EU are negotiating a new free trade agreement. If no agreement is reached, trade relations between the EU and the UK will default to World Trade Organization (“WTO”) rules following the transition period. In addition, unless otherwise negotiated with individual countries, after the transition period the UK will lose the benefit of all EU free trade agreements with other countries and such trade relations will similarly default to WTO rules. As a result, the long-term nature of the UK’s relationship with the EU and these other countries remains unclear and there is considerable uncertainty if and when any trade agreements will be agreed upon and implemented and how any such trade agreements will impact our business. The effects of this uncertainty also continues to impact the political and economic environment in the UK and across other EU member states, and may impair our ability to transact business. This uncertainty could also continue to affect the UK, the EU and worldwide economic or market conditions and contribute to the instability in global financial markets, and the value of the pound sterling or other currencies, including the Euro.

Additionally, a significant portion of the regulatory regime that applies to our operations in the UK is derived from EU directives and regulations, including REACH. Pursuant to domestic UK legislation, these laws and regulations will be incorporated into UK law following the transition period. However, the regulatory frameworks of the UK and the EU may subsequently change and potentially divergent national laws and regulations may develop. This may have adverse practical and/or operational implications for our engineered polymers product line, including the potential disruption to supply chains, additional compliance and operational costs, required product modifications and necessary operational changes.

The trade uncertainties stemming from Brexit and the impact of possible regulatory changes may adversely affect our engineered polymers operations, results of operations and financial condition.

## **Risks Related to Ingevity’s Business**

***We are dependent on attracting and retaining key personnel.***

The Company is dependent upon its senior management, as well as upon engineering, technical, sales and application specialists, together with experienced industry professionals. Our success depends, in part, on our ability to attract, retain and motivate these key performers. Our failure to attract and retain those making significant contributions could adversely affect our financial condition and results of operations.

***If increasingly more stringent air quality standards worldwide are not adopted, our growth could be impacted.***

Environmental standards drive the implementation of gasoline vapor emission control systems by automotive manufacturers. Given increasing societal concern over global warming and health hazards associated with poor air quality, there is growing pressure on regulators across the globe to take meaningful action. For those countries that have not significantly regulated gasoline vapor emissions, enacting more stringent regulations governing gasoline vapor emissions represents a significant upside to the Company's automotive carbon business. However, regulators may react to a variety of considerations, including economic and political, that may mean that any such more stringent regulations are delayed or shelved entirely, in one or more countries or regions. As the adoption of more stringent regulations governing gasoline vapor emissions is expected to drive significant growth in our automotive carbon applications, the failure to enact such regulations will have a significant impact on the growth prospects for these products.

***Adverse conditions in the automotive market may adversely affect demand for our automotive carbon products.***

Sales of our automotive activated carbon products are tied to global automobile production levels. Automotive production in the markets we serve can be affected by macro-economic factors such as interest rates, fuel prices, shifts in vehicle mix (including shifts toward alternative energy vehicles), consumer confidence, employment trends, regulatory and legislative oversight requirements and trade agreements. For example, the global economic downturn in 2008/2009 led to a drastic reduction in vehicle sales and an even greater reduction in vehicle production as OEMs right-sized their inventories to meet the lower sales volumes. Regional disruptions due to localized natural disasters or multi-month strikes at suppliers or OEMs can also significantly impact vehicle production and therefore demand for our automotive carbon. Additionally, if the recent Coronavirus outbreak continues, it could negatively impact demand for Chinese automotive sales, which would adversely impact sales of our automotive carbon products. The extent to which the Coronavirus outbreak impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including the severity of the Coronavirus, actions to contain the Coronavirus or treat its impact, among others.

***The Company's printing inks business serves customers in a market that is facing declining volumes and downward pricing.***

In recent years, the use of inks in which our printing ink resins are used, such as those made for magazines and catalogs, has significantly decreased, as the printing industry has experienced a reduction in demand due to various factors including the global economic downturn of 2008 and 2009, which severely impacted volumes, and competition from alternative sources of communication, including email, the Web, electronic readers, interactive television and electronic retailing. The impacts of these changes have led to continued intense competition and downward pricing pressures on printing inks, and therefore, our ink products.

***The Company's pavement technologies product line is heavily dependent on government infrastructure spending.***

A significant portion of our customers' revenues in our pavement technologies business is derived from contracts with various foreign and U.S. governmental agencies, and therefore, when government spending is reduced, our customers' need for our products is similarly reduced. While we do not do business directly with governmental agencies, our customers provide paving services to, for example, the governments of various jurisdictions within North America, South America, Europe, China, Brazil and India, and revenue either directly or indirectly attributable to such government spending continues to remain a significant portion of our revenues. Government business is, in general, subject to special risks and challenges, including: delays in funding and uncertainty regarding the allocation of funds to federal, state and local agencies, delays in the expenditures and delays or reductions in other state and local funding dedicated for transportation projects; other government budgetary constraints, cutbacks, delays or reallocation of government funding; long purchase cycles or approval processes; our customers' competitive bidding and qualification requirements; changes in government policies and political agendas; and international conflicts or other military operations that could cause the temporary or permanent diversion of government funding from transportation or other infrastructure projects.

***The Company's oilfield technologies product line is significantly affected by trends in oil and natural gas prices that affect the level of exploration, development and production activity.***

Demand for our oilfield technologies services and products is particularly sensitive to the level of exploration, development and production activity of, and the corresponding capital spending by, oil and natural gas companies, including national oil companies. The level of exploration, development and production activity is directly affected by trends in oil and natural gas prices, which historically have been volatile. Crude oil prices have declined significantly since 2014, with West Texas Intermediate oil spot prices declining from a high of \$108 per barrel in June 2014 to a low of \$27 per barrel in February 2016, a level which had not been experienced since 2003. Pricing has climbed to a trading range of \$55 to \$58 per barrel in the November 2019 to January 2020 time frame. Unless potential hostilities between the U.S. and Iran escalate, pricing is not currently forecasted to change significantly from these levels during 2020. While these pricing levels are significantly above the February 2016 levels, they remain off their highs seen in the last decade.

Any prolonged low pricing environment for oil and natural gas is likely to result in reduced demand for our oilfield technology products, which may have a material adverse effect on our results of operations.

***The Company's engineered polymers product line is reliant on cyclical end-markets, such as the automotive market and the apparel market, which are impacted by changes in consumer and industrial demand.***

Our engineered polymers product line end-markets are subject to constant and rapid technology changes, changes in consumer preferences, evolving standards, and changes in product supply and demand. For example, demand for our engineered polymers products in the automotive market, where our products are formulated into automotive resins and coatings and various components, may be affected by technological advances, changing automotive OEM specifications and global automobile production levels. In the footwear market, demand for our engineered polymers products, where our products are sold into footwear adhesives, may be affected by consumer discretionary spending and changes in consumer preferences. The impact of these changes may lead to increased competition from competing and substitute products and downward pricing pressures on our customers, and therefore, our engineered polymers product offerings.

***In order to compete successfully, we must develop new products and technologies meeting evolving market and customer needs; disruptive technologies could reduce the demand for the Company's products.***

Our industries and the end-use markets into which we sell our products experience periodic technological change and product improvement. Our future growth will depend on our ability to gauge the direction of commercial and technological progress in key end-use markets and on our ability to fund and successfully develop, manufacture and market products in such changing end-use markets. If we fail to keep pace with the evolving technological innovations in our end-use markets on a competitive basis, including with respect to innovation with regard to the development of alternative uses for, or application of, products developed that utilize such end-use products, our financial condition and results of operations could be adversely affected. Similarly, we face competition in our applications. Disruptive technology involving new or superior solutions could reduce the demand for the Company's products.

***From time to time we may be engaged in legal actions associated with our intellectual property rights and automotive carbon business, including associated potential counterclaims; if we are unsuccessful, these could potentially result in an adverse effect on our 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. See "Intellectual Property" included within Part I. Item 1 of this Form 10-K for more information on our "canister bleed emissions" patent. We will endeavor to protect our intellectual property rights in key jurisdictions in which our products are produced or used, in jurisdictions into which our products are imported, and in jurisdictions where our competitors have significant manufacturing capabilities. Our success will depend to a significant degree upon our ability to protect and preserve our intellectual property rights. However, we may be unable to obtain or maintain protection for our intellectual property in key jurisdictions. Although we own and have applied for numerous patents and trademarks throughout the world, 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. A failure to protect, defend or enforce our intellectual property could have an adverse effect on our 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.

We also rely materially upon unpatented proprietary technology, know-how and other trade secrets to maintain our competitive position. While we maintain policies to enter into confidentiality agreements with our employees and third parties to protect our proprietary expertise and other trade secrets, these agreements may not be enforceable or, even if legally enforceable, we may not have adequate remedies for breaches of such agreements. We also may not be able to readily detect breaches of such agreements. For instance, we manufacture some of our products in China where we may be at a greater risk of a third party misappropriating our intellectual property despite the foregoing policies, procedures and agreements. The failure of our patents or confidentiality agreements to protect our proprietary technology, know-how or trade secrets could result in significantly lower revenues, reduced profit margins or loss of market share.

We are currently involved in several legal actions relative to intellectual property associated with our "canister bleed emissions" patent. These have resulted in counterclaims against us, including anti-competition claims, which we are vigorously defending. These and other legal actions to protect, defend or enforce our intellectual property rights 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 rights, or an adverse decision in any counterclaim, could have an adverse effect on our financial condition and results of operations.

***Our Performance Chemicals segment is highly dependent on CTO, which is limited in supply; lack of access to sufficient CTO would impact our ability to produce CTO-based products.***

The availability of CTO is essential to the Company's Performance Chemicals segment. Availability of CTO is directly linked to the production output of kraft mills using pine as their source of pulp, which is the predominant fiber source for packaging grades of paper as well as fluff pulp for personal care products. As a result, there is a finite global supply of CTO-with global demand for softwood pulp driving the global supply of CTO, rather than demand for CTO itself. Most of the CTO made available for sale by its producers in North America is covered by long-term supply agreements, further constraining availability.

At the time of the Separation, we entered into a long-term supply agreement with WestRock pursuant to which we purchase all of the BLSS and CTO output from WestRock's existing (at the time of separation) kraft mills, subject to certain exceptions. This agreement includes pricing terms based on market prices.

Pricing for the products in our agreement with WestRock is based on the prevailing market prices of products at the time of purchase. The pricing formulas are subject to certain pricing floors as set forth in the agreement with WestRock. Given the take-or-pay requirements of the agreement with WestRock, in adverse market conditions we could be required to purchase BLSS and CTO from WestRock at prices where our results of operations could be materially and adversely affected.

In 2018, we entered into a 20 year CTO supply agreement with Georgia-Pacific, pursuant to which we purchase the lesser of 125,000 tons of CTO and the aggregate output of CTO produced and originating at certain of Georgia-Pacific's paper mills.

Pricing for the CTO in our agreement with Georgia-Pacific is a market-based price, subject to ongoing adjustments. Given the take-or-pay requirements of the agreement with Georgia-Pacific, in adverse market conditions we could be required to purchase CTO from Georgia-Pacific at prices where our results of operations could be materially and adversely affected.

If any of our suppliers (including WestRock or Georgia-Pacific) fail to meet their respective obligations under our supply agreements or we are otherwise unable to procure an adequate supply of CTO, we would be unable to maintain our current level of production and our results of operations would be materially and adversely affected.

Beginning in 2025, either party to the WestRock agreement may provide a notice to the other party terminating the WestRock agreement five years from the date of such notice. Beginning one year after such notice, the quantity of products provided by WestRock under the agreement will be gradually reduced over a four-year period based on the schedule set forth in the agreement. In addition, from 2022 until 2025, either party may provide a one-year notice to remove a kraft mill as a supply source. The two largest kraft mills under the WestRock agreement currently supply approximately 17 to 19 percent and 15 to 17 percent, respectively, of the total amount of products supplied under our agreement with WestRock. If WestRock exercises its rights to terminate the agreement or remove a kraft mill as a supply source, and we are unable to arrange for a substitute supply of CTO, we would be unable to continue to produce the same quantity of products and our results of operations could be materially and adversely affected.

There are other pressures on the availability of CTO. Some pulp or paper mills may choose to consume their production of CTO to meet their energy needs or reduce their carbon footprint rather than sell the CTO to third parties. Also, as described below, there are regulatory pressures that may incentivize suppliers of CTO to sell CTO into alternative fuel markets rather than to historical end users such as Ingevity. Furthermore, weather conditions have in the past and may in the future affect the availability and quality of pine trees used in the kraft pulping process and therefore the availability of CTO meeting Ingevity's quality standards. For example, the combined impact of Hurricane Katrina in August 2005 and Hurricane Rita in September 2005 caused significant damage to forests throughout the southern U.S. This significantly affected the availability and quality of the supply of CTO during late 2005 and into 2006. In addition, Hurricanes Florence and Michael in 2018 disrupted vendor operations and reduced availability of CTO supply well into 2019.

***We may not realize the growth opportunities that are anticipated from the Caprolactone Acquisition.***

The continued benefits that are expected to result from the Caprolactone Acquisition will depend, in part, on our ability to further realize the anticipated growth opportunities. Our success in realizing these growth opportunities, and the timing of this realization, depends on the successful integration of the Caprolactone Business. There is a significant degree of difficulty and management distraction inherent in the process of integrating an acquisition as sizable as the Caprolactone Business, and while integration is largely complete, the remaining process of integrating operations could cause an interruption of, or loss of momentum in, our and the Caprolactone Business' activities. Members of our senior management have and may be required to continue to devote considerable amounts of time to this integration process, which will decrease the time they will have to manage other aspects of our business, service existing customers, attract new customers and develop new products or strategies. If we are not able to effectively complete the integration process, or if any significant business activities are interrupted as a result of the integration process, our business could suffer. There can be no assurance that we will successfully or cost-effectively integrate the Caprolactone Business. The failure to do so could have a material adverse effect on our business, financial condition or results of operations.

Even if we are able to integrate the Caprolactone Business successfully, this integration may not result in the realization of the full benefits of the growth opportunities that we currently expect from this integration, and we cannot guarantee that this benefit will be achieved within anticipated time frames or at all. For example, the associated costs of the Caprolactone Acquisition may be greater than we expect. Additionally, global market conditions and Brexit may continue to negatively impact the Caprolactone Business. Any of these would offset the anticipated benefit from the Caprolactone Acquisition.

***The Caprolactone Acquisition may expose us to unknown liabilities.***

On February 13, 2019, we acquired all the shares of Perstorp UK Ltd. and, as a result, we are generally subject to all of its liabilities, subject to a warranty and indemnity insurance policy and remedies in the Caprolactone Agreement. We may learn additional information about the Caprolactone Business that adversely affects us, such as unknown liabilities, including liabilities under environmental or tax laws, or issues that could affect our ability to comply with other applicable laws. If previously unknown liabilities or other obligations of the Caprolactone Business emerge in the future, and available remedies are not sufficient, our business could be materially affected.

***The European Union's Directive 2009/28 on the promotion of the use of energy from renewable resources ("Renewable Energy Directive" or "RED"), which will be repealed on July 1, 2021 (the "RED"), and the new Directive replacing Directive 2009/28, which has to be implemented by Member States by June 30, 2021 (the "RED II") and similar legislation in the U.S. and elsewhere may incentivize the use of CTO as a feedstock for production of alternative fuels.***

In December 2008, the European Union ("EU") adopted the Renewable Energy Directive, which established a 20 percent EU-wide target for energy consumed from renewable sources relative to the EU's gross final consumption of energy, as well as a 10 percent target for energy consumed from renewable sources in the transport section. In order to reach these targets, the RED established mandatory targets for each Member State and required each Member State to adopt a national renewable energy action plan setting forth measures to achieve its national targets. The RED also established sustainability criteria for biofuels, which must be satisfied in order for the consumption of a fuel to count toward a Member State's national targets. CTO-based biofuel currently satisfies the RED's biofuel sustainability criteria.

In spring 2015, the EU adopted amendments to the Renewable Energy Directive. RED now expressly lists CTO as a residue-type feedstock whose use in biofuel would make that biofuel eligible for double counting towards national targets of the Member States, and at least two Member States additionally have or plan fiscal incentives for the domestic marketing of CTO-

based and other qualifying biofuels. In 2018, the EU adopted RED II (effective 2021-2030) which increased the target for energy consumed from renewable sources in the transport section to 14 percent by 2030. Advanced biofuels must comprise 0.2% of the transport sector by 2022 and 3.5% by 2030. CTO remains an expressly listed feedstock for advanced biofuels and may be doubled counted toward these goals. RED II requires Member States shall prepare plans to set national targets and growth trajectories for their contributions to the EU-wide target. The RED II now includes language to consider the potential for undue market distortion for the raw materials used to meet these targets.

In addition to these developments in the European Union, various pieces of legislation regarding the use of alternative fuels have been introduced in the United States at both the Federal and State level. Currently, none of the legislation mandates or provides incentives for the use of CTO as a transportation fuel. Some regional cap and trade programs may incentivize the use of CTO in stationary sources. Future legislation in the U.S. and elsewhere may promote the use of CTO as a feedstock for production of alternative fuels.

Because the supply of CTO is inherently constrained by the volume of kraft pulp processing, any diversion of CTO for production of alternative fuels would reduce the available supply of CTO as the principal raw material of the pine chemicals industry. As described above, the Company is highly dependent on CTO as an essential raw material, and if the Company is unable to procure an adequate supply of CTO due to competing new uses such as for biofuel production, the Company's results of operations would be materially and adversely affected.

***Pricing for CTO is subject to particular pricing pressures by reason of limited supply and competing demands for end use, and we may be limited in our ability to pass on increased costs to our customers.***

Pricing for CTO (which accounted for approximately 10 percent of all of our cost of sales and 32 percent of our raw materials purchases for 2019) is subject to particular pricing pressures by reason of the limited supply elasticity of the product and competing demands for its use, all of which drive pressure on price:

- CTO is a product of the kraft pulping process, and the global supply of CTO is inherently constrained by the volume of kraft pulping processing;
- CTO can be burned as alternative fuels, either in support of the originating pulp mill operations, by energy companies or biofuel companies; and
- Regulations or other incentives mandate or encourage the consumption of biofuels as alternatives, including CTO.

We may not have the ability to pass through any increases in our cost of CTO to our customers in the form of price increases or other adjustments, with a resulting material adverse effect on our results of operations. Additionally, we may be placed at a competitive disadvantage relative to our competitors who rely on different primary raw materials or who have more favorable terms with their suppliers.

***We are also dependent on other raw materials, and these are also subject to pricing pressures; lack of access to these raw materials and inability to pass on price increases could adversely affect our financial condition and results of operations.***

The Company is dependent on other raw materials, including, but not limited to, hardwood sawdust, phosphoric acid, ethylene amines, black liquor, nonylphenol, hydrogen peroxide, cyclohexanone, and pentaerythritol. Raw material costs are a significant operating expense of the Company. The cost of raw materials can be volatile and subject to increases as a result of, among other things, changing economic conditions, political or policy considerations, supply and demand levels, instability in energy producing nations, and natural events such as extreme weather events or even insect infestations. Any interruption in the supply of the raw materials on which we depend, and any increases in the cost of raw materials that we are not able to pass on to customers in the form of price increases or other adjustments, may materially impact our financial condition and results of operations.

***A prolonged period of low energy prices may materially impact our results of operations.***

The price of energy may directly or indirectly impact demand, pricing or the profitability for certain Ingevity products. As petroleum oil prices fall or change rapidly, Ingevity products may be disadvantaged due to the fact that CTO and BLSS are thinly traded commodities with pricing commonly established for periods ranging from one quarter to one year periods of time. Due to this, alternative technologies which compete with product offerings provided by Ingevity may be advantaged from time to time in the market place. Protracted periods of high volatility or sustained oversupply of petroleum oil may also translate into increased competition from petroleum-based alternatives which would otherwise be consumed in petroleum transportation fuel blends. In addition, pricing for competing naturally derived oils such as palm or soybean is likely to provide further pressure on pricing of the Company's products during periods of depressed petroleum prices.

***We face competition from producers of substitute products and new technologies, and new or emerging competitors.***

In the Performance Materials segment, there is competition from various other activated carbon manufacturers. These competitors are actively trying to develop more advanced and alternative activated carbon products that would more effectively compete with our products in the automotive applications. There is also competition in the automotive applications from non-activated carbon competitors or product offerings. For example, at least one OEM is using sealed tanks in certain subsets of its vehicles to comply with the LEV III/Tier 3 regulations. While the sealed tank fuel systems generally require a similarly sized pelleted activated carbon canister to deal with refueling emissions, in most cases, they do not use an extruded honeycomb to meet current U.S. and California regulations. There is also emerging competition in the "honeycomb" space, which may impact sales of the Company's products. If a competitor were to succeed in developing products that are better suited for automotive evaporative emissions capture applications and/or a competitive technology, such as, but not limited to, sealed gas tanks, were to be implemented across a material number of vehicle platforms, our financial results could be negatively impacted.

In addition, growth in alternative vehicles, such as all-electric vehicles and hydrogen fuel cell vehicles, which do not use gasoline, may also adversely affect the demand for our products.

In the Performance Chemicals segment, hydrocarbon resins and gum rosin-based products compete with TOR-based resins in the adhesives and printing inks markets. The price of gum rosin has a significant impact on the market price for TOR and rosin derivatives and the price of gum rosin is driven by labor rates, land leasing costs and various other factors that are not within our control. Hydrocarbon resins, for example, C5 resins, are co-products from isoprene (synthetic rubber). Availability and pricing are determined by the supply and demand for synthetic rubber as well as crude oil prices as the feedstock for isoprene and various other factors that are not within our control. Animal and vegetable-based fatty acids compete with TOFA products in lubricant and industrial specialties. The market price for TOFA products is impacted by the prices of other fats and oils and the prices for other fats and oils is driven by actual and expected harvest rates, crude oil prices and the biofuel market. Other monomers, thermoplastics and polyols compete with our caprolactone based products. The price for our products is impacted by the prices of competitive substitutes which are influenced by petroleum prices as well as other supply and demand factors. Additionally, the Company faces competition from competitors that are actively developing new technologies and competing products across the segment. A significant investment by a competitor in a competitive technology or product line could negatively impact our financial results.

***We face competition from infringing intellectual property activity.***

The Company is currently involved in several legal actions relative to intellectual property associated with our "canister bleed emissions" patent. These infringing activities also represent a competitive threat. The Company is vigorously addressing infringing activity through legal actions and other available means. While the Company believes its legal action claims are meritorious, there can be no assurances that the Company will prevail in such actions.

***Disruptions at any of our manufacturing facilities or within our supply chain could negatively impact our production, financial condition and results of operations.***

An operational disruption in any of our facilities could negatively impact production and our financial results. The occurrence of a natural disaster, such as a hurricane, tropical storm, earthquake, tornado, severe weather, flood, fire, as well as risk that may result from climate change, could cause operational disruptions. Additionally, other unanticipated problems such as labor difficulties, health epidemics (including the recent Coronavirus outbreak in China), equipment failure, capacity expansion difficulties or unscheduled maintenance could also cause operational disruptions of varied duration. These types of disruptions could materially adversely affect our financial condition and results of operations to varying degrees dependent upon the facility, the duration of the disruption, our ability to shift business to another facility or find alternative sources of materials or energy. In certain cases, we have some products that are only made at one facility. For example, in the case of our Waynesboro, Georgia facility, while we have some redundancies within the facility, we only have one facility that makes our extruded honeycomb products. In the case of our Warrington, UK facility, while we have some redundancies within the facility, we only have one facility that makes our caprolactone products. As other examples, in our Charleston SC facility, we source black liquor from an adjacent paper mill to isolate and subsequently modify lignin to serve our agriculture customers while we make the vast majority of our ink resin products in our DeRidder, Louisiana facility. While we have redundancies within these facilities, we have limited ability to make these products at other facilities. Finally, the Coronavirus outbreak is causing travel disruptions, quarantines and/or closures, which could result in disruptions to our manufacturing and production operations at our Changshu and Zhuhai facilities, as well as those of our suppliers and customers. Any losses due to these events may not be covered by our existing insurance policies or may be subject to certain deductibles.

We could be similarly adversely affected by disruptions within our supply chain and transportation network. Our products are transported by truck, rail, barge or ship by third-party providers. The costs of transporting our products could be negatively affected by factors outside of our control, including rail service interruptions or rate increases, extreme weather events, tariffs, rising fuel costs and capacity constraints. Significant delays or increased costs affecting these transportation methods could materially affect our financial condition and results of operations. Disruptions at our suppliers could lead to short term or longer rises in raw material or energy costs and/or reduced availability of materials or energy, potentially affecting our financial condition and results of operations. For example, Solvay is our primary provider of hydrogen peroxide to our Warrington, UK Performance Chemicals facility, which is co-located with the Solvay Warrington, UK chemical plant ("Solvay Plant"). Disruptions at the Solvay Plant impacting Solvay's ability to supply hydrogen peroxide could adversely affect our financial condition and results of operations. See also "Our engineered polymers product line may be adversely affected by the United Kingdom's withdrawal from the European Union." risk factor.

***We are dependent upon third parties for the provision of certain critical operating services at several of our facilities.***

We are dependent upon third parties for the provision of certain critical operating services at our Covington, Virginia Performance Materials facility and at the following Performance Chemicals facilities: Crossett, Arkansas; North Charleston, South Carolina; and Warrington, UK.

We are dependent on: (i) the WestRock Covington, Virginia paper mill ("WestRock VA Paper Mill") for the provision of electricity, water, compressed air, steam and wastewater treatment to our Covington Performance Materials facility; (ii) the WestRock North Charleston, South Carolina paper mill ("WestRock SC Paper Mill") for the provision of water, compressed air, steam and wastewater treatment at our North Charleston Performance Chemicals facility; (iii) the Georgia-Pacific Crossett, Arkansas paper mill and chemicals plant (collectively, "Georgia-Pacific Mill") for the provision of natural gas, water, compressed air and wastewater treatment to our Crossett Performance Chemicals facility; and (iv) Solvay Plant for the provision of water, compressed air, nitrogen, natural gas, electricity, steam, and wastewater treatment and waste management at our Warrington Performance Chemicals facility. We have existing long-term contractual arrangements covering these services for our Covington, Crossett, North Charleston and Warrington facilities. The provision of these services would be at risk if any of the counterparties were to idle or permanently shut down the associated mill, or if operations at the associated mill were disrupted due to natural or other disaster, or by reason of strikes or other labor disruptions, or if there were a significant contractual dispute between the parties.

In the event that WestRock VA Paper Mill, WestRock SC Paper Mill, Georgia-Pacific Mill or Solvay Plant were to fail to provide the contracted services, we would be required to obtain these services from other third parties at an increased cost or to expend capital to provide these services ourselves. The expenses associated with obtaining or providing these services, as well as any interruption in our operations as a result of the failure of the counterparty to provide these services, may be significant and may adversely affect our financial condition and results of operations.



Furthermore, in the event that WestRock VA Paper Mill wastewater treatment operations do not comply with permits or applicable law and the WestRock VA Paper Mill is unable to determine the cause of such compliance, then we will be responsible for between 10 percent and 50 percent of the costs and expenses of such noncompliance (increasing in 10 percent increments per violation during each twelve month period) despite representing less than 3 percent of the total wastewater volume. These costs and expenses may be significant and may adversely affect our financial condition and results of operations.

Additionally, (i) our Covington Performance Materials facility is located on real property leased from WestRock pursuant to a long-term lease agreement, and is surrounded by the WestRock VA Paper Mill, (ii) a portion of our North Charleston Performance Chemicals facility is located on real property leased from WestRock and is adjacent to the WestRock SC Paper Mill; (iii) our Crossett Performance Chemicals facility is located on real property leased from Georgia-Pacific pursuant to a long-term lease agreement, and is surrounded by the Georgia-Pacific Paper Mill and (iv) our Warrington, UK Performance Chemicals facility is located on real property leased from Solvay pursuant to multiple long-term lease agreements, and is surrounded by the Solvay Plant. In the event we were to have a dispute with WestRock, Georgia-Pacific or Solvay regarding the terms of the relevant lease agreements, or we were otherwise unable to fully access or utilize the leased property, the associated business disruption may be significant and may adversely affect our financial condition and results of operations.

We are also dependent on third parties for the disposal of brine, which results from our own conversion of BLSS into CTO. If these service providers do not perform under their contracts, the costs of disposing of brine ourselves, including, for example, the transportation costs, could be significant.

***Work stoppages and other labor relations matters may have an adverse effect on our financial condition and results of operations.***

Many of our production employees are governed by collective bargaining agreements (“CBAs”). From time to time the Company engages in negotiations to renew CBAs as those contracts are scheduled to expire. At our North Charleston Performance Chemicals facility, the Company ratified a new CBA with the IBEW in January 2019. At our Crossett Performance Chemicals facility, the CBA with the International Association of Machinists and Aerospace Workers expired on January 15, 2020. At our Wickliffe Performance Materials facility, the CBA with the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO-CLC expired on February 1, 2020. We have begun to negotiate with the unions at both facilities.

While the Company has generally positive relations with its labor unions, there is no guarantee the Company will be able to successfully negotiate new union contracts without work stoppages, labor difficulties or unfavorable terms. If we were to experience any extended interruption of operations at any of our facilities because of strikes or other work stoppages, our results of operations and financial condition could be materially and adversely affected. In addition, due to the co-location of our Covington, Crossett, North Charleston, and Warrington facilities within the WestRock VA Paper Mill, Georgia-Pacific Mill, WestRock SC Paper Mill and Solvay Plant facilities, a strike or work stoppage at any of these facilities could cause disruptions at our facilities, and our results of operations could be materially and adversely affected.

***Our business involves hazards associated with chemical manufacturing, storage, transportation and disposal.***

There are hazards associated with the chemicals we manufacture and the related storage and transportation of our raw materials, including common solvents, such as toluene and methanol, and reactive chemicals, such as acrylic acid, all of which fall under the OSHA Process Safety Management Code. These hazards could lead to an interruption or suspension of operations and 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 the following potential hazards: 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 adversely 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 financial condition and results of operations.

***Regulation of exposure to certain process chemicals could require expenditures or changes to our product formulations.***

Certain regulations applicable to our operations, including the Occupational Safety and Health Act and the Toxic Substances Control Act in the U.S. and the Registration, Evaluation and Authorization of Chemicals, or REACH, directive in Europe, prescribe limits restricting exposure to a number of chemicals used in our operations, including certain forms of formaldehyde, a raw material used in the manufacture of phenolic modified rosin-based ink resins and some lignin-based dispersants. Future studies on the health effects of chemicals used in our operations, including alkylphenols, such as bisphenol A, which are used in our TOR-based ink resins, may result in additional regulation or new requirements in the U.S., Europe and elsewhere, which might further restrict or prohibit the use of, and exposure to, these chemicals. Additional regulation of or requirements for these or other chemicals could require us to change our operations, and these changes could affect the quality or types of products we manufacture and/or materially increase our costs.

***The Company's operations are subject to a wide range of general and industry-specific environmental laws and regulations.***

The Company's operations are subject to a wide range of general and industry-specific environmental laws and regulations, including, for example, related to bisphenol A, formaldehyde and air emissions. Changes in environmental laws and regulations, or their application, could subject the Company to significant additional capital expenditures and operating expenses in future years. Additionally, changes in the regulation of greenhouse gases, as well as future climate change laws and regulations, depending on their nature and scope, could subject our operations to significant additional costs or limits on operations. Our manufacturing facilities use energy, including electricity and natural gas and some of our plants emit amounts of greenhouse gas that may in the future be affected by legislative and regulatory efforts to limit greenhouse gas emissions. Potential consequences could include increased energy, transportation and raw material costs and may require the Company to make additional investments in facilities and equipment or limit our ability to grow.

However, any such changes are uncertain and, therefore, it is not possible for the Company to predict with certainty the amount of additional capital expenditures or operating expenses that could be necessary for compliance with respect to any such changes. Even without such regulation, increased public awareness and adverse publicity about potential impacts on climate change emanating from us or our industry could have a negative impact on us.

***As we rely on information technologies to conduct our business, security breaches and other disruptions could compromise our information and expose us to liability, which could cause our business and reputation to suffer.***

We rely on information technologies, some of which are managed by third parties, to manage the day-to-day operations and activities of our business, operate elements of our manufacturing facilities, manage our customer and vendor transactions, and maintain our financial, accounting and business records. In addition, we collect and store certain data, including proprietary business information, and may have access to confidential or personal information that is subject to privacy and security laws and regulations.

The secure processing, maintenance and transmission of sensitive, confidential and personal data is critical to our operations and business strategy. We follow industry best practices and have instituted a system of security policies, procedures, capabilities, and internal controls designed to protect this information. Additionally, we engage third-party threat detection and monitoring services which includes a global cyber security incident response team. Despite our security design and controls, and those of our third-party providers, we may be vulnerable to cyber-attacks, computer viruses, security breaches, inadvertent or intentional employee actions, system failures and other risks that could potentially lead to the compromising of sensitive, confidential or personal data, improper use of our, or our third-party provider systems, solutions or networks, unauthorized access, use, disclosure, modification or destruction of information, and operational disruptions. In addition, the global regulatory environment pertaining to information security and privacy is increasingly demanding, with new and changing requirements, such as the European Union's General Protection Regulation ("GDPR"), California Consumer Privacy Act ("CCPA"), and the China Cybersecurity Law. GDPR, which applies to the collection, use, retention, security, processing, and transfer of personally identifiable information of residents of EU countries, mandates new compliance obligations, and imposes significant fines and sanctions for violations. CCPA requires companies to provide new data disclosure, access, deletion and opt-out rights to consumers in California. Implementing and complying with these laws and regulations may be more costly or take longer than we anticipate, or could otherwise affect our business operations. Such breaches, cyber incidents and disruptions, or failure to comply with laws and regulations related to information security or privacy, could result in legal claims or proceedings against us by governmental entities or individuals, significant fines, penalties or judgements, disruption of our operations, remediation requirements, changes to our business practices, and damage to our reputation, which could adversely affect our business, financial condition or results of operations.

***We are dependent on certain customers.***

We have certain large customers in particular businesses, the loss of which could have a material adverse effect on the applicable segment's sales and, depending on the significance of the loss, our results of operations, financial condition or cash flows. Sales to the Company's ten largest customers (across both segments) accounted for 33 percent of total sales for 2019. No customer accounted for more than 10 percent of total sales for 2019. With some exceptions, our business with those large customers is based primarily upon individual purchase orders. As such, our customers could cease buying our products from us at any time, for any reason, with little or no recourse. If a major customer or multiple smaller customers elected not to purchase products from us, our financial condition and results of operations would be materially adversely affected.

***Challenges in the commercial and credit environment may materially adversely affect Ingevity's future access to capital.***

Ingevity's ability to issue debt or enter into other financing arrangements on acceptable terms could be materially adversely affected if there is a material decline in the demand for Ingevity's products or in the solvency of its customers or suppliers or if other significantly unfavorable changes in economic conditions occur. Volatility in the world financial markets could increase borrowing costs or affect Ingevity's ability to gain access to the capital markets, which could have a material adverse effect on Ingevity's competitive position, business, financial condition, results of operations and cash flows.

***Our current level of debt could adversely affect our financial health and prevent us from fulfilling our debt obligations.***

Our debt requires significant interest and principal payments. Our ability to make scheduled payments on or to refinance our debt obligations and to fund working capital, planned capital expenditures and expansion efforts and any strategic alliances or acquisitions we may make in the future depends on our ability to generate cash in the future and our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business, regulatory and other factors beyond our control. There can be no assurance that we will maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our debt.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay investments and capital expenditures, or to sell assets, seek additional capital or restructure or refinance our debt, including the notes. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. If our operating results and available cash are insufficient to meet our debt service obligations, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to consummate those dispositions or to obtain the proceeds sought from them, and these proceeds may not be adequate to meet any debt service obligations then due. Further, we may need to refinance all or a portion of our debt on or before maturity, and there can be no assurances we will be able to refinance any of our debt on commercially reasonable terms or at all. Any inability to generate sufficient cash flow or refinance our indebtedness on favorable terms could have a material adverse effect on our business, results of operations, and financial condition.

Certain of our floating rate debt uses the London Interbank Offered Rate ("LIBOR") as a benchmark for establishing the interest rate. The U.K. Financial Conduct Authority announced in 2017 that it intends to phase out LIBOR by the end of 2021. In addition, other regulators have suggested reforming or replacing other benchmark rates. The discontinuation, reform or replacement of LIBOR or any other benchmark rates may have an unpredictable impact on contractual mechanics in the credit markets or cause disruption to the broader financial markets. Uncertainty as to the nature of such potential discontinuation, reform or replacement may negatively impact the cost of our floating rate debt.

***The inability to make or effectively integrate future acquisitions may affect our results.***

As part of our growth strategy, we may pursue acquisitions of complementary businesses and product lines or invest in joint ventures. The ability to grow through acquisitions or other investments depends upon our ability to identify, negotiate, complete and integrate suitable acquisitions or joint venture arrangements. If we fail to successfully integrate acquisitions into our existing business, our financial condition and results of operations could be adversely affected.

***We are subject to continuing contingent tax-related liabilities of WestRock.***

Under the U.S. Internal Revenue Code of 1986, as amended (the "Code"), each corporation that was a member of WestRock's consolidated tax reporting group during any taxable period or portion of any taxable period ending on or before the effective time of the distribution is severally liable for the U.S. federal income tax liability of the entire consolidated tax reporting group for such taxable period. In connection with the Separation, we entered into the tax matters agreement with WestRock (the "Tax Matters Agreement") that allocates the responsibility for prior period taxes of WestRock's consolidated tax

reporting group between Ingevity and WestRock. If WestRock were unable to pay any prior period taxes for which it is responsible, however, we could be required to pay the entire amount of such taxes, and such amounts could be significant. The Tax Matters Agreement generally gives WestRock discretion to handle consolidated tax returns and audits for pre-distribution periods in a manner which may be unfavorable to us and which may result in additional tax costs to us.

***Our tax rate is dependent upon a number of factors; a change in any of which could impact our future tax rates and net income.***

Our future tax rates may be adversely affected by a number of factors, including: future changes in the jurisdictions in which our profits are determined to be earned and taxed; changes in estimated realization of our deferred tax assets; the repatriation of non-U.S. earnings for which we have not previously provided U.S. income and non-U.S. withholding taxes; adjustments to estimated taxes upon finalization of various tax returns; increases in expenses that are non-deductible for tax purposes; changes in available tax credits; the resolution of issues arising from tax audits with various tax authorities; and changes in tax laws or interpretation of such tax laws. Losses for which no tax benefits can be recorded could materially impact our tax rate and its volatility from one quarter to another.

### **Risks Relating to Ingevity's Common Stock**

***The price of Ingevity's common stock may fluctuate significantly.***

The market price of Ingevity common stock may fluctuate significantly due to a number of factors, some of which may be beyond Ingevity's control, including:

- actual or anticipated fluctuations in Ingevity's operating results;
- changes in earnings estimated by securities analysts or Ingevity's ability to meet those estimates;
- the operating and stock price performance of comparable companies;
- changes to the regulatory and legal environment under which Ingevity operates; and
- domestic and worldwide economic conditions.

***We cannot guarantee the timing, amount or payment of any dividends on our common stock in the future.***

The payment and amount of any dividend is subject to the sole discretion of our board of directors and will depend upon many factors, including our financial condition and prospects, our capital requirements and access to capital markets, covenants associated with certain of our debt obligations, legal requirements and other factors that our board of directors may deem relevant, and there can be no assurances that we will pay a dividend.

***Your percentage of ownership in Ingevity may be diluted in the future.***

A stockholder's percentage ownership in Ingevity may be diluted because of equity issuances for acquisitions, capital market transactions or otherwise, including, without limitation, equity awards that we may be granting to our directors, officers and employees. Such awards will have a dilutive effect on Ingevity's earnings per share, which could adversely affect the market price of Ingevity's common stock. From time to time, Ingevity will issue additional options or other stock-based awards to certain employees under Ingevity's employee benefits plans.

In addition, Ingevity's amended and restated certificate of incorporation authorizes Ingevity to issue, without the approval of Ingevity's stockholders, one or more classes or series of preferred stock having such designation, powers, preferences and relative, participating, optional and other special rights, including preferences over Ingevity's common stock respecting dividends and distributions, as Ingevity's board of directors generally may determine. The terms of one or more classes or series of preferred stock could dilute the voting power or reduce the value of Ingevity's common stock. For example, Ingevity could grant the holders of preferred stock the right to elect some number of Ingevity's directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences Ingevity could assign to holders of preferred stock could affect the residual value of the common stock.

***Certain provisions in Ingevity's amended and restated certificate of incorporation and amended and restated bylaws, and of Delaware law, may prevent or delay an acquisition of Ingevity, which could depress the trading price of Ingevity's common stock.***

Ingevity's amended and restated certificate of incorporation and amended and restated bylaws contain, and Delaware law contains, provisions that are intended to deter coercive takeover practices and inadequate takeover bids by making such practices or bids unacceptably expensive to the bidder and to encourage prospective acquirers to negotiate with Ingevity's board of directors rather than to attempt a hostile takeover. These provisions include, among others:

- the inability of Ingevity's stockholders to act by written consent;
- rules regarding how stockholders may present proposals or nominate directors for election at stockholder meetings;
- the right of Ingevity's board to issue preferred stock without stockholder approval;
- the ability of Ingevity's remaining directors to fill vacancies on Ingevity's board of directors; and
- the inability of Ingevity's stockholders to remove directors other than for cause while the board is classified.

In addition, because Ingevity has not chosen to be exempt from Section 203 of the Delaware General Corporation Law (the "DGCL"), this provision could also delay or prevent a change of control that you may favor. Section 203 provides that, subject to limited exceptions, persons that acquire, or are affiliated with persons that acquire, more than 15 percent of the outstanding voting stock of a Delaware corporation shall not engage in any business combination with that corporation, including by merger, consolidation or acquisitions of additional shares, for a three-year period following the date on which that person or its affiliates becomes the holder of more than 15 percent of the corporation's outstanding voting stock.

Ingevity believes these provisions will protect its stockholders from coercive or otherwise unfair takeover tactics by requiring potential acquirers to negotiate with Ingevity's board of directors and by providing Ingevity's board of directors with more time to assess any acquisition proposal. These provisions are not intended to make Ingevity immune from takeovers. However, these provisions will apply even if the offer may be considered beneficial by some stockholders and could delay or prevent an acquisition that Ingevity's board of directors determines is not in the best interests of Ingevity and Ingevity's stockholders. These provisions may also prevent or discourage attempts to remove and replace incumbent directors.

***There could be significant liability if the Separation were determined to be a taxable transaction.***

In connection with the Separation, our former parent received an opinion from outside tax counsel to the effect that the requirements for tax-free treatment under Section 355 of the Code would be satisfied. The opinion relied on certain facts, assumptions, representations and undertakings from our former parent and us regarding the past and future conduct of the companies' respective businesses and other matters. If any of these facts, assumptions, representations or undertakings were incorrect or not satisfied, we and our stockholders may not be able to rely on the opinion of tax counsel and could be subject to significant tax liabilities.

Notwithstanding the opinion of tax counsel, the IRS could determine upon audit that the Separation is taxable if it determines that any of these facts, assumptions, representations or undertakings were incorrect or violated or if it disagrees with the conclusions in the opinion, or for other reasons, including as a result of certain significant changes in the share ownership of our company or our former parent after the Separation. If the Separation were determined to be taxable for U.S. federal income tax purposes, our former parent and its stockholders that are subject to U.S. federal income tax could incur significant U.S. federal income tax liabilities, and we could incur significant liabilities.

***Ingevity's amended and restated bylaws designate the state courts within the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by Ingevity's stockholders, which could discourage lawsuits against Ingevity and Ingevity's directors and officers.***

Ingevity's amended and restated bylaws provide that unless the board of directors otherwise determines, a state court within the State of Delaware will be the sole and exclusive forum for any derivative action or proceeding brought on behalf of Ingevity, any action asserting a claim of breach of a fiduciary duty owed by any director or officer of Ingevity to Ingevity or Ingevity's stockholders, creditors or other constituents, any action asserting a claim against Ingevity or any director or officer of Ingevity arising pursuant to any provision of the DGCL, or Ingevity's amended and restated certificate of incorporation or bylaws, or any action asserting a claim against Ingevity or any director or officer of Ingevity governed by the internal affairs

doctrine. However, if no state court located within the State of Delaware has jurisdiction, the action may be brought in the federal district court for the District of Delaware. Although Ingevity’s amended and restated bylaws include this exclusive forum provision, it is possible that a court could rule that this provision is inapplicable or unenforceable. This exclusive forum provision may limit the ability of Ingevity’s stockholders to bring a claim in a judicial forum that such stockholders find favorable for disputes with Ingevity or Ingevity’s directors or officers, which may discourage such lawsuits against Ingevity and Ingevity’s directors and officers. Alternatively, if a court were to find this exclusive forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings described above, Ingevity may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect Ingevity’s business, financial condition or results of operations.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

We are headquartered in North Charleston, South Carolina and operate manufacturing facilities in the U.S., United Kingdom, and People's Republic of China and warehouse and distribution facilities globally. The following locations represent the principal properties of Ingevity. We believe these facilities are adequate and suitable for our current operations, and that the production capacity of our facilities is sufficient to meet current demand. In the case of the properties identified as “Leased”, we nevertheless own the manufacturing assets themselves.

	Own / Lease	Functional Use
North Charleston, South Carolina	Own / Lease <sup>(1)</sup>	Corporate Headquarters; Application Labs; Performance Chemicals: Manufacturing
Covington, Virginia	Lease	Performance Materials: Manufacturing
Crossett, Arkansas	Lease	Performance Chemicals: Manufacturing
DeRidder, Louisiana	Own	Performance Chemicals: Manufacturing
Waynesboro, Georgia	Own <sup>(2)</sup>	Performance Materials: Manufacturing
Wickliffe, Kentucky	Lease	Performance Materials: Manufacturing
Changshu, People’s Republic of China	Lease	Performance Materials: Manufacturing
Warrington, United Kingdom	Lease	Performance Chemicals: Manufacturing, Application Lab
Zhuhai, People’s Republic of China	Lease	Performance Materials: Manufacturing, Application Lab

(1) Portions of the manufacturing operations are on leased land.

(2) Certain manufacturing assets are subject to a capital lease with the Development Authority of Burke County (the county in which Waynesboro, Georgia is located).

**ITEM 3. LEGAL PROCEEDINGS**

We are from time to time, involved in routine litigation incidental to our operations. None of the litigation in which we are currently involved, individually or in the aggregate, is material to our combined financial condition or results of operations nor are we aware of any material pending or contemplated proceedings.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The executive officers of Ingevity Corporation, the offices they currently hold, their business experience over the past five years and their ages are as follows:

Name	Age <sup>(1)</sup>	Present Position and Business Experience
Richard B. Kelson	73	Interim President and Interim Chief Executive Officer (2020 – present); Director and Chairman of the Board (2016 – present); Chairman, President and Chief Executive Officer of ServeCo LLC (2009 – present).
John C. Fortson	52	Executive Vice President, Chief Financial Officer & Treasurer (2015-present); Vice President, Chief Financial Officer and Treasurer of AAR Corporation (2013-2015); Managing Director in the Investment Banking Department of Bank of America Merrill Lynch (2007-2013)
Katherine P. Burgeson	62	Executive Vice President, General Counsel & Secretary (2015-present); Associate General Counsel of WestRock (2015); Deputy General Counsel of MeadWestvaco (2006-2015)
Michael P. Smith	59	Executive Vice President & President of Performance Chemicals, Strategy and Business Development (2017-present); Senior Vice President Strategy and Business Development (2016-2017), Vice President of Health and Nutrition at FMC Corporation (2013-2015); Division General Manager of BioPolymer at FMC Corporation (2006-2013)
S. Edward Woodcock	54	Executive Vice President & President of Performance Materials (2015-present); Vice President of MeadWestvaco's Carbon Technologies business (2010-2015)

(1) As of December 31, 2019.

All officers are elected to hold office for one year or until their successors are elected and qualified. No family relationships exist among any of our executive officers or directors, and there are no arrangements or understandings between any of the above-listed officers and any other person pursuant to which they serve as an officer.



## PART II

### ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDERS MATTER AND ISSUER PURCHASES OF EQUITY SECURITIES

#### Market for Registrant's Common Equity and Related Stockholder Matters

Ingevity's common stock (\$0.01 par value) is listed on the New York Stock Exchange, Inc. ("NYSE") under the symbol "NGVT." There were approximately 5,200 record holders of our common stock as of February 24, 2020.

#### Unregistered Sales of Equity Securities

Not Applicable.

#### Issuer Purchases of Equity Securities

The following table summarizes information with respect to the purchase of our common stock during the three months ended December 31, 2019.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Publicly Announced Program <sup>(1)</sup>		
			Total Number of Shares Repurchased	Total Dollar Amount Purchased	Maximum Dollar Value of Shares that May Yet be Purchased
October 1-31, 2019	—	\$ —	—	\$ —	\$ 389,537,445
November 1-30, 2019	—	—	—	—	389,537,445
December 1-31, 2019	—	—	—	—	389,537,445
<b>Total Q4 2019</b>	—	\$ —	—	\$ —	\$ 389,537,445

(1) On February 20, 2017, our Board of Directors authorized the repurchase of up to \$100 million of our common stock. On November 1, 2018, our Board of Directors approved the authorization for the repurchase of up to an additional \$350 million of our outstanding common stock. The repurchase program does not include a specific timetable or price targets and may be suspended or terminated at any time. Shares may be purchased through open market or privately negotiated transactions at the discretion of management based on its evaluation of prevailing market conditions and other factors.

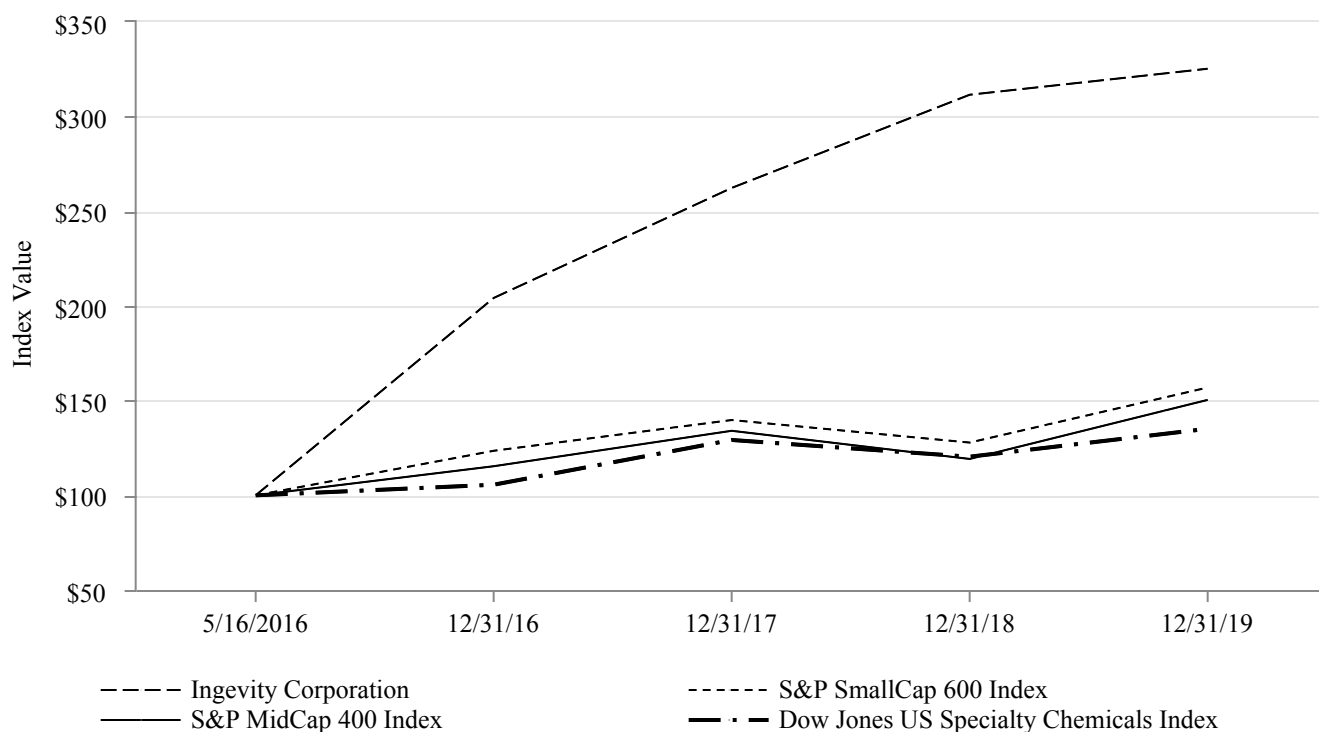
#### Stock Performance Graph

The following table and graph present the cumulative total stockholder return for Ingevity's common stock compared with the Standard & Poor's (S&P) MidCap 400 Index, S&P SmallCap 600 Index and the Dow Jones (DJ) U.S. Specialty Chemicals Index since Ingevity's stock began "regular-way" trading on the NYSE on May 16, 2016.

The graph assumes the investment of \$100 in each of Ingevity's common stock, the S&P MidCap 400 Index, S&P SmallCap 600 Index, and DJ U.S. Specialty Chemicals Index on May 16, 2016, and that all dividends, if any, were reinvested. Previously, Ingevity was included in the S&P SmallCap 600 Index and was moved to the S&P MidCap 400 Index on March 12, 2019, so we updated our comparative broad market index accordingly for the fiscal year ended December 31, 2019. In light of our market capitalization, the S&P MidCap 400 index is a more comparable broad market index with which to compare Ingevity.

	December 31,				
	May 16, 2016	2016	2017	2018	2019
Ingevity Corporation	\$ 100.00	\$ 204.24	\$ 262.36	\$ 311.58	\$ 325.32
S&P SmallCap 600 Index	100.00	123.53	139.77	127.87	156.94
S&P MidCap 400 Index	100.00	115.37	134.09	119.22	150.41
Dow Jones US Specialty Chemicals Index	\$ 100.00	\$ 105.60	\$ 129.24	\$ 120.40	\$ 135.15

### Total Stockholder Returns



The graph and related information set forth above are not deemed to be "filed" with the SEC for purposes of Section 18 of the Exchange Act or incorporated by reference into any future filing made by us with the SEC, except to the extent that we specifically incorporate it by reference into any such filing. The stock price performance included in the graph above is not necessarily indicative of future stock performance.

## ITEM 6. SELECTED FINANCIAL DATA

Ingevity did not operate as a separate, stand-alone entity for all five years listed below. Our consolidated balance sheets as of December 31, 2019, 2018, 2017, and 2016, respectively, and our consolidated statement of operations, comprehensive income (loss), and cash flows for the years ended December 31, 2019, 2018, and 2017, respectively, consist of the consolidated balances of Ingevity as prepared on a stand-alone basis. Our consolidated balance sheets as of December 31, 2015, and our consolidated statements of operations, comprehensive income (loss), and cash flows for the years ended December 31, 2016, and 2015, respectively, have been prepared on a “carve out” basis for the periods and dates prior to the Separation. The selected consolidated financial data should be read in conjunction with our Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K.

<i>In millions, except per share and share data</i>	Years Ended December 31,				
	2019	2018	2017	2016	2015
<b>Statement of Operations Data:</b>					
Net sales	\$ 1,292.9	\$ 1,133.6	\$ 972.4	\$ 908.3	\$ 958.3
Gross profit	482.0	416.8	329.0	274.4	275.4
Income before income taxes	227.9	221.8	174.8	87.0	136.5
Net income (loss) attributable to Ingevity stockholders	183.7	169.1	126.5	35.2	79.7
<b>Per Share Data attributable to Ingevity stockholders <sup>(1)</sup></b>					
Basic earnings (loss) per share	\$ 4.39	\$ 4.02	\$ 3.00	\$ 0.83	\$ 1.89
Diluted earnings (loss) per share	\$ 4.35	\$ 3.97	\$ 2.97	\$ 0.83	\$ 1.89
<b>Balance Sheet Data (at period end):</b>					
Working capital <sup>(2)</sup>	\$ 247.7	\$ 239.4	\$ 215.5	\$ 158.3	\$ 196.5
Property, plant and equipment, net	664.7	523.8	438.5	422.8	437.5
Total assets	2,141.7	1,315.2	929.6	832.8	778.7
Long-term debt including finance lease obligations	1,228.4	741.2	444.0	481.3	80.0
Total equity	530.8	338.7	277.9	134.6	517.4
<b>Other Data:</b>					
Capital expenditures	\$ 114.8	\$ 93.9	\$ 52.6	\$ 56.7	\$ 100.9
Depreciation and amortization expense	85.0	57.0	40.4	38.8	34.6
<b>Weighted average common stock outstanding (in thousands) <sup>(1)</sup>:</b>					
Basic shares	41,801	42,037	42,130	42,108	42,102
Diluted shares	42,200	42,601	42,529	42,271	42,102

(1) On May 15, 2016, WestRock Company distributed 42.1 million shares of Ingevity's common stock to holders of its common stock. Basic and diluted earnings (loss) per share for the year ended December 31, 2015 is calculated using the number of common shares distributed on May 15, 2016. Basic and diluted earnings (loss) per share for the year ended December 31, 2016 is calculated using the weighted average number of common shares outstanding for the period beginning after May 15, 2016.

(2) Defined as current assets less current liabilities.

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

### **Introduction**

Management's discussion and analysis of Ingevity's financial condition and results of operations ("MD&A") is provided as a supplement to the Consolidated Financial Statements and related notes included elsewhere herein to help provide an understanding of our financial condition, changes in financial condition and results of our operations.

### **Cautionary Statements About Forward-Looking Statements**

This section and other parts of this Annual Report on Form 10-K contain forward-looking statements, within the meaning of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the Private Securities Litigation Reform Act of 1995 that reflect our current expectations, beliefs, plans or forecasts with respect to, among other things, future events and financial performance. Forward-looking statements are often characterized by words or phrases such as "may," "will," "could," "should," "would," "anticipate," "estimate," "expect," "project," "intend," "plan," "believe," "target," "prospects," "potential" and "forecast," and other words, terms and phrases of similar meaning. Forward-looking statements involve estimates, expectations, projections, goals, forecasts, assumptions, risks and uncertainties. We caution readers that a forward-looking statement is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking statement. Such risks and uncertainties include, among others, those discussed in Item 1A under the heading "Risk Factors" as well as in our consolidated financial statements, related notes, and the other information appearing elsewhere in this report and our other filings with the SEC. We do not intend, and undertake no obligation, to update any of our forward-looking statements after the date of this report to reflect actual results or future events or circumstances. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. In addition to any such risks, uncertainties and other factors discussed elsewhere herein, risks, uncertainties and other factors that could cause or contribute to actual results differing materially from those expressed or implied by the forward-looking statements include, but are not limited to the following:

- we are exposed to risks that the expected benefits from the Caprolactone Acquisition may not be realized or will not be realized within the expected time period, the risk of significant transaction costs and unknown or understated liabilities;
- we may be adversely affected by general economic and financial conditions beyond our control;
- we are exposed to risks related to our international sales and operations;
- our reported results could be adversely affected by currency exchange rates and currency devaluation could impair our competitiveness;
- our operations outside the U.S. require us to comply with a number of U.S. and foreign regulations, violations of which could have a material adverse effect on our financial condition and results of operations;
- we may be adversely affected by changes in trade policy, including the imposition of tariffs and the resulting consequences;
- our engineered polymers product line may be adversely affected by the United Kingdom's withdrawal from the European Union;
- we are dependent upon attracting and retaining key personnel;
- adverse conditions in the global automotive market or adoption of alternative or new technologies may adversely affect demand for our automotive carbon products;
- we face competition from producers of alternative products and new technologies, and new or emerging competitors;
- we face competition from infringing intellectual property activity;
- if increasingly more stringent air quality standards worldwide are not adopted, our growth could be impacted;
- we may be adversely affected by a decrease in government infrastructure spending;

- our printing inks business serves customers in a market that is facing declining volumes and downward pricing;
- our Performance Chemicals segment is highly dependent on crude tall oil ("CTO") which is limited in supply;
- lack of access to sufficient CTO would impact our ability to produce CTO-based products;
- a prolonged period of low energy prices may materially impact our results of operations;
- we are dependent upon third parties for the provision of certain critical operating services at several of our facilities;
- the occurrence of a natural disaster, such as a hurricane, winter or tropical storm, earthquake, tornado, flood, fire or other matters such as labor difficulties (including work stoppages), equipment failure or unscheduled maintenance and repair, which could result in operational disruptions of varied duration;
- the adverse effect of the Coronavirus on our international sales and operations, demand for our automotive carbon products, and our manufacturing facilities and supply chain;
- from time to time we are called upon to protect our intellectual property rights and proprietary information through litigation and other means;
- if we are unable to protect our intellectual property and other proprietary information we may lose significant competitive advantage;
- information technology security breaches and other disruptions;
- government policies and regulations, including, but not limited to, those affecting the environment, climate change, tax policies and the chemicals industry; and
- losses due to lawsuits arising out of environmental damage or personal injuries associated with chemical or other manufacturing processes.

## Overview

Ingevity Corporation ("Ingevity," "the company", "we," "us" or "our") is a leading global manufacturer of specialty chemicals and high performance activated carbon materials. We provide innovative solutions to meet our customers' unique and demanding requirements through proprietary formulated products. We report in two business segments, Performance Materials and Performance Chemicals.

Our Performance Materials segment consists of our automotive technologies and process purifications product lines. Performance Materials manufactures products in the form of powder, granules, extruded pellets, extruded honeycombs, and activated carbon sheets. Automotive technologies products are sold into gasoline vapor emission control applications within the automotive industry, while process purification products are sold into the food, water, beverage, and chemical purification industries.

Our Performance Chemicals segment consists of our pavement technologies, oilfield technologies, industrial specialties, and engineered polymers product lines. Performance Chemicals manufactures products derived from CTO and lignin extracted from the kraft paper making process as well as caprolactone monomers and derivatives derived from cyclohexanone and hydrogen peroxide. Performance Chemicals products serve as critical inputs used in a variety of high performance applications, including pavement preservation, pavement adhesion promotion, and warm mix paving (pavement technologies product line), oil well service additives, oil production, and downstream application chemicals (oilfield technologies product line), printing inks, adhesives, agrochemicals, lubricants, and industrial intermediates (industrial specialties product line), coatings, resins, elastomers, adhesives, and bio-plastics (engineered polymers product line).

## **Recent Developments**

### ***Perstorp AB's Caprolactone Business***

On February 13, 2019, we completed the acquisition of Perstorp UK Ltd. with Perstorp Holding AB ("Seller"), including the Seller's entire caprolactone business ("Caprolactone Business"), herein referred to as the "Caprolactone Acquisition." The Caprolactone Acquisition was completed for an aggregate purchase price of €578.9 million (\$652.5 million), less assumed debt of €100.4 million (\$113.1 million). At closing, the assumed debt was settled with an affiliate of the Seller. The Caprolactone Acquisition is being integrated into our Performance Chemicals segment and included within our engineered polymers product line. Our revolving credit facility was utilized as the primary source of funds, along with available cash on hand, to fund the Caprolactone Acquisition.

### ***Revolving Credit and Term Loan Facility Amendment***

On March 7, 2019, we entered into an Amendment No. 3 and Amendment No. 4 (the "Amendments") to our Credit Agreement. Among other things, the Amendments established a new class of incremental term loan commitments, collectively referred to as the 2019 Term Loan, in the aggregate principal amount of \$375.0 million. The 2019 Term Loan of \$375.0 million is in addition to the existing 2017 Term Loan of \$375.0 million.

The 2019 Term Loan is not subject to amortization; the full principal balance is due and payable at maturity on August 7, 2022. The 2019 Term Loan bears interest at either (a) an adjusted base rate or (b) an adjusted LIBOR rate (or a comparable or successor rate), in each case, plus an applicable margin (the "2019 Term Loan Applicable Margin"), in the case of base rate loans, ranging between zero and 0.25 percent, and in the case of adjusted LIBOR rate loans, ranging between 0.75 percent and 1.25 percent. The 2019 Term Loan Applicable Margin is based on a total leverage based pricing grid.

As consideration for Amendments, we paid to each lender party thereto a consent fee equal to 0.05 percent of the aggregate principal amount of the commitments and outstanding loans under held by such lender. Fees of \$1.8 million were incurred to secure the 2019 Term Loan. These fees have been deferred and will be amortized over the term of the loan.

We used the proceeds of the 2019 Term Loan to repay loans outstanding under our Revolving Credit Facility.

## Results of Operations

<i>In millions, except per share data</i>	Years Ended December 31,		
	2019	2018	2017
Net sales	\$ 1,292.9	\$ 1,133.6	\$ 972.4
Cost of sales	810.9	716.8	643.4
Gross profit	482.0	416.8	329.0
Selling, general and administrative expenses	163.1	132.4	106.4
Research and technical expenses	19.7	21.5	19.8
Separation costs	—	—	0.9
Restructuring and other (income) charges, net	1.8	(0.5)	3.7
Acquisition-related costs	26.9	10.8	7.1
Other (income) expense, net	(4.3)	1.0	0.5
Interest expense	54.6	33.2	18.1
Interest income	(7.7)	(3.4)	(2.3)
Income (loss) before income taxes	227.9	221.8	174.8
Provision (benefit) for income taxes	44.2	40.0	29.6
Net income (loss)	183.7	181.8	145.2
Less: Net income (loss) attributable to noncontrolling interests	—	12.7	18.7
Net income (loss) attributable to Ingevity stockholders	\$ 183.7	\$ 169.1	\$ 126.5

### Net Sales Comparison of Years Ended December 31, 2019, 2018, and 2017

<i>In millions, except percentages</i>	Net sales	Percentage change vs. prior year			
		Total change	Currency effect	Price/Mix	Volume
Year Ended December 31, 2019	\$ 1,292.9	14%	(1)%	4%	11%
Year Ended December 31, 2018	1,133.6	17%	1%	1%	15%

### ***Year Ended December 31, 2019 vs. 2018***

The sales increase in 2019 was driven primarily by a volume increase of \$123.7 million (11 percent of sales). Performance Materials and Performance Chemicals contributed \$70.1 million and \$53.6 million, respectively, to the volume growth during the year. The Caprolactone Acquisition, completed in the first quarter of 2019, contributed \$122.1 million to the favorable volume growth during the period. Additionally, the favorable pricing and product mix of \$43.2 million (four percent of sales) across both segments, offset partially by unfavorable foreign exchange impacts of \$7.6 million (one percent of sales) resulted in the year over year Net sales increase.

### ***Year Ended December 31, 2018 vs. 2017***

The sales increase in 2018 was driven by a volume increase of \$142.9 million (15 percent of sales). Performance Materials and Performance Chemicals contributed \$44.6 million and \$98.3 million, respectively, to the volume impacts during the year. Additionally, the favorable pricing and product mix of \$13.5 million (one percent of sales) across both segments, as well as favorable foreign exchange impacts of \$4.8 million (one percent of sales) resulted in the year over year Net sales increase.

## Gross Profit

### ***Year Ended December 31, 2019 vs. 2018***

Gross profit improvement of \$65.2 million was driven by favorable sales volume contributing \$62.0 million of additional gross profit and pricing and product mix improvement contributing \$39.5 million. These positive impacts were offset by increased manufacturing costs of \$26.0 million, inventory step-up amortization related to the Pine Chemical Acquisition and Caprolactone Acquisition of \$7.0 million (see Note 17 within the Condensed Consolidated Financial Statements included within Part II, Item 8 of the Form 10-K for more information), and unfavorable foreign currency exchange of \$3.3 million. Refer to the Segment Operating Results section included within this MD&A for more information on the drivers to the changes in gross profit period over period for both segments.

### ***Year Ended December 31, 2018 vs. 2017***

Gross profit improvement of \$87.8 million was driven by favorable sales volume contributing \$67.1 million of additional gross profit, pricing and product mix improvement of \$20.6 million, and favorable foreign currency exchange of \$1.9 million. These positive impacts were offset by increased manufacturing costs of \$0.4 million, inventory step-up amortization related to the Pine Chemical Acquisition of \$1.4 million (see Note 17 within the Condensed Consolidated Financial Statements included within Part II, Item 8 of the Form 10-K for more information). Refer to the Segment Operating Results section included within this MD&A for more information on the drivers to the changes in gross profit period over period for both segments.

## Selling, general and administrative expenses

### ***Year Ended December 31, 2019 vs. 2018***

Selling, general and administrative ("SG&A") expenses were \$163.1 million (13 percent of sales) and \$132.4 million (12 percent of sales) for the years ended December 31, 2019 and 2018, respectively. The increase in SG&A is primarily due to intangible asset amortization associated with the Caprolactone Acquisition and Pine Chemical Acquisition of \$16.5 million and increased legal costs associated with our Performance Materials' intellectual property litigation of \$10.2 million, and increased spending related to the new engineered polymers product line.

### ***Year Ended December 31, 2018 vs. 2017***

SG&A expenses were \$132.4 million (12 percent of sales) and \$106.4 million (11 percent of sales) for the years ended December 31, 2018 and 2017, respectively. The increase in SG&A is primarily due to intangible asset amortization of \$10.6 million associated with the Pine Chemical Acquisition, litigation expenses of \$4.9 million in our Performance Materials segment, and growth related spending in both segments.

## Research and technical expenses

### ***Years Ended December 31, 2019, 2018, and 2017***

Research and technical expenses as a percentage of Net sales remained relatively consistent period over period, decreasing to 1.5 percent in the year ended December 31, 2019 from 1.9 percent and 2.0 percent in the years ended December 31, 2018 and 2017, respectively.

## Restructuring and other (income) charges, net

### ***2019 activities***

During the third quarter of 2019, we initiated a reorganization as part of an effort to improve our Performance Chemicals segment's workflow and efficiency to best serve our customers' needs and reduce costs. As a result of this reorganization, we recorded \$1.5 million in severance and other employee-related costs in the year ended December 31, 2019.

During the second quarter of 2019, we sold assets from the Performance Chemicals derivatives operations in Palmeira, Brazil. These assets were part of a facility that was closed as a result of a restructuring event in 2016. As a result of this sale, we recorded \$0.4 million in proceeds from the sales as a gain on sale of assets, which was offset by a \$0.7 million charge related to other miscellaneous exit costs in the year ended December 31, 2019.



## 2018 activities

In February 2018, we sold assets from the Performance Chemicals derivatives operations in Duque De Caxias, Rio de Janeiro, Brazil. These assets were part of a facility that was closed as a result of a restructuring event in 2016. As a result of this sale, we recorded \$0.6 million as a gain on sale of assets offset by other employee related costs of \$0.1 million for the year ended December 31, 2018.

## 2017 activities

In January 2017, we initiated a reorganization to streamline our leadership team, flatten the organization and reduce costs. Because of this reorganization, we recorded \$1.3 million in severance and other employee-related costs for the year ended December 31, 2017.

During the year ended December 31, 2017, we also recorded \$2.4 million of additional miscellaneous exit costs primarily associated with the exit of our Performance Chemicals' manufacturing operations in Palmeira, Santa Catarina, Brazil which began in the fourth quarter of 2016.

Detail on these restructuring charges and asset disposal activities is provided below.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Restructuring and other (income) charges, net			
Gain on sale of assets and businesses	\$ (0.4)	\$ (0.6)	\$ —
Severance and other employee-related costs <sup>(1)</sup>	1.5	0.1	1.3
Other (income) charges, net <sup>(2)</sup>	0.7	—	2.4
Total restructuring and other (income) charges, net	<u>\$ 1.8</u>	<u>\$ (0.5)</u>	<u>\$ 3.7</u>

(1) Represents severance and employee benefit charges.

(2) Primarily represents costs associated with rental payments, contract terminations, and other miscellaneous exit costs. Other Income primarily represents favorable developments on previously recorded exit costs as recoveries associated with restructuring activities.

## Acquisition-related costs

### Years Ended December 31, 2019, 2018, and 2017

Acquisition costs of \$26.9 million, \$10.8 million, and \$7.1 million for the years ended December 31, 2019, 2018, and 2017, respectively, were comprised of charges incurred in connection with the acquisitions of the Caprolactone Business and Pine Chemical Business. See Note 17 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information.

### Other (income) expense, net

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Foreign currency exchange (income) loss	\$ 0.2	\$ 2.0	\$ 1.2
Royalty and sundry (income) loss	(1.9)	(0.8)	(0.7)
Impairment of equity investment <sup>(1)</sup>	—	1.5	—
Other (income) expense, net	(2.6)	(1.7)	—
Total Other (income) expense, net	<u>\$ (4.3)</u>	<u>\$ 1.0</u>	<u>\$ 0.5</u>

(1) Represents an impairment charge related to an equity investment within our Performance Materials segment.

## Interest expense

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Interest expense on finance lease obligations	\$ 6.1	\$ 6.2	\$ 6.1
Interest expense on revolving credit facility and term loans	36.2	14.9	11.4
Interest expense on senior notes	13.5	13.0	—
Capitalized interest	(1.6)	(1.1)	(0.3)
Other	0.4	0.2	0.9
Total interest expense	<u>\$ 54.6</u>	<u>\$ 33.2</u>	<u>\$ 18.1</u>

## Interest income

### ***Years Ended December 31 2019, 2018, and 2017***

Interest income was \$7.7 million, \$3.4 million, and \$2.3 million for the years ended December 31, 2019, 2018 and 2017, respectively. Interest income is primarily related to the interest earned on our restricted investment of \$2.0 million and \$2.3 million from our fixed-to-fixed cross-currency interest rate swap (see Note 6 and 10 to the Consolidated Financial Statements included in Part II. Item 8 of this Form 10-K for more information).

### Provision (benefit) for income taxes

Detail explaining the change in the effective tax rate is presented in Note 18 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K.

### Net income (loss) attributable to noncontrolling interests

#### ***Year Ended December 31, 2019, 2018, and 2017***

Net income (loss) attributable to noncontrolling interests was zero, \$12.7 million and \$18.7 million for the years ended December 31, 2019, 2018, and 2017, respectively. Our noncontrolling interest represented the 30 percent ownership interest held by a third-party U.S.-based company in our consolidated Purification Cellutions, LLC legal entity, prior to our purchase of this remaining interest on August 1, 2018.

## Segment Operating Results

In addition to the information discussed above, the following sections discuss the results of operations for each of Ingevity's segments. Our segments are (i) Performance Materials and (ii) Performance Chemicals. Segment Earnings before Interest, Taxes, Depreciation and Amortization ("EBITDA") is the primary measure used by the Company's chief operating decision maker to evaluate the performance of and allocate resources among our operating segments. Segment EBITDA is defined as segment revenue less segment operating expenses (segment operating expenses consist of costs of sales, selling, general and administrative expenses, other (income) expense, net, excluding depreciation and amortization). We have excluded the following items from segment EBITDA: interest expense associated with corporate debt facilities, income taxes, depreciation, amortization, restructuring and other (income) charges, acquisition and other related costs, pension and postretirement settlement and curtailment (income) charge. In general, the accounting policies of the segments are the same as those described in the Summary of Significant Accounting Policies in Note 3 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K.

### Performance Materials

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Net sales			
<i>Automotive Technologies product line</i>	\$ 454.9	\$ 362.0	\$ 312.5
<i>Process Purification product line</i>	35.7	38.4	36.8
Total Performance Materials - Net sales	\$ 490.6	\$ 400.4	\$ 349.3
Segment EBITDA	213.4	169.4	141.8

#### Net Sales Comparison of Years Ended December 31, 2019, 2018, and 2017

<i>In millions, except percentages</i>	Net sales	Percentage change vs. prior year			
		Total change	Currency effect	Price/Mix	Volume
Year Ended December 31, 2019	\$ 490.6	23 %	(1)%	6 %	18 %
Year Ended December 31, 2018	\$ 400.4	15 %	— %	2 %	13 %

#### **Year Ended December 31, 2019 vs. 2018**

**Segment net sales.** The increase in 2019 was driven by \$70.1 million (18 percent of sales) in volume improvements in automotive evaporative emission canister products due to stricter environmental regulation in the Chinese, North American, and European automotive markets. These gains were further bolstered by favorable pricing and product mix of \$22.9 million (six percent of sales), partially offset by unfavorable foreign currency exchange impacts of \$2.8 million (one percent of sales).

**Segment EBITDA.** Segment EBITDA increased \$44.0 million due to favorable volume primarily in the automotive carbon application, which contributed \$41.3 million and favorable pricing and product mix, which contributed \$18.9 million. These gains were partially offset by increased manufacturing costs of \$5.4 million and increased SG&A and research and technical costs of \$14.6 million, primarily due to increased intellectual property litigation costs of \$10.2 million. Favorable foreign currency exchange impacts and other miscellaneous income of \$3.9 million also contributed to the increase.

#### **Year Ended December 31, 2018 vs. 2017**

**Segment net sales.** The increase in 2018 was driven by \$44.6 million (13 percent of sales) in volume improvements in the automotive carbon market due to strong growth in high content vehicle production for sale into the North American automotive market and increased vehicle content due to regulatory adoption. Additionally, we had improved price and product mix of \$5.2 million (two percent of sales) and favorable foreign currency exchange impacts of \$1.3 million (less than one percent of sales).

**Segment EBITDA.** Segment EBITDA \$27.6 million primarily due to \$28.6 million in favorable volumes and \$8.2 million in favorable pricing and product mix, and lower production and operating costs of \$1.8 million. These gains were

partially offset by higher SG&A expenses of \$8.9 million, unfavorable foreign currency exchange impacts of \$0.6 million, and the impairment of an equity investment of \$1.5 million.

## Performance Chemicals

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Net sales			
<i>Pavement Technologies product line</i>	\$ 111.4	\$ 114.2	\$ 77.8
<i>Oilfield Technologies product line</i>	183.3	178.5	163.0
<i>Industrial Specialties product line</i>	385.5	440.5	382.3
<i>Engineered Polymers product line</i>	122.1	—	—
Total Performance Chemicals - Net sales	\$ 802.3	\$ 733.2	\$ 623.1
Segment EBITDA	183.5	151.1	100.9

### Net Sales Comparison of Years Ended December 31, 2019, 2018, and 2017

<i>In millions, except percentages</i>	Net sales	Percentage change vs. prior year			
		Total change	Currency effect	Price/Mix	Volume
Year Ended December 31, 2019	\$ 802.3	9 %	(1)%	3 %	7 %
Year Ended December 31, 2018	\$ 733.2	18 %	1 %	1 %	16 %

## Pine Chemical Business and Caprolactone Business

The Pine Chemical Business has been integrated into our Performance Chemicals segment and has been included within our results of operations since March 8, 2018. The Caprolactone Business is being integrated into our Performance Chemicals segment and has been included within our results of operations since it was acquired on February 13, 2019. The information presented below for the years ended December 31, 2019 and 2018, includes the results of these acquisitions as compared to historical results. For a pro forma comparative analysis of 2019 versus 2018 results, refer to the section below titled "Performance Chemicals Pro Forma Financial Results with the Pine Chemical Business and Caprolactone Business."

### *Year Ended December 31, 2019 vs. 2018*

**Segment net sales.** The sales increase was driven by favorable volume of \$53.6 million (seven percent of sales), which consisted of a favorable increase in engineered polymers (\$122.1 million), partially offset by volume declines in industrial specialties (\$63.9 million), oilfield technologies (\$3.3 million) and pavement technologies product lines (\$1.3 million). Also driving the net sales increase was pricing and product mix of \$20.3 million (three percent of sales) in industrial specialties (\$12.3 million), oilfield technologies (\$0.8 million), and pavement technologies product lines (\$7.2 million), which were partially offset by unfavorable \$4.8 million (one percent of sales) of foreign currency exchange impact.

**Segment EBITDA.** Segment EBITDA increased \$32.4 million due to favorable volume of \$20.7 million, favorable price and product mix of \$20.6 million, as well as favorable SG&A costs of \$2.0 million. These favorable operating results were partially offset by \$10.4 million of unfavorable manufacturing productivity, primarily driven by higher freight costs, and unfavorable foreign currency exchange impacts and other miscellaneous charges of \$0.5 million.

### *Year Ended December 31, 2018 vs. 2017*

**Segment net sales.** The sales increase was driven by favorable volume of \$98.3 million (16 percent of sales) driven by industrial specialties (\$52.3 million), oilfield technologies (\$33.9 million) and pavement technologies product lines (\$12.1 million). Additionally, favorable pricing and product mix of \$8.3 million (one percent of sales) in industrial specialties (\$3.3 million), oilfield technologies (\$2.3 million), and pavement technologies product lines (\$2.7 million) markets and favorable \$3.5 million (one percent of sales) of foreign currency exchange contributed to results.

**Segment EBITDA.** Segment EBITDA increased \$50.2 million due to favorable volume of \$38.5 million, favorable price and product mix of \$12.4 million, favorable manufacturing and production costs, net of freight inflation, of \$3.5 million, and favorable foreign currency exchange and other miscellaneous income of \$4.2 million. These gains were partially offset by unfavorable SG&A expenses of \$8.4 million, which was partially due to higher employee-related costs.

### Performance Chemical Pro Forma Financial Results with the Pine Chemical Business and Caprolactone Business

We believe that reviewing our operating results by combining actual and pro forma results for our Performance Chemicals segment is useful in identifying trends in, or reaching conclusions regarding, the overall operating performance. Our pro forma segment information includes adjustments as if the acquisitions had occurred on January 1st, in the year preceding the year of acquisition. Our pro forma results are adjusted for the effects of acquisition accounting but do not include adjustments for costs related to integration activities, cost savings or synergies that might be achieved by the combined businesses. Pro forma amounts presented are not necessarily indicative of what our results would have been had we operated the Pine Chemical Business and Caprolactone Business since January 1st in the year preceding the acquisition, nor will the pro forma amounts necessarily be indicative of our future results.

#### Performance Chemical Pro Forma Financial Results

<i>In millions</i>	Year Ended December 31,	
	2019	2018
<b>Net sales</b>		
Performance Chemicals, as reported <sup>(1)</sup>	\$ 802.3	\$ 733.2
Pine Chemical Business and Caprolactone Business, pro forma <sup>(2)</sup>	17.7	187.2
<b>Pro Forma Combined Net Sales <sup>(3)</sup></b>	<b>\$ 820.0</b>	<b>\$ 920.4</b>
<b>Segment EBITDA</b>		
Performance Chemicals, as reported <sup>(1)</sup>	\$ 183.5	\$ 151.1
Pine Chemical Business and Caprolactone Business, pro forma <sup>(2)</sup>	5.5	65.9
<b>Pro Forma Combined Segment EBITDA <sup>(3)</sup></b>	<b>\$ 189.0</b>	<b>\$ 217.0</b>

- (1) As reported amounts are the results of operations of Performance Chemicals, including the results of the Pine Chemical Business and Caprolactone Business, post acquisition dates of March 8, 2018 and February 13, 2019, respectively.
- (2) Pro forma amounts include historical results of the Pine Chemical Business and Caprolactone Business, prior to the acquisition dates of March 8, 2018 and February 13, 2019, respectively. These amounts also include adjustments as if the acquisitions had occurred on January 1st in the year preceding the acquisition, including the effects of purchase accounting. The pro forma amounts do not include adjustments for expenses related to integration activities, cost savings, or synergies that have been or may have been realized.
- (3) The pro forma combined results are not necessarily indicative of what the results would have been had we acquired the Pine Chemical Business and Caprolactone Business on January 1st in the year preceding the acquisition, nor are they indicative of future results.

#### Performance Chemical Pro Forma Combined Net Sales

<i>In millions</i>	Year Ended December 31,	
	2019	2018
Oilfield Technologies product line	\$ 111.4	\$ 118.8
Pavement Technologies product line	183.3	178.7
Industrial Specialties product line	385.5	455.9
Engineered Polymers product line	139.8	167.0
Pro Forma Combined Net Sales - Performance Chemicals	<b>\$ 820.0</b>	<b>\$ 920.4</b>

***Pro Forma Comparison of Year Ended December 31, 2019 vs. 2018***

<b>Performance Chemicals (In millions, except percentages)</b>	<b>Percentage change vs. prior year</b>				
	<b>Pro Forma Combined Net sales</b>	<b>Total change</b>	<b>Currency effect</b>	<b>Price/Mix</b>	<b>Volume</b>
Year Ended December 31, 2019	\$ 820.0	(11)%	(1)%	3 %	(13)%

***Pro Forma Combined Results - Year Ended December 31, 2019 vs. 2018***

**Pro Forma Combined Net Sales.** The decrease was driven by unfavorable volume of \$115.4 million (13 percent of sales), which consisted of unfavorable volumes in industrial specialties (\$79.2 million), engineered polymers (\$26.7 million), pavement technologies (\$1.6 million), and oilfield technologies product lines (\$7.9 million). This decline was partially offset by pricing and product mix increase of \$20.3 million (three percent of sales) driven by favorable price and product mix in oilfield technologies (\$0.8 million), pavement technologies (\$7.2 million), and industrial specialties product lines (\$12.3 million). In addition, unfavorable foreign currency exchange impacted Pro Forma Combined Net Sales by \$5.3 million (less than one percent of sales).

**Pro Forma Combined Segment EBITDA.** Pro Forma Combined Segment EBITDA decreased by \$28.0 million primarily due to decreased volumes of \$50.3 million, increased manufacturing, freight and warehousing costs of \$5.9 million, and unfavorable foreign currency exchange impact of \$1.9 million. These declines were partially offset by \$19.8 million of favorable pricing and product mix and \$10.3 million of favorable SG&A costs.

**Use of Non-GAAP Financial Measures**

Ingevity has presented the financial measure, Adjusted EBITDA, defined below, which has not been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) and has provided a reconciliation to net income, the most directly comparable financial measure calculated in accordance with GAAP. Adjusted EBITDA is not meant to be considered in isolation or as a substitute for the most directly comparable financial measure calculated in accordance with GAAP. Adjusted EBITDA is utilized by management as a measure of profitability.

We believe this non-GAAP financial measure provides management as well as investors, potential investors, securities analysts and others with useful information to evaluate the performance of the business, because such measure, when viewed together with our financial results computed in accordance with GAAP, provides a more complete understanding of the factors and trends affecting our historical financial performance and projected future results. We believe Adjusted EBITDA is a useful measure because it excludes the effects of investment activities as well as non-operating activities.

Adjusted EBITDA is defined as net income (loss) plus provision (benefit) for income taxes, interest expense, net, depreciation, amortization, restructuring and other (income) charges, net, acquisition and other-related costs, and pension and postretirement settlement and curtailment (income) charges.

This non-GAAP measure is not intended to replace the presentation of financial results in accordance with GAAP and investors should consider the limitations associated with these non-GAAP measures, including the potential lack of comparability of these measures from one company to another. A reconciliation of Adjusted EBITDA to net income is set forth within this section.

## Reconciliation of Net Income to Adjusted EBITDA

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Net income (loss) (GAAP)	\$ 183.7	\$ 181.8	\$ 145.2
Interest expense	54.6	33.2	18.1
Interest income	(7.7)	(3.4)	(2.3)
(Provision) benefit for income taxes	44.2	40.0	29.6
Depreciation and amortization - Performance Materials	24.2	22.2	19.8
Depreciation and amortization - Performance Chemicals	60.8	34.8	20.6
Pension and postretirement settlement and curtailment income (charges)	—	0.2	—
Separation costs	—	—	0.9
Restructuring and other (income) charges, net	1.8	(0.5)	3.7
Acquisition and other-related costs <sup>(1)</sup>	35.3	12.2	7.1
Separation costs	—	—	0.9
Adjusted EBITDA (Non-GAAP)	<u>\$ 396.9</u>	<u>\$ 320.5</u>	<u>\$ 242.7</u>

(1) These charges are associated with the acquisition and integration of the Pine Chemical Business and the acquisition and integration of the Caprolactone Business. See below for more detail on the charges incurred.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Legal and professional service fees <sup>(i)</sup>	\$ 14.2	\$ 6.9	\$ 7.1
Inventory fair value step-up amortization <sup>(ii)</sup>	8.4	1.4	—
Purchase price hedge adjustment <sup>(i)</sup>	12.7	3.9	—
Acquisition and other-related costs	<u>\$ 35.3</u>	<u>\$ 12.2</u>	<u>\$ 7.1</u>

(i) Included within "Acquisition-related costs" on the consolidated statements of operations.

(ii) Included within "Cost of sales" on the consolidated statements of operations.

### Adjusted EBITDA

#### Year Ended December 31, 2019, 2018 and 2017

The factors that impacted Adjusted EBITDA period to period are the same factors that affected earnings discussed in the sections entitled "Results of Operations" and "Segment Operating Results" within MD&A.

## Total Company Outlook and 2020 Guidance

For revenue, we expect favorable volume growth in Performance Materials' automotive technologies product line driven by continued regulatory changes. In Performance Chemicals, we expect volume growth in pavement technologies driven by continued chemistry adoption and global growth, and in engineered polymers as monomer markets stabilize and the use of caprolactone derivatives grow in targeted applications, spurred in part due to new product and innovation products. The Performance Chemicals volume growth is expected to be partially offset by reduced volumes in the industrial specialties and oilfield technologies product lines. We expect that first quarter 2020 revenue will be unfavorably impacted by \$20 million to \$30 million, due to the impacts of the novel coronavirus (COVID-19), however, we believe we will recover some or all of this impact over the course of the year.

Adjusted EBITDA is expected to grow by one percent to six percent versus 2019. In the Performance Materials segment, growth will be driven by continued volume, price and mix improvements, as the US and Canada continue adoption of

the Tier 3/LEV III standard, as China demand increases with continued adoption of China 6, and European demand increases as they continue implementation of Euro 6d. This growth will be partially offset by marginally lower vehicle demand, maintenance expense associated with a kiln replacement in Covington, and continued legal costs to defend the company's intellectual property. In the Performance Chemicals segment, continued profitable growth in pavement technologies and a return to growth in engineered polymers is expected to be offset by somewhat lower volumes in industrial specialties and oilfield technologies, modest inflationary costs for freight and CTO, and lower throughput at our refineries. Some risks to the 2020 outlook include lower than anticipated U.S., China, Canadian and European vehicle sales and production, higher non-CTO raw materials costs with higher oil prices, a shift towards smaller vehicles in the U.S. (versus the 2016 to 2019 shift towards light trucks), lower oil prices and a reduction in oil drilling and production in oilfield technologies, Brexit, and ongoing trade and tariff discussions between the U.S. and other countries. We also expect the first quarter 2020 Adjusted EBITDA will be negatively impact by \$10 million to \$15 million as a result of the novel coronavirus (COVID-19), however, we believe we will recover some, if not all of, this impact over the course of the year. We expect to deliver fiscal year 2020 Adjusted EBITDA of \$400 million to \$420 million. These estimates assume a slowdown of the 2019 novel coronavirus (COVID-19) public health crisis by the end of the first quarter.

A reconciliation of net income to adjusted EBITDA as projected for 2020 is not provided. Ingevity does not forecast net income as it cannot, without unreasonable effort, estimate or predict with certainty various components of net income. These components, net of tax, include further restructuring and other income (charges), net; additional acquisition and other related costs in connection with the Perstorp Holding AB's Capa caprolactone business; additional pension and postretirement settlement and curtailment (income) charges; and revisions due to future guidance and assessment of U.S. tax reform. Additionally, discrete tax items could drive variability in our projected effective tax rate. All of these components could significantly impact such financial measures. Further, in the future, other items with similar characteristics to those currently included in adjusted EBITDA, that have a similar impact on comparability of periods, and which are not known at this time, may exist and impact adjusted EBITDA.



## Liquidity and Capital Resources

The primary source of liquidity for Ingevity's business is the cash flow provided by operating activities. We expect our cash flow provided by operations combined with cash on hand and available capacity under our revolving credit facility to be sufficient to meet our working capital needs. We believe these sources will be sufficient to fund our planned operations and meet our interest and other contractual obligations for at least the next twelve months. Over the next twelve months, we expect to make interest payments, capital expenditures, principal repayments, treasury share repurchases, income tax payments, incurred additional spend associated with our Performance Materials' intellectual property litigation, and may incur additional acquisition-related costs. As of December 31, 2019, our available capacity under our revolving credit facility was \$616.6 million.

Cash and cash equivalents totaled \$56.5 million at December 31, 2019. Management continuously monitors deposit concentrations and the credit quality of the financial institutions that hold our cash and cash equivalents, as well as the credit quality of its insurance providers, customers, and key suppliers.

Due to the global nature of our operations, a portion of our cash is held outside the U.S. The cash and cash equivalents balance at December 31, 2019 included \$54.0 million held by our foreign subsidiaries. Cash and earnings of our foreign subsidiaries are generally used to finance our foreign operations and capital expenditures. We believe that our foreign holdings of cash will not have a material adverse impact on our U.S. liquidity. Management does not currently expect to repatriate cash earnings from our foreign operations in order to fund U.S. operations. If these earnings were distributed, such amounts would be subject to U.S. federal income tax at the statutory rate less the available foreign tax credits, if any, and potentially subject to withholding taxes in the various jurisdictions. The potential tax implications of the repatriation of unremitted earnings are driven by facts at the time of distribution, therefore, it is not practicable to estimate the income tax liabilities that might be incurred if such cash and earnings were repatriated to the U.S.

### Revolving Credit Facility and Term Loans

Refer to Note 11 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for a summary of our revolving credit facility and outstanding term loans.

### Other Potential Liquidity Needs

#### *Share Repurchases*

On February 20, 2017, the Board of Directors authorized the repurchase of up to \$100.0 million of our common stock. In addition, on November 1, 2018, the Board of Directors approved the authorization for the repurchase of up to an additional \$350.0 million of Ingevity's outstanding common stock. The repurchase program does not include a specific timetable or price targets and may be suspended or terminated at any time. Shares may be purchased through open market or privately negotiated transactions at the discretion of management based on its evaluation of market prevailing conditions and other factors.

During the year ended December 31, 2019, we repurchased \$6.4 million in common shares, representing 80,300 shares of our common stock at a weighted average cost per share of \$80.22. At December 31, 2019, \$389.5 million remained unused under our Board-authorized repurchase program. We record shares of common stock repurchased at cost as treasury stock, resulting in a reduction of stockholders' equity in the consolidated balance sheets. When the treasury shares are contributed under our employee benefit plans or issued for option exercises, we use a first-in, first-out ("FIFO") method for determining cost. The difference between the cost of the shares and the market price at the time of contribution to an employee benefit plan is added to or deducted from the related capital in excess of par value of common stock.

#### *Capital Expenditures*

Projected 2020 capital expenditures are expected to be \$95 million to \$105 million. We have no material commitments associated with these projected capital expenditures as of December 31, 2019.

**Cash flow comparison of Years Ended December 31, 2019, 2018, and 2017**

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Net cash provided by (used in) operating activities	\$ 275.7	\$ 252.0	\$ 174.3
Net cash provided by (used in) investing activities	(658.3)	(414.4)	(58.6)
Net cash provided by (used in) financing activities	369.2	153.7	(57.8)

**Cash flows provided by (used in) operating activities**

During the year ended December 31, 2019, cash flow provided by operations increased primarily due to higher earnings, partially offset by working capital increases compared to 2018. Working capital increases in 2019 when compared to 2018 are further explained below.

**Current Assets and Liabilities**

<i>In millions</i>	December 31,	
	2019	2018
Cash and cash equivalents	\$ 56.5	\$ 77.5
Accounts receivable, net	150.0	118.9
Inventories, net	212.5	191.4
Prepaid and other current assets	44.2	34.9
Total current assets	\$ 463.2	\$ 422.7

Current assets as of December 31, 2019, increased \$40.5 million compared to December 31, 2018, primarily due to increases in inventories and accounts receivable. Accounts receivable, net as of December 31, 2019, increased \$31.1 million, which includes \$13.2 million of receivables associated with the Caprolactone Acquisition. The increase to accounts receivables was partially due to the increase in fourth quarter sales year over year and delayed customer receivable collections at the end of 2019. Inventories, net also contributed to the overall increase in total current assets, primarily due to the inclusion of the Caprolactone Business' product inventory of \$14.3 million. See Note 17 in the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information on the Caprolactone Acquisition. Additionally, Prepaid and other current assets increased by \$9.3 million primarily related to the New Market Tax Credit transaction. See Note 11 in the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information.

<i>In millions</i>	December 31,	
	2019	2018
Accounts payable	\$ 99.1	\$ 92.9
Accrued expenses	33.3	36.7
Accrued payroll and employee benefits	28.2	42.0
Current operating lease liabilities	17.1	—
Notes payable and current portion of long-term debt	22.5	11.2
Income taxes payable	15.3	0.5
Total current liabilities	\$ 215.5	\$ 183.3

Current liabilities as of December 31, 2019, increased by \$32.2 million compared to December 31, 2018, driven primarily by the \$17.1 million increase in Current operating lease liabilities associated with adoption of the new lease accounting standard (see Notes 4 and 14 in the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information on the adoption and current lease balances). Also increasing current liabilities was an \$11.3 million increase in the current portion of long-term debt (see Note 11 in the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information on our debt balances) as well a \$14.8 million increase on our Income taxes payable. See Note 18 in the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information as it relates to income taxes and related balances. Offsetting the increases noted above was a decrease of

\$13.8 million in Accrued payroll and employee benefits, primarily related to lower accrued incentive costs in the current year as compared to the year ended December 31, 2018.

***Cash flows provided by (used in) investing activities***

The cash used in investing activities for the year ended December 31, 2019 was primarily driven by the \$537.9 million purchase of the Caprolactone Business (see Note 17 to the Consolidated Financial Statements Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information). The remaining cash used by investing activities was primarily driven by capital expenditures. See the table below for the capital expenditure spending by category.

The cash used in investing activities for the year ended December 31, 2018 was primarily driven by the \$315.5 million purchase of the Pine Chemical Business. The remaining cash used by investing activities was primarily driven by capital expenditures.

For the year ended December 31, 2019, capital spending was driven primarily by maintenance and growth spending. Our Covington, Virginia facility incurred expenditures for its expansion project, along with base maintenance and other various equipment purchases. Also, we incurred cost improvement spending at our DeRidder, Louisiana location related to installation of new CTO tanks as well as base maintenance spending, and our Waynesboro, Georgia location expended funds primarily for growth and cost improvement. We also invested capital spending in our newest location in Warrington, United Kingdom to enable further growth and cost improvement as well as base maintenance.

For the year ended December 31, 2018, capital spending included both growth and maintenance spending for expansion and specialized equipment at our Covington, Virginia, Waynesboro, Georgia, and Changshu, China facilities, as well as base maintenance spending to support ongoing operations across both segments. In addition, we expended funds for cost improvement related to CTO tanks at our DeRidder, Louisiana facility.

**Capital expenditure categories**

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Maintenance	\$ 44.6	\$ 41.1	\$ 30.3
Safety, health and environment	11.2	9.6	8.2
Growth and cost improvement	59.0	43.2	14.1
Total capital expenditures	<u>\$ 114.8</u>	<u>\$ 93.9</u>	<u>\$ 52.6</u>

***Cash flows provided by (used in) financing activities***

Cash provided by financing activities for the year ended December 31, 2019 was \$369.2 million, and was driven by proceeds from long-term borrowings from a new term loan in Q1 of 2019 of \$375.0 million and \$131.3 million in net borrowings related to our revolving credit facility (refer to Note 11 to the Consolidated Financial Statements Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information). This was offset by repayments of \$122.5 million on our long-term borrowings. Additionally, we made payments of \$14.3 million related to tax withholdings on vested equity awards.

Cash provided by financing activities for the year ended December 31, 2018 was \$153.7 million, and was driven by proceeds from long-term borrowings from the issuance of \$300.0 million Senior Notes (refer to Note 11 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information), offset by our purchase of the remaining portion of our joint venture with Purification Cellutions, LLC of \$80.0 million (refer to Note 13 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information), \$47.4 million to repurchase shares according the publicly announced share repurchase program (also refer to Note 13 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information), and noncontrolling interest distributions of \$15.3 million.

Cash used by financing activities for the year ended December 31, 2017 was \$57.8 million, and was driven by net repayments of \$111.9 million, noncontrolling interest distributions of \$12.3 million, and \$6.6 million to repurchase shares according to the publicly announced share repurchase program.

## Off-Balance Sheet Arrangements

Ingevity is not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on Ingevity's financial condition, results of operations or cash flows.

### Contractual Obligations

We enter into various contractual obligations throughout the year. Presented below are the contractual obligations of Ingevity as of December 31, 2019, and the time period in which payments under the obligations are due. Included below are disclosures regarding the amounts due under purchase obligations. A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on Ingevity and that specifies all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. We have included in the below disclosure all normal and recurring purchase orders, take-or-pay contracts and supply arrangements as well as other purchase commitments that management believes meet the above definition of a purchase obligation. See Note 11 and Note 14 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information.

<i>In millions</i>	Payments due in period				
	Total at December 31, 2019	2020	2021-2022	2023-2024	2025 and beyond
Contractual obligations					
Debt maturities	\$ 1,177.8	\$ 22.5	\$ 414.6	\$ 440.7	\$ 300.0
Contractual interest <sup>(1)</sup>	155.9	36.6	65.8	33.2	20.3
Finance lease obligations <sup>(2)</sup>	125.9	6.1	12.2	12.2	95.4
Operating lease obligations	60.7	19.4	26.0	10.3	5.0
Purchase obligations	191.1	191.1	—	—	—
<b>Total</b>	<b>\$ 1,711.4</b>	<b>\$ 275.7</b>	<b>\$ 518.6</b>	<b>\$ 496.4</b>	<b>\$ 420.7</b>

(1) Contractual interest is the interest we are contracted to pay on our long-term debt obligations. We had \$871.9 million of long-term debt subject to variable interest rates at December 31, 2019 and \$305.9 million of debt subject to fixed interest rates. The rate assumed for the variable interest component of the contractual interest obligation was the rate in effect at December 31, 2019. Variable rates are determined by the market and will fluctuate over time.

(2) Amounts include the interest payments under the finance lease as well as the principal payment due in 2027.

### New Accounting Guidance

Refer to the Note 4 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for a full description of recent accounting pronouncements including the respective expected dates of adoption and expected effects on our Consolidated Financial Statements.

### Critical Accounting Policies

Our principal accounting policies are described in Note 3 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K. Our Consolidated Financial Statements are prepared in conformity with GAAP. The preparation of our financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. We have reviewed these accounting policies, identifying those that we believe to be critical to the preparation and understanding of our financial statements. Critical accounting policies are central to our presentation of results of operations and financial condition and require management to make estimates and judgments on certain matters. We base our estimates and judgments on historical experience, current conditions and other reasonable factors.

The following is a list of those accounting policies that we have deemed most critical to the presentation and understanding of our results of operations and financial condition:

### *Revenue recognition and Accounts receivables*

In May 2014, the Financial Accounting Standard Board ("FASB") issued ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)," which supersedes both the revenue recognition requirement to ASC 605 "Revenue Recognition" and most industry-specific guidance. The core principle of the new standard (ASC 606) is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity must also disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including qualitative and quantitative information about contracts with customers, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. In 2016 and 2017, the FASB issued several ASUs that provided additional clarity on numerous topics as well as providing technical corrections to ASU 2014-09. We adopted this new standard on January 1, 2018, utilizing the modified retrospective method applied to those contracts, which were not completed as of that date. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be presented in accordance with our historic accounting under ASC 605.

Substantially all our revenue is recognized when products are shipped from our manufacturing and warehousing facilities, which represents the point at which control is transferred to the customer. For certain limited contracts, where we are producing goods with no alternative use and for which we have an enforceable right to payment for performance completed to date, we are recognizing revenue as goods are manufactured, rather than when they are shipped.

Sales net of returns and customer incentives are based on the sale of manufactured products. Net sales are recognized when obligations under the terms of a contract with our customer are satisfied; generally, this occurs with the transfer of control of our products. Since net sales are derived from product sales only, we have disaggregated our net sales by our product lines within each reportable segment. Net sales are measured as the amount of consideration we expect to receive in exchange for transferring goods. Sales, value add, and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. Sales returns and allowances are not a normal practice in the industry and are not significant. Certain customers may receive cash-based incentives, including discounts and volume rebates, which are accounted for as variable consideration and included in Net sales. Shipping and handling fees billed to customers continue to be included with Net sales. If we pay for the freight and shipping, we recognize the cost when control of the product has transferred to the customer as an expense in Cost of sales on the consolidated statement of operations. Although very rare, from time to time we incur expenses to obtain a sales contract. In these cases, if these costs are for orders that are fulfilled in one year or less, we expense these costs as they are incurred. Because the period between when we transfer a promised good to a customer and when the customer pays for that good will be one year or less, we elect not to adjust the promised amount of consideration for the effects of any financing component, as it is not significant.

Accounts receivables consist of amounts owed to Ingevity from customer sales and are recorded at the invoiced amounts when revenue is recognized and generally do not bear interest. The allowance for doubtful accounts is our best estimate of the amount of probable loss in the existing accounts receivable. We determine the allowance based on historical write-off experience, current collection trends, and external business factors such as economic factors, including regional bankruptcy rates, and political factors. Past due balances over a specified amount are reviewed individually for collectability. Account balances are charged off against the allowance when it is probable that the receivable will not be recovered.

### *Valuation of tangible and intangible long-lived assets and goodwill*

Our long-lived assets primarily include property, plant and equipment and other intangible assets. We periodically evaluate whether current events or circumstances indicate that the carrying value of long-lived assets to be held and used may not be recoverable. If such circumstances are determined to exist, an estimate of undiscounted future cash flows produced by the long-lived asset, or the appropriate grouping of assets, is compared to carrying value to determine whether an impairment exists.

If an asset is determined to be impaired, the loss is measured based on quoted market prices in active markets, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques, including a discounted value of estimated future cash flows. We report an asset to be disposed of at the lower of its carrying value or its estimated net realizable value.

Goodwill represents the excess of cost of an acquired business over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. We review the recorded value of goodwill at least annually at October 1, or sooner if events or changes in circumstances indicate that the fair value of a reporting unit is below its carrying value. A reporting unit is the level at which discrete financial information is available and reviewed by business management on a regular basis. An impairment exists when the carrying value of a reporting unit exceeds its fair value. Our reporting units are our operating segments, i.e. Performance Chemicals and Performance Materials. If an indication exists that the fair value of a reporting unit with goodwill is less than its carrying value, a quantitative goodwill impairment test is performed. The fair value of each reporting unit is estimated primarily using an income approach, specifically the discounted cash flow method. The following assumptions are key to the income approach: 1) cash flow and earnings projections; 2) growth rates; 3) discount rates; 4) income tax rates; and, 5) terminal value rates.

The factors we considered in developing our estimates and projections for cash flows and earnings include, but are not limited to, the following: (i) macroeconomic conditions; (ii) industry and market considerations; (iii) costs, such as increases in raw materials, labor, or other costs; (iv) our overall financial performance; and, (v) other relevant entity-specific events that impact our reporting units. The discount rate we used represents the weighted average cost of capital for the reporting units, considering the risks and uncertainty inherent in the cash flows of the reporting units and in our internally-developed forecasts.

The determination of whether goodwill is impaired involves a significant level of judgment in the assumptions underlying the approach used to determine the estimated fair values of our reporting units. We believe that the assumptions and rates used in our impairment assessment are reasonable; however, these assumptions are judgmental and variations in any assumptions could result in materially different calculations of fair value. We will continue to evaluate goodwill on an annual basis as of October 1, and whenever events or changes in circumstances, such as significant adverse changes in operating results, market conditions, or changes in management's business strategy indicate that there may be a probable indicator of impairment. It is possible that the assumptions used by management related to the evaluation may change or that actual results may vary significantly from management's estimates.

#### *Business Combinations*

We account for business combinations in accordance with ASC 805 "Business Combinations" which requires, among other things, the acquiring entity in a business combination to recognize the fair value of the assets acquired and liabilities assumed; the recognition of acquisition-related costs in the consolidated results of operations; the recognition of restructuring costs in the consolidated results of operations for which the acquirer becomes obligated after the acquisition date; and contingent purchase consideration to be recognized at fair value on the acquisition date with subsequent adjustments recognized in the consolidated results of operations. We generally use third party qualified consultants to assist management in determination of the fair value of assets acquired and liabilities assumed. This includes, when necessary, assistance with the determination of lives and valuation of property and identifiable intangibles, assisting management in determining the fair value of obligations associated with employee related liabilities and assisting management in assessing obligations associated with legal and environmental claims.

The fair values assigned to identifiable intangible assets acquired are determined primarily by using an income approach, which is based on assumptions and estimates made by management. Significant assumptions utilized in the income approach are the attrition rate, growth rates and discount rate. These assumptions are based on company specific information and projections, which are not observable in the market and are therefore considered Level 2 and Level 3 measurements. The excess of the purchase price over the fair value of the identified assets and liabilities is recorded as goodwill. Based on the acquired business' end markets and products as well as how the chief operating decision maker will review the business results determines the most appropriate operating segment for which to integrate the acquired business. Goodwill acquired, if any, is allocated to the reporting unit within or at the operating segment for which the acquired business will be integrated. Operating results of the acquired entity are reflected in the Consolidated Financial Statements from date of acquisition.

#### *Income taxes*

We are subject to income taxes in the United States and numerous foreign jurisdictions, including China and the United Kingdom. The provision for income taxes includes income taxes paid, currently payable or receivable, and deferred taxes. We follow the liability method of accounting for income taxes in accordance with current accounting standards regarding the accounting for income taxes. Under this method, deferred income taxes are recorded based upon the differences between the

financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws in effect at the time the underlying assets or liabilities are recovered or settled. The ability to realize deferred tax assets is evaluated through the forecasting of taxable income, historical and projected future operating results, the reversal of existing temporary differences, and the availability of tax planning strategies. Valuation allowances are recognized to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. We do not provide income taxes on undistributed earnings of consolidated foreign subsidiaries as it is our intention that such earnings will remain invested in those companies.

We recognize income tax positions that are more likely than not to be realized and accrue interest related to unrecognized income tax positions, which is included as a component of the income tax provision, on the consolidated statements of operations.

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

### ***Foreign currency***

We have foreign-based operations, primarily in Europe, South America and Asia, which accounted for approximately 22 percent of our net sales in 2019. Ingevity's significant operations outside the U.S. have designated the local currency as their functional currency. The primary currencies for which we have exchange rate exposure are the U.S. dollar versus the euro, the Japanese yen, the pound sterling, and the Chinese renminbi. In addition, certain of our domestic operations have sales to foreign customers. In the conduct of our foreign operations, we also make inter-company sales. All of this exposes us to the effect of changes in foreign currency exchange rates. Our earnings are therefore subject to change due to fluctuations in foreign currency exchange rates when the earnings in foreign currencies are translated into U.S. dollars. During 2017, we began hedging this foreign currency exchange rate risk. Foreign exchange forward contracts are used to hedge firm and highly anticipated foreign currency cash flows. The U.S. dollar versus the euro is our most significant foreign currency exposure. A hypothetical 10 percent change in the average euro to U.S. dollar exchange rate during the year ended December 31, 2019, would have changed our net sales and income before income taxes by approximately \$12 million or one percent and \$4 million or two percent, respectively.

### ***Concentration of credit risk***

The financial instruments that potentially subject Ingevity to concentrations of credit risk are accounts receivable. We limit our credit risk by performing ongoing credit evaluations and, when necessary, requiring letters of credit, guarantees or collateral. We had accounts receivable from our largest customer of \$8.3 million and \$11.7 million as of December 31, 2019 and 2018, respectively. Sales to this customer, which are included in the Performance Materials segment, were six percent of total net sales for each of the years ended December 31, 2019, 2018, and 2017. No customers individually accounted for greater than 10 percent of the Ingevity's consolidated net sales.

### ***Commodity price risk***

A portion of our manufacturing costs include purchased raw materials, which are commodities whose prices fluctuate as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to fluctuate with the changes in these commodity prices. The cost of energy is a manufacturing cost that is exposed to commodity pricing. Our energy costs are diversified among electricity, steam and natural gas, with natural gas comprising our largest energy input.

### *Crude oil price risk*

Our results of operations are directly affected by the cost of our raw materials, particularly CTO, which is approximately 10 percent of all of our cost of sales and 32 percent of our raw materials purchases for the year ended December 31, 2019. Pricing for CTO is subject to particular pricing pressures by reasons of the limited supply elasticity of the product and competing demands for its use, both of which drive pressure on price. Our gross profit and margins could be adversely affected by changes in the cost of CTO if we are unable to pass the increases on to our customers. CTO is a thinly traded commodity with pricing commonly established for periods ranging from one quarter to one year periods of time. We try to protect against such pricing fluctuations through various business strategies. Based on average pricing during the year ended December 31, 2019, a hypothetical unhedged, unfavorable 10 percent change in the market price for CTO would have resulted in additional costs of sales of approximately \$8 million or one percent, which we may or may not have been able to pass on to our customers.

### *Natural gas price risk*

Natural gas is our largest form of energy purchases constituting approximately two percent of our cost of goods sold for the year ended December 31, 2019. Increases in natural gas costs, unless passed on to our customers, would adversely affect our results of operations. If natural gas prices increase significantly, our business or results of operations may be adversely affected. In December 2017, we entered into certain derivative financial instruments in order to mitigate expected fluctuations in market prices and the volatility to earnings and cash flow resulting from changes to pricing of natural gas purchases. Refer to the Note 10 to the Consolidated Financial Statements included within Part II. Item 8 of this Form 10-K for more information on our natural gas price risk hedging program. For the year ended December 31, 2019, a hypothetical, unhedged 10 percent increase in natural gas pricing would have resulted in an increase to cost of sales of approximately \$1.6 million or two percent. As of December 31, 2019, we had 1.1 million and 0.3 million mmBTUS (millions of British Thermal Units) in aggregate notional volume of outstanding natural gas commodity swap contracts and zero cost collar option contracts, respectively, designated as cash flow hedges. As of December 31, 2019, open commodity contracts hedge forecasted transactions until May 2020. The fair value of the outstanding designated natural gas commodity hedge contracts as of December 31, 2019 was a liability of \$0.5 million.

### ***Interest Rate Risk***

As of December 31, 2019, approximately \$872 million of our borrowings include a variable interest rate component. As a result, we are subject to interest rate risk with respect to such floating-rate debt. A 100 basis point increase in the variable interest rate component of our borrowings would increase our annual interest expense by approximately \$9 million or 19 percent.

In the second quarter of 2019, we entered into a floating-to-fixed interest rate swap for an initial aggregate notional amount of \$141.3 million to limit exposure to interest rate increases related to a portion of our floating rate indebtedness. This swap agreement hedges a portion of contractual floating rate interest through its expiration in July 2023. As a result, our effective fixed interest rate on the notional amount floating rate indebtedness will be 3.96% through May 2021. The fair value of this instrument at December 31, 2019 was a liability of \$3.9 million.



## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

### INDEX TO THE FINANCIAL STATEMENTS

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**Ingevity Corporation**  
**Management's Report on Internal Control over Financial Reporting**

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. 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 GAAP. 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 authorization of management and directors of the Company; and
- iii. provide reasonable assurance regarding prevention or timely detection of unauthorized acquisitions, use or disposition of the Company's assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, based on criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework* (2013). Based on its assessment and those criteria, management concluded that the Company maintained effective internal control over financial reporting as of December 31, 2019. Our assessment of the effectiveness of internal control over financial reporting as of December 31, 2019 did not include the internal controls at our Ingevity UK Ltd. legal entity, as permitted by Securities and Exchange Commission guidelines that allow companies to exclude certain acquisitions from their assessment of internal control over financial reporting during the first year following an acquisition. Ingevity UK Ltd. is the legal entity that owns the acquired net assets of the Caprolactone Business that we acquired on February 13, 2019. Six percent and nine percent of Ingevity's consolidated total assets and consolidated revenues, associated with Ingevity UK Ltd., as of and for the year ended December 31, 2019, were excluded from management's assessment of internal control over financial reporting.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, as stated in their report, which is presented on the following page.

Date: February 26, 2020

By: \_\_\_\_\_  
/S/ RICHARD B. KELSON  
**Richard B. Kelson**  
Chairman of the Board, and Interim President and  
Chief Executive Officer

\_\_\_\_\_  
/S/ JOHN C. FORTSON  
**John C. Fortson**  
Executive Vice President and Chief Financial Officer

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Ingevity Corporation

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets of Ingevity Corporation and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income (loss), stockholders’ equity and cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the index appearing under item 15(a)ii (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

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

### ***Change in Accounting Principle***

As discussed in Note 4 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 the accompanying Management’s Report on Internal Control over Financial Reporting. 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.

As described in Management’s Report on Internal Control over Financial Reporting, management has excluded the Ingevity UK Ltd. legal entity, which holds the net assets acquired from Perstorp Holding AB’s Caprolactone Business, from its assessment of internal control over financial reporting as of December 31, 2019 because the Caprolactone Business was acquired by the Company in a purchase business combination during 2019. We have also excluded Ingevity UK Ltd. from our audit of internal control over financial reporting. Ingevity UK Ltd. is a wholly-owned subsidiary whose total assets and total revenues excluded from management’s assessment and our audit of internal control over financial reporting represent 6% and 9%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2019.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally

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

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

### ***Critical Audit Matters***

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

#### *Valuation of Customer Relationships Intangible Asset – Perstorp Holding AB's Caprolactone Business Acquisition*

As described in Note 17 to the consolidated financial statements, the Company completed the acquisition of Perstorp Holding AB's Caprolactone Business on February 13, 2019 for an aggregate purchase price of \$652.5 million, less assumed debt of \$113.1 million. One of the most significant assets recorded was \$159 million related to a customer relationships intangible asset. The fair values assigned to the customer relationships intangible asset acquired was determined by using a multi-period excess earnings model. Significant assumptions utilized in the model are the attrition rate, revenue growth rates, and the discount rate.

The principal considerations for our determination that performing procedures relating to the valuation of the customer relationships intangible asset acquired as part of the Perstorp Holdings AB's Caprolactone Business acquisition is a critical audit matter are (i) there was a high degree of auditor judgment and subjectivity in applying our procedures related to the fair value measurement of the customer relationships intangible asset acquired due to the significant judgment by management when developing the estimate; (ii) significant audit effort was required in evaluating the significant assumptions relating to the valuation of the customer relationships intangible asset, including the attrition rate, revenue growth rates, and the discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the acquisition accounting, including controls over management's valuation of the customer relationships intangible asset and the development of the assumptions related to the valuation of the customer relationships intangible asset, including the attrition rate, revenue growth rates, and the discount rate. These procedures also included, among others (i) reading the purchase agreement; (ii) testing management's process for estimating the fair value of customer relationships intangible asset; and (iii) testing the completeness and accuracy of the underlying data used in the model. Testing management's process included evaluating the appropriateness of the valuation model and the reasonableness of significant assumptions, including the attrition rate, revenue growth rates and the discount rate. Evaluating the reasonableness of the attrition rate and revenue growth rates involved considering the past performance of the acquired Perstorp Holdings AB's Caprolactone Business and 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 evaluating significant assumptions, including the discount rate and the attrition rate. The discount rate was evaluated by considering the cost of capital of comparable businesses and other industry factors.

/s/ PricewaterhouseCoopers LLP

Charlotte, North Carolina  
February 26, 2020

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

**INGEVITY CORPORATION**  
**Consolidated Statements of Operations**

<i>In millions, except per share data</i>	Years Ended December 31,		
	2019	2018	2017
Net sales	\$ 1,292.9	\$ 1,133.6	\$ 972.4
Cost of sales	810.9	716.8	643.4
Gross profit	482.0	416.8	329.0
Selling, general and administrative expenses	163.1	132.4	106.4
Research and technical expenses	19.7	21.5	19.8
Separation costs	—	—	0.9
Restructuring and other (income) charges, net	1.8	(0.5)	3.7
Acquisition-related costs	26.9	10.8	7.1
Other (income) expense, net	(4.3)	1.0	0.5
Interest expense	54.6	33.2	18.1
Interest income	(7.7)	(3.4)	(2.3)
Income (loss) before income taxes	227.9	221.8	174.8
Provision (benefit) for income taxes	44.2	40.0	29.6
Net income (loss)	183.7	181.8	145.2
Less: Net income (loss) attributable to noncontrolling interests	—	12.7	18.7
Net income (loss) attributable to Ingevity stockholders	<u>\$ 183.7</u>	<u>\$ 169.1</u>	<u>\$ 126.5</u>
Per share data			
Basic earnings (loss) per share attributable to Ingevity stockholders	\$ 4.39	\$ 4.02	\$ 3.00
Diluted earnings (loss) per share attributable to Ingevity stockholders	4.35	3.97	2.97

*The accompanying notes are an integral part of these financial statements.*

**INGEVITY CORPORATION**  
**Consolidated Statements of Comprehensive Income (Loss)**

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Net income (loss)	\$ 183.7	\$ 181.8	\$ 145.2
Other comprehensive income (loss), net of tax:			
Foreign currency adjustments:			
Foreign currency translation adjustment	15.6	(6.3)	8.3
Unrealized gain (loss) on net investment hedges, net of tax provision (benefit) of \$0.7, zero, and zero	2.3	—	—
Total foreign currency adjustments, net of tax provision (benefit) of \$0.7, zero, and zero	17.9	(6.3)	8.3
Derivative instruments:			
Unrealized gain (loss), net of tax provision (benefit) of (\$1.1), \$0.4, and zero	(3.7)	1.3	(0.1)
Reclassifications of deferred derivative instruments (gain) loss, included in net income (loss), net of tax (provision) benefit of (\$0.1), (\$0.3), and zero	(0.2)	(0.9)	0.1
Total derivative instruments, net of tax provision (benefit) of (\$1.2), \$0.1, and zero	(3.9)	0.4	—
Pension & other postretirement benefits:			
Unrealized actuarial gains (losses) and prior service (costs) credits, net of tax provision (benefit) of (\$0.4), (\$0.1), and (\$0.4)	(1.4)	(0.3)	(0.7)
Reclassifications of net actuarial and other (gain) loss, amortization of prior service cost, and settlement and curtailment (income) charges, included in net income, net of tax (provision) benefit of zero, \$0.1, and zero	0.1	0.2	—
Total pension and other postretirement benefits, net of tax provision (benefit) of (\$0.4), zero, and (\$0.4)	(1.3)	(0.1)	(0.7)
Other comprehensive income (loss), net of tax provision (benefit) of (\$0.9), \$0.1, and (\$0.4)	12.7	(6.0)	7.6
Comprehensive income (loss)	196.4	175.8	152.8
Less: Comprehensive income (loss) attributable to noncontrolling interests	—	12.7	18.7
Comprehensive income (loss) attributable to the Ingevity stockholders	<u>\$ 196.4</u>	<u>\$ 163.1</u>	<u>\$ 134.1</u>

*The accompanying notes are an integral part of these financial statements.*

**INGEVITY CORPORATION**  
**Consolidated Balance Sheets**

<i>In millions, except share and par value data</i>	December 31,	
	2019	2018
<b>Assets</b>		
Cash and cash equivalents	\$ 56.5	\$ 77.5
Accounts receivable, net of allowance of \$0.5 at 2019 and \$0.4 at 2018	150.0	118.9
Inventories, net	212.5	191.4
Prepaid and other current assets	44.2	34.9
Current assets	463.2	422.7
Property, plant and equipment, net	664.7	523.8
Operating lease assets, net	53.4	—
Goodwill	436.4	130.7
Other intangibles, net	396.2	125.6
Deferred income taxes	5.0	2.9
Restricted investment	72.6	71.2
Other assets	50.2	38.3
Total Assets	\$ 2,141.7	\$ 1,315.2
<b>Liabilities</b>		
Accounts payable	\$ 99.1	\$ 92.9
Accrued expenses	33.3	36.7
Accrued payroll and employee benefits	28.2	42.0
Current operating lease liabilities	17.1	—
Notes payable and current maturities of long-term debt	22.5	11.2
Income taxes payable	15.3	0.5
Current liabilities	215.5	183.3
Long-term debt including finance lease obligations	1,228.4	741.2
Noncurrent operating lease liabilities	36.7	—
Deferred income taxes	100.3	36.9
Other liabilities	30.0	15.1
Total Liabilities	1,610.9	976.5
Commitments and contingencies (Note 19)		
<b>Equity</b>		
Preferred stock (par value \$0.01 per share; 50,000,000 shares authorized; zero issued and outstanding at 2019 and 2018)	—	—
Common stock (par value \$0.01 per share; 300,000,000 shares authorized; 42,675,171 and 42,331,913 issued and 41,826,136 and 41,693,261 outstanding at 2019 and 2018, respectively)	0.4	0.4
Additional paid-in capital	112.8	98.3
Retained earnings	497.2	313.5
Accumulated other comprehensive income (loss)	(5.0)	(17.7)
Treasury stock, common stock, at cost (849,035 and 638,652 shares at 2019 and 2018 respectively)	(74.6)	(55.8)
Total Equity	530.8	338.7
Total Liabilities and Equity	\$ 2,141.7	\$ 1,315.2

*The accompanying notes are an integral part of these financial statements.*

**INGEVITY CORPORATION**  
**Consolidated Statements of Stockholders' Equity**

	Ingevity Stockholders'							Total Equity
	Common Stock		Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Treasury stock	Noncontrolling interests	
	Shares	Amount						
<i>In millions, shares in thousands</i>								
Balance at December 31, 2016	42,116.4	\$ 0.4	\$ 129.9	\$ 16.0	\$ (19.0)	\$ (0.3)	\$ 7.6	\$ 134.6
Net income (loss)	—	—	—	126.5	—	—	18.7	145.2
Other comprehensive income (loss)	—	—	—	—	7.6	—	—	7.6
Common stock issued	85.9	—	—	—	—	—	—	—
Exercise of stock options, net	6.6	—	0.2	—	—	—	—	0.2
Tax payments related to vested restricted stock units	—	—	—	—	—	(1.2)	—	(1.2)
Share repurchase program	—	—	—	—	—	(6.6)	—	(6.6)
Noncontrolling interest distributions	—	—	—	—	—	—	(12.3)	(12.3)
Share-based compensation plans	—	—	10.0	—	—	0.4	—	10.4
Reclassification of certain deferred tax effects	—	—	—	0.3	(0.3)	—	—	—
Balance at December 31, 2017	42,208.9	\$ 0.4	\$ 140.1	\$ 142.8	\$ (11.7)	\$ (7.7)	\$ 14.0	\$ 277.9
Net income (loss)	—	—	—	169.1	—	—	12.7	181.8
Other comprehensive income (loss)	—	—	—	—	(6.0)	—	—	(6.0)
Common stock issued	116.7	—	—	—	—	—	—	—
Exercise of stock options, net	6.3	—	0.2	—	—	—	—	0.2
Tax payments related to vested restricted stock units	—	—	—	—	—	(2.5)	—	(2.5)
Share repurchase program	—	—	—	—	—	(47.4)	—	(47.4)
Noncontrolling interest distributions	—	—	—	—	—	—	(15.3)	(15.3)
Share-based compensation plans	—	—	12.3	—	—	1.8	—	14.1
Adoption of accounting standard	—	—	—	1.6	—	—	—	1.6
Acquisition of noncontrolling interest	—	—	(54.3)	—	—	—	(11.4)	(65.7)
Balance at December 31, 2018	42,331.9	\$ 0.4	\$ 98.3	\$ 313.5	\$ (17.7)	\$ (55.8)	\$ —	\$ 338.7
Net income (loss)	—	—	—	183.7	—	—	—	183.7
Other comprehensive income (loss)	—	—	—	—	12.7	—	—	12.7
Common stock issued	283.3	—	—	—	—	—	—	—
Exercise of stock options, net	60.0	—	1.7	—	—	—	—	1.7
Tax payments related to vested restricted stock units	—	—	—	—	—	(14.3)	—	(14.3)
Share repurchase program	—	—	—	—	—	(6.4)	—	(6.4)
Noncontrolling interest distributions	—	—	—	—	—	—	—	—
Share-based compensation plans	—	—	12.8	—	—	1.9	—	14.7
Balance at December 31, 2019	42,675.2	\$ 0.4	\$ 112.8	\$ 497.2	\$ (5.0)	\$ (74.6)	\$ —	\$ 530.8

*The accompanying notes are an integral part of these financial statements.*



**INGEVITY CORPORATION**  
**Consolidated Statements of Cash Flows**

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<b>Cash provided by (used in) operating activities:</b>			
Net income (loss)	\$ 183.7	\$ 181.8	\$ 145.2
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Depreciation and amortization	85.0	57.0	40.4
Deferred income taxes	14.8	0.9	(25.7)
Disposal/impairment of assets	1.4	0.9	2.2
Restructuring and other (income) charges, net	2.2	0.1	3.7
Share-based compensation	12.3	12.5	10.1
Pension and other postretirement benefit costs	1.5	2.0	1.3
Other non-cash items	10.1	15.9	7.3
Changes in operating assets and liabilities, net of effect of acquisitions:			
Accounts receivable, net	(15.3)	(3.0)	(9.5)
Inventories, net	0.5	(26.9)	(6.6)
Prepaid and other current assets	0.1	(6.8)	6.5
Planned major maintenance outage	(8.4)	(7.0)	(6.1)
Accounts payable	(6.2)	5.7	1.7
Accrued expenses	(5.9)	13.1	1.6
Accrued payroll and employee benefits	(14.4)	3.0	13.4
Income taxes	14.7	5.0	(7.3)
Pension contribution	—	(1.6)	(1.4)
Changes in all other operating assets and liabilities, net	(0.4)	(0.6)	(2.5)
Net cash provided by (used in) operating activities	\$ 275.7	\$ 252.0	\$ 174.3
<b>Cash provided by (used in) investing activities:</b>			
Capital expenditures	(114.8)	(93.9)	(52.6)
Payments for acquired businesses, net of cash acquired	(537.9)	(315.5)	—
Purchase of equity securities	—	—	(2.4)
Sale of equity securities	—	1.1	1.0
Restricted investment	(2.0)	(2.0)	(1.6)
Other investing activities, net	(3.6)	(4.1)	(3.0)
Net cash provided by (used in) investing activities	\$ (658.3)	\$ (414.4)	\$ (58.6)

*The accompanying notes are an integral part of these financial statements.*

**INGEVITY CORPORATION**  
**Consolidated Statements of Cash Flows (continued)**

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<b>Cash provided by (used in) financing activities:</b>			
Proceeds from revolving credit facility	797.7	—	156.4
Proceeds from long-term borrowings	375.0	300.0	75.0
Payments on revolving credit facility	(666.4)	—	(268.3)
Payments on long-term borrowings	(122.5)	—	—
Debt issuance costs	(2.4)	(7.1)	(1.3)
Borrowings (repayments) of notes payable and other short-term borrowings, net	2.1	3.9	—
Tax payments related to withholdings on vested equity awards	(14.3)	(2.5)	(1.2)
Proceeds and withholdings from share-based compensation plans, net	4.1	2.1	0.5
Repurchases of common stock under publicly announced plan	(6.4)	(47.4)	(6.6)
Acquisition of noncontrolling interest	—	(80.0)	—
Noncontrolling interest distributions	—	(15.3)	(12.3)
Other financing activities, net	2.3	—	—
Net cash provided by (used in) financing activities	<u>\$ 369.2</u>	<u>\$ 153.7</u>	<u>\$ (57.8)</u>
Increase (decrease) in cash, cash equivalents, and restricted cash	(13.4)	(8.7)	57.9
Effect of exchange rate changes on cash	0.2	(1.4)	(0.5)
Change in cash, cash equivalents, and restricted cash	(13.2)	(10.1)	57.4
Cash, cash equivalents, and restricted cash at beginning of period	77.8	87.9	30.5
Cash, cash equivalents, and restricted cash at end of period <sup>(1)</sup>	<u>\$ 64.6</u>	<u>\$ 77.8</u>	<u>\$ 87.9</u>

(1) Includes restricted cash of \$8.1 million, \$0.3 million, and zero and cash and cash equivalents of \$56.5 million, \$77.5 million, and \$87.9 million for the years ended December 31, 2019, 2018, and 2017, respectively. Restricted cash is included within "Prepaid and other current assets" within the consolidated balance sheets.

**Supplemental cash flow information:**

Cash paid for interest, net of capitalized interest	\$ 48.0	\$ 26.0	\$ 16.0
Cash paid for income taxes, net of refunds	14.9	34.8	61.9
Purchases of property, plant and equipment in accounts payable	7.6	8.9	5.1
Leased assets obtained in exchange for new finance lease liabilities	—	—	—
Leased assets obtained in exchange for new operating lease liabilities	5.3	—	—

*The accompanying notes are an integral part of these financial statements.*

**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2019**

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**Ingevity Corporation**  
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**Note 1: Background**

Ingevity Corporation ("Ingevity," "the company," "we," "us" or "our") is a leading global manufacturer of specialty chemicals and high performance activated carbon materials. We provide innovative solutions to meet our customers' unique and demanding requirements through proprietary formulated products. We report in two business segments: Performance Materials and Performance Chemicals.

Our Performance Materials segment consists of our automotive technologies and process purifications product lines. Performance Materials manufactures products in the form of powder, granular, extruded pellets, extruded honeycombs, and activated carbon sheets. Automotive technologies products are sold into the gasoline vapor emission control applications within the automotive industry, while process purifications products are sold into the food, water, beverage, and chemical purification industries.

Our Performance Chemicals segment consists of our pavement technologies, oilfield technologies, industrial specialties, and engineered polymers (acquired in 2019; see Note 17 for more information) product lines. Performance Chemicals manufactures products derived from CTO and lignin extracted from the kraft paper making process as well as caprolactone monomers and derivatives derived from cyclohexanone and hydrogen peroxide. Performance Chemicals products serve as critical inputs used in a variety of high performance applications, including pavement preservation, pavement adhesion promotion, and warm mix paving (pavement technologies product line), oil well service additives, oil production, and downstream application chemicals (oilfield technologies product line), printing inks, adhesives, agrochemicals, lubricants, and industrial intermediates (industrial specialties product line), coatings, resins, elastomers, adhesives, and bio-plastics (engineered polymers product line).

**Note 2: Basis of Consolidation and Presentation**

The accompanying Consolidated Financial Statements of Ingevity were prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). The significant accounting policies described in Note 3, together with the other notes that follow, are an integral part of the Consolidated Financial Statements.

The Consolidated Financial Statements include the accounts of Ingevity and subsidiaries in which a controlling interest is maintained. If Ingevity's ownership is less than 100 percent, the outside stockholders' interests are shown as noncontrolling interests. In 2018 and 2017, our noncontrolling interest represented the 30 percent ownership interest held by a third-party U.S. based company in our consolidated Purification Cellutions, LLC legal entity, now known as Ingevity Georgia, LLC. See Note 13 for information regarding our acquisition of the 30 percent interest in Purification Cellutions, LLC on August 1, 2018.

**Note 3: Summary of Significant Accounting Policies**

*Estimates and assumptions:* We are required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results are likely to differ from those estimates, but we do not believe such differences will materially affect our financial position, results of operations or cash flows.

*Cash equivalents:* Highly liquid securities with an original maturity of three months or less are considered to be cash equivalents.

*Accounts receivable and allowance for doubtful accounts:* Accounts receivable, net on the consolidated balance sheets are comprised of trade receivables less allowances for doubtful accounts. Trade receivables consist of amounts owed to Ingevity from customer sales and are recorded at the invoiced amounts when revenue is recognized and generally do not bear interest. The allowance for doubtful accounts is our best estimate of the amount of probable loss in the existing accounts receivable. We determine the allowance based on historical write-off experience, current collection trends, and external business factors such as economic factors, including regional bankruptcy rates, and political factors. Past due balances over a specified amount are reviewed individually for collectability. Account balances are charged off against the allowance when it is probable that the receivable will not be recovered. Allowance for doubtful accounts at December 31, 2019 and 2018, was \$0.5 million and \$0.4 million, respectively.

**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
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*Concentration of credit risk:* The financial instruments that potentially subject Ingevity to concentrations of credit risk are accounts receivable. We limit our credit risk by performing ongoing credit evaluations and, when necessary, requiring letters of credit, guarantees or collateral. We had accounts receivable from our largest customer of \$8.3 million and \$11.7 million as of December 31, 2019 and 2018, respectively. Sales to this customer, which are included in the Performance Materials segment, were six percent of total net sales for each of the years ended December 31, 2019, 2018, and 2017. No customers individually accounted for greater than 10 percent of Ingevity's consolidated Net sales.

*Inventories, net:* Inventories held in the U.S. are valued at lower of cost or market. The value of our U.S. inventories is determined using the last-in, first-out method ("LIFO") for substantially all raw materials, finished goods and production materials. Cost of all other inventories, including stores and supplies inventories and inventories of non-U.S. operations, is determined by the first-in, first-out ("FIFO") or average costs methods and are held at either lower of cost or net realizable value. Elements of cost in inventories include raw materials, direct labor, and manufacturing overhead. We routinely assess inventory for both potential obsolescence and potential declines in anticipated selling prices, to derive a market value for the inventory on hand. This review also includes an analysis of potentially obsolete, unmarketable, slow moving, or overvalued inventory. If necessary, we will impair any inventories by an amount equal to the difference between the value of the held inventory (i.e. cost) and its estimated net realizable value for FIFO and average cost inventories, and market value for LIFO inventories.

*Property, plant, and equipment:* Owned assets are recorded at cost. Also included in the cost of these assets is interest on funds borrowed during the construction period. When assets are sold, retired or disposed of, their cost and related accumulated depreciation are removed from the consolidated balance sheet and any resulting gain or loss is reflected in cost of sales. Repair and maintenance costs that materially add to the value of the asset or prolong its useful life are capitalized and depreciated based on the extension of the useful life; general costs of maintenance and repairs are charged to expense.

*Repair and maintenance costs:* We expense routine repair and maintenance costs as we incur them. We defer expenses incurred during planned major maintenance activities and record these amounts to Other assets on our consolidated balance sheet. Deferred amounts are recognized as expense ratably, over the shorter of the estimated interval until the next major maintenance activity or the life of the deferred item. The cash outflows related to these costs are included in operating activities in the consolidated statement of cash flows. The timing of this maintenance can vary by manufacturing plant and has a significant impact on our results of operations in the period performed primarily due to lost production during the maintenance period.

*Depreciation:* The cost of plant and equipment is depreciated, utilizing the straight-line method, over the estimated useful lives of the assets, the majority of which range from 20 to 40 years for buildings and leasehold improvements and 5 to 30 years for machinery and equipment. The following table provides the detail behind the useful lives and proportion of our machinery and equipment ("M&E") in each useful life category.

Percent of M&E Cost	Depreciable Life in Years	Types of Assets
55	20	Production vessels and kilns, storage tanks, piping
11	15	Control systems, instrumentation, metering equipment
8	25 to 30	Blending equipment, storage tanks, piping, shipping equipment and platforms, safety equipment
19	5 to 10	Production control system equipment and hardware, laboratory testing equipment
3	40	Machinery & equipment support structures and foundations
4	Various	Various

*Impairment of long-lived assets:* We periodically evaluate whether current events or circumstances indicate that the carrying value of our long-lived assets, including intangible assets, to be held and used may not be recoverable. If such circumstances are determined to exist, an estimate of undiscounted future cash flows produced by the long-lived asset, or the appropriate grouping of assets, is compared to carrying value to determine whether impairment exists.

If an asset is determined to be impaired, the loss is measured based on quoted market prices in active markets, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques, including a discounted value of estimated future cash flows. We report an asset to be disposed of at the lower of its carrying value or its estimated net realizable value.

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*Goodwill and other intangible assets:* Goodwill represents the excess of cost of an acquired business over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. We review the recorded value of goodwill at least annually at October 1, or sooner if events or changes in circumstances, such as significant adverse changes in operating results, market conditions, or changes in management's business strategy indicate that there may be a probable indicator of impairment. indicate that the fair value of a reporting unit is below its carrying value. A reporting unit is the level at which discrete financial information is available and reviewed by business management on a regular basis. An impairment exists when the carrying value of a reporting unit exceeds its fair value. Our reporting units are our operating segments, i.e. Performance Chemicals and Performance Materials. If an indication exists that the fair value of a reporting unit with goodwill is less than its carrying value, a quantitative goodwill impairment test is performed. The fair value of each reporting unit is estimated primarily using an income approach, specifically the discounted cash flow method. The following assumptions are key to the income approach: 1) cash flow and earnings projections; 2) growth rates; 3) discount rates; 4) income tax rates; and, 5) terminal value rates.

The factors we considered in developing our estimates and projections for cash flows and earnings include, but are not limited to, the following: (i) macroeconomic conditions; (ii) industry and market considerations; (iii) costs, such as increases in raw materials, labor, or other costs; (iv) our overall financial performance; and, (v) other relevant entity-specific events that impact our reporting units. The discount rate we used represents the weighted average cost of capital for the reporting units, considering the risks and uncertainty inherent in the cash flows of the reporting units and in our internally-developed forecasts.

The determination of whether goodwill is impaired involves a significant level of judgment in the assumptions underlying the approach used to determine the estimated fair values of our reporting units. We believe that the assumptions and rates used in our impairment assessment are reasonable; however, these assumptions are judgmental and variations in any assumptions could result in materially different calculations of fair value. It is possible that the assumptions used by management related to the evaluation may change or that actual results may vary significantly from management's estimates.

Other intangible assets are comprised of finite-lived intangible assets consisting primarily of brands: representing trademarks, trade names and know-how, customer contracts and relationships, and developed technology. Other intangible assets are amortized over their estimated useful lives which range from 5 to 20 years. See Note 9 for additional information.

*Capitalized software:* Capitalized software for internal use is included in Other assets on the consolidated balance sheets. Amounts capitalized are presented in Capital expenditures on our consolidated statements of cash flow. Capitalized software is amortized using the straight-line over the estimated useful lives ranging from 1 to 10 years. Amortization is recorded to Costs of sales on our consolidated statements of operations for software directly used in the production of inventory and Selling, general and administrative expenses on our consolidated statements of operations for software used for non-production related activities.

*Legal liabilities:* We recognize a liability for legal contingencies when a loss is probable and reasonably estimable. Third-party fees for legal services are expensed as incurred.

*Revenue recognition:* In May 2014, the FASB issued ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)," which supersedes both the revenue recognition requirement to ASC 605 "Revenue Recognition" and most industry-specific guidance. The core principle of the new standard (ASC 606) is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity must also disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including qualitative and quantitative information about contracts with customers, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. In 2016 and 2017, the FASB issued several ASUs that provided additional clarity on numerous topics as well as providing technical corrections to ASU 2014-09. We adopted this new standard on January 1, 2018, utilizing the modified retrospective method applied to those contracts, which were not completed as of that date. Results for reporting periods beginning after January 1, 2018, are presented under ASC 606, while prior period amounts are not adjusted and continue to be presented in accordance with our historic accounting under ASC 605.

Substantially all our revenue is recognized when products are shipped from our manufacturing and warehousing facilities, which represents the point at which control is transferred to the customer. For certain limited contracts, where we are

**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
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producing goods with no alternative use and for which we have an enforceable right to payment for performance completed to date, we are recognizing revenue as goods are manufactured, rather than when they are shipped.

Sales net of returns and customer incentives are based on the sale of manufactured products. Net sales are recognized when obligations under the terms of a contract with our customer are satisfied; generally, this occurs with the transfer of control of our products. Since Net sales are derived from product sales only, we have disaggregated our net sales by our product lines within each reportable segment. Net sales are measured as the amount of consideration we expect to receive in exchange for transferring goods. Sales, value add, and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. Sales returns and allowances are not a normal practice in the industry and are not significant. Certain customers may receive cash-based incentives, including discounts and volume rebates, which are accounted for as variable consideration and included in Net sales. Shipping and handling fees billed to customers continue to be included within Net sales. If we pay for the freight and shipping, we recognize the cost when control of the product has transferred to the customer as an expense in Cost of sales in the consolidated statement of operations. Although very rare, from time to time we incur expenses to obtain a sales contract. In these cases, if these costs are for orders that are fulfilled in one year or less, we expense these costs as they are incurred. Because the period between when we transfer a promised good to a customer and when the customer pays for that good will be one year or less, we elect not to adjust the promised amount of consideration for the effects of any financing component, as it is not significant.

*Cost of sales:* Costs primarily consists of the cost of inventory sold and other production related costs. These costs include raw materials, direct labor, manufacturing overhead, packaging costs and maintenance costs. Shipping and handling costs are also recorded to Cost of sales.

*Selling, general and administrative expenses:* Costs are expensed as incurred and primarily include employee compensation costs related to sales, and office personnel, office expenses, and other expenses not directly related to our manufacturing operations. Costs also include advertising and promotional costs.

*Research and technical expenses:* Cost are expensed as incurred and primarily include employee compensation, technical equipment costs and material testing and innovation related expenses.

*Royalty expense:* Our Performance Materials and Performance Chemicals segments have licensing agreements with third parties requiring us to pay royalties for certain technologies we use in the manufacturing of our products. Royalty expense is recognized as incurred and recorded to Cost of sales on our consolidated statements of operations.

*Income taxes:* We are subject to income taxes in the U.S. and numerous foreign jurisdictions, including China and the United Kingdom. The Provision (benefit) for income taxes includes income taxes paid, currently payable or receivable, and deferred taxes. We follow the liability method of accounting for income taxes in accordance with current accounting standards regarding the accounting for income taxes. Under this method, deferred income taxes are recorded based upon the differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws in effect at the time the underlying assets or liabilities are recovered or settled. The ability to realize deferred tax assets is evaluated through the forecasting of taxable income, historical and projected future operating results, the reversal of existing temporary differences, and the availability of tax planning strategies. Valuation allowances are recognized to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. We do not provide income taxes on undistributed earnings of consolidated foreign subsidiaries as it is our intention that such earnings will remain invested in those companies. See Note 18 for more information.

We recognize income tax positions that are more likely than not to be realized and accrue interest related to unrecognized income tax positions, which is included as a component of the Provision (benefit) for income taxes on the consolidated statements of operations.

*Pension and postretirement benefits:* We provide both qualified and non-qualified pension and postretirement benefit plans to our employees. The expense related to the current employees of Ingevity as well as the expense related to retirees of Ingevity are included in the Consolidated Financial Statements. The costs (or benefits) and obligations related to these benefits reflect key assumptions related to general economic conditions, including interest (discount) rates, healthcare cost trend rates and expected return on plan assets. The costs (or benefits) and obligations for these benefit programs are also affected by other assumptions, such as average retirement age, mortality, employee turnover, and plan participation. To the extent our plans' actual experience, as influenced by changing economic and financial market conditions or by changes to our own plans' demographics, differs from these assumptions, the costs and obligations for providing these benefits, as well as the plans'

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funding requirements, could increase or decrease. When actual results differ from our assumptions, the difference is typically recognized over future periods. In addition, the unrealized gains and losses related to our pension and postretirement benefit obligations may also affect periodic benefit costs (or benefits) in future periods. See Note 15 for additional information.

*Share-based compensation:* We recognize compensation expense in our Consolidated Financial Statements for all share-based compensation arrangements. Share-based compensation cost is measured at the date of grant, based on the fair value of the award and expense is recognized over the grantee's requisite service period; forfeitures are recognized as they occur. We calculate the fair value of our stock options using the Black-Scholes option pricing model. The fair value of restricted stock units ("RSU"s), non-employee director deferred stock units ("DSU"s) and performance-based restricted stock units ("PSU"s) is determined using our closing stock price on the day of the grant. Substantially all compensation expense related to share-based awards is recorded as a component of Selling, general and administrative expenses in the consolidated statements of operations. See Note 12 for additional information.

*Operating segments:* Ingevity's operating segments are Performance Materials and Performance Chemicals. Our operating segments were determined based upon the nature of the products produced, the nature of the production process, the type of customer for the products, the similarity of economic characteristics, and the manner in which management reviews results. Ingevity's chief operating decision maker evaluates the business at the segment level when making decisions about allocating resources and assessing performance of Ingevity as a whole. We evaluate sales in a format consistent with our reportable segments: (1) Performance Materials, which includes wood-based, chemically activated carbon products and (2) Performance Chemicals, which includes specialty pine-based chemical co-products derived from the kraft pulping process and caprolactone monomers and derivatives derived from cyclohexanone and hydrogen peroxide. Each segment operates as a portfolio of various end uses for the relevant raw material used in that segment. Business decisions are made and performance is generally measured based upon the total mix of end uses each raw material is being directed at in the segment. See Note 20 for additional information.

*Derivative financial instruments:* Ingevity's operations are exposed to market risks, such as the impact of changes of interest rates on our floating rate debt, changes in foreign currency exchange rates, and commodity prices due to transactions denominated in a variety of foreign currencies and purchases of certain commoditized raw materials and inputs. Changes in these rates and prices may have an impact on Ingevity's future cash flow and earnings. We formally document all relationships between the derivative financial instrument and hedged item, as well as the risk management objective and strategy for undertaking various hedge transactions. We do not hold or issue derivative financial instruments for speculative or trading purposes. We enter into derivative financial instruments which are governed by policies, procedures, and internal processes set forth by our Board of Directors.

Our risk management program also addresses counterparty credit risk by selecting only major financial institutions with investment grade ratings. Once the derivative financial instrument is entered into, we continuously monitor the financial institutions' credit ratings and our credit risk exposure held by the financial institution. When appropriate, we reallocate exposures across multiple financial institutions to limit credit risk. If a counterparty fails to fulfill its performance obligations under the derivative financial instrument, then Ingevity is exposed to credit risk equal to the fair value of the financial instrument. Derivative assets and liabilities are recorded on our consolidated balance sheets at fair value and are presented on a gross basis. Due to our proactive mitigation of these potential credit risks, we anticipate performance by our counterparties to these contracts and therefore no material loss is expected. In order to mitigate the impact of market risks we have entered into both net investment hedges as well as cash flow hedges.

*Cash Flow Hedges:* Cash flow hedges are derivative financial instruments designated as and used to hedge the exposure to variability in expected future cash flows that are attributable to a particular risk. The derivative financial instruments that are designated and qualify as a cash flow hedge are recorded on the balance sheet at fair value and the changes in fair value of these hedging instruments are offset in part or in whole by corresponding changes in the anticipated cash flows of the underlying exposures being hedged. The gains and losses arising from qualifying hedging instruments are reported as a component of Accumulated other comprehensive income (loss) ("AOCI") located in the consolidated balance sheets and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. The reclassification gain or losses of the hedge from AOCI are recorded in the same financial statement caption on the consolidated statements of operations as the hedged item. For example, designated cash flow hedges entered to minimize foreign currency exchange risk of forecasted revenue transactions are recorded to Net sales on the consolidated statements of operations when the forecasted transaction occurs. Designated commodity cash flow hedges gains or losses recorded in AOCI are recognized in



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Cost of sales on the consolidated statements of operations when the inventory is sold. See Note 10 for more information regarding our cash flow hedges.

*Net Investment Hedges:* Net investment hedges are defined as derivative or non-derivative instruments designated as and used to hedge the foreign currency exposure of the net investment in certain foreign operations. The net of the change in the hedge instrument and the item being hedged against for qualifying net investment hedges is reported as a component of the foreign currency adjustments ("CTA") within Accumulated other comprehensive income ("AOCI") on the condensed consolidated balance sheet. The gains (losses) on net investment hedges are reclassified to earnings only when the related CTA are required to be reclassified, usually upon sale or liquidation of the investment. See Note 10 for more information regarding our net investment hedges.

*Noncontrolling interests:* When our ownership in a consolidated legal entity is less than 100 percent, the outside stockholders' interests are shown as noncontrolling interests. Our noncontrolling interests for the year ended December 31, 2017, represented the 30 percent ownership interest held by a third-party U.S. based company in our consolidated Purification Cellutions, LLC legal entity, as further discussed in Note 2.

*Treasury stock:* We record shares of common stock repurchased at cost as treasury stock, resulting in a reduction of stockholders' equity in the consolidated balance sheets. When the treasury shares are contributed under our employee benefit plans or issued for option exercises, we use a first-in, first-out ("FIFO") method for determining cost. The difference between the cost of the shares and the market price at the time of contribution to an employee benefit plan is added to or deducted from Additional paid-in capital on the consolidated balance sheets.

*Translation of foreign currencies:* The local currency is the functional currency for all of Ingevity's significant operations outside the U.S. consisting primarily of the euro, the Japanese yen, the pound sterling and the Chinese renminbi. The assets and liabilities of Ingevity's foreign subsidiaries are translated into U.S. dollars using period-end exchange rates, and adjustments resulting from these financial statement translations are included in Accumulated other comprehensive income in the consolidated balance sheets. Revenues and expenses are translated at average rates prevailing during each period.

*Business combinations:* We account for business combinations in accordance with ASC 805 "Business Combinations" which requires, among other things, the acquiring entity in a business combination to recognize the fair value of the assets acquired and liabilities assumed; the recognition of Acquisition-related costs in the consolidated statement of operations; the recognition of Restructuring and other (income) charges, net in the consolidated statement of operations for which the acquirer becomes obligated after the acquisition date; and contingent purchase consideration to be recognized at fair value on the acquisition date with subsequent adjustments recognized in the consolidated statement of operations. We generally use third-party qualified consultants to assist management in determination of the fair value of assets acquired and liabilities assumed. This includes, when necessary, assistance with the determination of lives and valuation of tangible property, plant, and equipment and identifiable intangibles, assisting management in determining the fair value of obligations associated with employee related liabilities and assisting management in assessing obligations associated with legal and environmental claims.

The fair values assigned to identifiable intangible assets acquired are determined primarily by using an income approach, which is based on assumptions and estimates made by management. Significant assumptions utilized in the income approach are the attrition rate, growth rates, and the discount rate. These assumptions are based on company specific information and projections, which are not observable in the market and are therefore considered Level 2 and Level 3 measurements. The excess of the purchase price over the fair value of the identified assets and liabilities is recorded as goodwill. Based on the acquired business' end markets and products as well as how the chief operating decision maker will review the business results determines the most appropriate operating segment for which to integrate the acquired business. Goodwill acquired, if any, is allocated to the reporting unit within or at the operating segment for which the acquired business will be integrated. Selection of the appropriate reporting unit is based on the level at which discrete financial information is available and reviewed by business management post integration. Operating results of the acquired entity are reflected in the Consolidated Financial Statements from date of acquisition.

*Reclassifications:* Certain prior year amounts have been reclassified to conform with current year's presentation.

**Note 4: New Accounting Guidance**

The Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC" or "Codification") is the sole source of authoritative U.S. GAAP other than Securities and Exchange Commission ("SEC") issued rules and

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regulations that apply only to SEC registrants. The FASB issues an Accounting Standards Update ("ASU") to communicate changes to the Codification. We consider the applicability and impact of all ASUs. ASUs not listed below were assessed and determined to be either not applicable or are not expected to have a material impact on our Consolidated Financial Statements.

**Recently Adopted Accounting Pronouncement**

In August 2018, the FASB issued ASU 2018-13 "Fair Value Measurement (Topic 820) Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement." This ASU eliminates, amends, and adds disclosure requirements for fair value measurements. The new standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. We adopted this standard on January 1, 2019. The impact of adoption did not have a material impact on our Consolidated Financial Statements and related disclosures.

In June 2018, the FASB issued ASU 2018-07 "Compensation-Stock Compensation (Topic 718) - Improvements to Nonemployee Share-Based Payment Accounting." This ASU provides for a single accounting model for all share-based payments, with the employee based guidance now applying to nonemployee share-based transactions. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We adopted this standard on January 1, 2019. The impact of adoption did not have a material impact on our Consolidated Financial Statements and related disclosures.

In February 2016, the FASB issued ASU 2016-02 "Leases (Topic 842)." Under the new guidance, lessees are required to recognize for all leases (with the exception of short-term leases) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis and a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. Since the issuance of ASU 2016-02, the FASB issued several amendments that clarify certain points in Topic 842, including ASU 2018-20 ("Lease (Topic 842): Narrow-Scope Improvements for Lessors"), ASU 2018-01 ("Land Easement Practical Expedient"), ASU 2018-10 ("Codification Improvements"), ASU 2018-11 ("Targeted Improvements") and ASU 2019-01 ("Codification Improvements"). ASU 2016-02 and all subsequent amendments will herein be referred to as ASC 842. We adopted ASC 842 utilizing the modified retrospective approach as of January 1, 2019. The modified retrospective approach we selected provides a method of transition allowing for the recognition of existing leases as of the beginning of the period of adoption (i.e. January 1, 2019), and which does not require the adjustment of comparative periods.

We have elected the practical expedient package upon transition that does not require reassessment of prior conclusions related to contracts containing a lease, lease classification, and initial direct costs for any leases that existed at the period of adoption of ASC 842. We also adopted the practical expedient to apply hindsight in determining the lease term; we chose to account for lease and non-lease components together as a single component for all lease asset classes; and we elected the practical expedient related to land easements allowing us to carry-forward our current accounting treatment for land easements on existing agreements. We include the option to extend or terminate a lease when it is reasonably certain that we will exercise the option. In addition, we elected the accounting policy to not apply the balance sheet recognition criteria required in ASC 842 to leases with an initial lease term of twelve months or less by class of underlying asset for all lease asset classes. Payments for these leases are recognized on a straight-line basis over the lease term. As a lessee, most of our leases under prior guidance ASC 840 "Leases" were classified as operating leases, and therefore, were not recorded on the consolidated balance sheet but were recorded as expense in the consolidated statement of operations as incurred. We cataloged our existing lease contracts and implemented changes to our systems to perform the lease accounting and reporting under the new guidance going forward.

The adoption of ASC 842 resulted in the recognition of lease assets and liabilities. Our existing capital leases were accounted for as finance leases upon adoption of ASC 842. Additionally, we do not expect a significant impact in the timing of expense recognition based on the classification of leases as either operating or financing.

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In accordance with ASC 842, the impact of adoption on our consolidated balance sheet was as follows:

<i>In millions</i>	<u>Balance at December 31, 2018</u>	<u>Adjustments</u>	<u>Balance at January 1, 2019</u>
<b>Assets</b>			
Prepaid and other current assets	\$ 34.9	\$ (0.2) <sup>(1)</sup>	\$ 34.7
Operating lease assets, net	—	64.6 <sup>(2)</sup>	64.6
<b>Liabilities</b>			
Current operating lease liabilities	—	18.4 <sup>(3)</sup>	18.4
Noncurrent operating lease liabilities	—	46.3 <sup>(4)</sup>	46.3
Other liabilities	15.1	(0.3) <sup>(5)</sup>	14.8

- (1) Represents prepaid rent reclassified to operating lease assets.  
(2) Represents capitalization of operating lease assets and straight-line rent accrual.  
(3) Represents recognition of the current portion of operating lease liabilities.  
(4) Represents recognition of the noncurrent operating lease liabilities.  
(5) Represents accrued rent reclassified to operating lease liabilities.

**Recently Issued Accounting Pronouncements**

In August 2018, the FASB issued ASU 2018-15 "Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40) Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." This ASU requires companies to defer specific implementation costs incurred in a Cloud Computing Arrangement ("CCA") that are often expensed as incurred under current GAAP, and recognize the expense over the noncancellable term of the CCA. The new standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Although we are still evaluating the impact of this new standard, we do not believe that the adoption will materially impact our Consolidated Financial Statements and related disclosures.

In August 2018, the FASB issued ASU 2018-14 "Compensation — Retirement Benefits — Defined Benefit Plans — General (Topic 715-20): Disclosure Framework — Changes to the Disclosure Requirements for Defined Benefit Plans." This ASU amends ASC 715 to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. The new standard is effective for fiscal years ending after December 15, 2020. Although we are still evaluating the impact of this new standard, we do not believe that the adoption will materially impact our Consolidated Financial Statements and related disclosures.

In June 2016, the FASB issued ASU 2016-13 "Financial Instruments – Credit losses: Measurement of Credit Losses on Financial Instruments (Topic 326)" ("ASU 2016-13"), which modifies the measurement of expected credit losses of certain financial instruments. The ASU is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and will be applied as a cumulative effect adjustment to retained earnings as of the beginning of the first reporting period for which the guidance is effective. In April 2019, the FASB issued ASU 2019-04 which addresses issues related to accrued interest receivable balances, recoveries, variable interest rates and prepayments, among other things. In May 2019, the FASB issued ASU 2019-05 "Financial Instruments – Credit Losses (Topic 326): Targeted Transition Relief" ("ASU 2019-05"), which provides targeted transition relief allowing entities to make an irrevocable one-time election upon adoption of the new credit losses standard to measure financial assets previously measured at amortized cost (except held-to-maturity securities) using the fair value option. The provisions of ASU 2019-04 related to Topic 326 and ASU 2019-05 are effective concurrent with the adoption of ASU 2016-13. We are currently evaluating the impact of these ASUs and do not expect these provisions to have a material impact on our consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12 "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" This ASU amends ASC 740 to add, remove, and clarify disclosure requirements related to income taxes. The new standard is effective for fiscal years ending after December 15, 2020. Although we are still evaluating the impact of this

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new standard, we do not believe that the adoption of this new standard will materially impact our Consolidated Financial Statements and related disclosures.

**Note 5: Revenues**

On January 1, 2018, we adopted ASC 606 using the modified retrospective method applied to contracts not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under ASC 605.

**Disaggregation of Revenue**

The following tables present our Net sales disaggregated by product line and geography.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<i>Automotive Technologies product line</i>	\$ 454.9	\$ 362.0	\$ 312.5
<i>Process Purification product line</i>	35.7	38.4	36.8
Performance Materials segment	\$ 490.6	\$ 400.4	\$ 349.3
<i>Oilfield Technologies product line</i>	111.4	114.2	77.8
<i>Pavement Technologies product line</i>	183.3	178.5	163.0
<i>Industrial Specialties product line</i>	385.5	440.5	382.3
<i>Engineered Polymers product line</i>	122.1	—	—
Performance Chemicals segment	\$ 802.3	\$ 733.2	\$ 623.1
Consolidated Net sales	<u>\$ 1,292.9</u>	<u>\$ 1,133.6</u>	<u>\$ 972.4</u>

The following table presents our Net sales disaggregated by geography, based on the delivery address of our customer.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
North America	\$ 795.7	\$ 770.4	\$ 662.9
Asia Pacific	281.4	171.4	142.5
Europe, Middle East, and Africa	193.6	169.9	149.2
South America	22.2	21.9	17.8
<b>Net sales</b>	<u>\$ 1,292.9</u>	<u>\$ 1,133.6</u>	<u>\$ 972.4</u>

**Contract Balances**

The following table provides information about contract assets and contract liabilities from contracts with customers. The contract assets primarily relate to our rights to consideration for products produced but not billed at the reporting date on contracts with certain customers. The contract assets are recognized as accounts receivables when the rights become unconditional and the customer has been billed. Contract liabilities represent obligations to transfer goods to a customer for which we have received consideration from our customer. For all periods presented, we had no contract liabilities.

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*In millions*

	Contract Asset	
	Years Ended December 31,	
	2019	2018
Balance at beginning of period	\$ 5.1	\$ 4.4
Contract asset additions	29.5	26.6
Reclassification to accounts receivable, billed to customers	(28.4)	(25.9)
Balance at end of period <sup>(1)</sup>	<u>\$ 6.2</u>	<u>\$ 5.1</u>

(1) Included within "Prepaid and other current assets" on the consolidated balance sheet.

**Note 6: Fair Value Measurements**

**Fair Value Measurements**

We have categorized our assets and liabilities that are recorded at fair value, based on the priority of the inputs to the valuation technique, into a three-level fair value hierarchy. The fair-value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure the assets and liabilities fall within different levels of the hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument. The carrying value of our financial instruments: cash and cash equivalents, restricted cash, other receivables, other payables and accrued liabilities, approximate their fair values due to the short-term nature of these financial instruments.

***Recurring Fair Value Measurements***

The following information is presented for assets and liabilities that are recorded in the consolidated balance sheets at fair value measured on a recurring basis. See Note 10 for more information regarding the recurring fair value measurements associated with our derivative instruments. There were no transfers of assets and liabilities that are recorded at fair value between Level 1 and Level 2 during the periods reported. There were no non-recurring fair value measurements during fiscal years ending December 31, 2019, 2018, or 2017, respectively.

<i>In millions</i>	Level 1 <sup>(1)</sup>	Level 2 <sup>(2)</sup>	Level 3 <sup>(3)</sup>	Total
<b>December 31, 2019</b>				
Assets:				
Equity securities <sup>(4)</sup>	\$ 0.4	\$ —	\$ —	\$ 0.4
Deferred compensation plan investments <sup>(5)</sup>	1.4	—	—	1.4
Total assets	<u>\$ 1.8</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1.8</u>
Liabilities:				
Deferred compensation arrangement <sup>(5)</sup>	\$ 10.0	\$ —	\$ —	\$ 10.0
Separation-related reimbursement awards <sup>(6)</sup>	0.1	—	—	0.1
Total liabilities	<u>\$ 10.1</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 10.1</u>

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<i>In millions</i>	Level 1 <sup>(1)</sup>	Level 2 <sup>(2)</sup>	Level 3 <sup>(3)</sup>	Total
<b>December 31, 2018</b>				
Assets:				
Equity securities <sup>(4)</sup>	\$ 0.4	\$ —	\$ —	\$ 0.4
Deferred compensation plan investments <sup>(5)</sup>	1.3	—	—	1.3
<b>Total assets</b>	<b>\$ 1.7</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 1.7</b>
Liabilities:				
Deferred compensation arrangement <sup>(5)</sup>	\$ 4.6	\$ —	\$ —	\$ 4.6
Separation-related reimbursement awards <sup>(6)</sup>	0.1	—	—	0.1
<b>Total liabilities</b>	<b>\$ 4.7</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 4.7</b>

(1) Quoted prices in active markets for identical assets.

(2) Quoted prices for similar assets and liabilities in active markets.

(3) Significant unobservable inputs.

(4) Included within "Prepaid and other current assets" on the consolidated balance sheet.

(5) Consists of a deferred compensation arrangement, through which we hold various investment securities recognized on our balance sheets. Both the asset and liability related to investment securities are recorded at fair value, and are included within "Other assets" and "Other liabilities" on the consolidated balance sheets, respectively. In addition to the investment securities, we also had company-owned life insurance related to the deferred compensation arrangement recorded at cost in "Other assets" of \$8.4 million and \$3.1 million at December 31, 2019 and 2018, respectively.

(6) Included within "Accrued expenses" on the consolidated balance sheet. The income and (expense), respectively, recognized during the years ended December 31, 2019, 2018, and 2017 was zero, \$0.1 million, and \$(0.3) million, respectively.

### Equity Securities

Our investments in equity securities with a readily determinable fair value totaled \$0.4 million as of both December 31, 2019 and 2018. The net realized gain/(loss) recognized during the years ended December 31, 2019 and 2018 was zero. The net unrealized gain/(loss) during the years ended December 31, 2019 and 2018 was \$0.1 million and \$(0.3) million, respectively. The aggregate carrying value of investments in equity securities where fair value is not readily determinable totaled \$1.5 million as of both December 31, 2019 and 2018, respectively. There were no adjustments to the carrying value of the not readily determinable investments for impairment or observable price changes for the period ended December 31, 2019.

### Restricted Investment

At December 31, 2019 and 2018, the book value of our restricted investment was \$72.6 million and \$71.2 million, respectively, and the fair value was \$74.5 million and \$66.7 million, respectively, based on Level 1 inputs.

Our restricted investment is a trust managed in order to secure repayment of the finance lease obligation, associated with Performance Materials' Wickliffe, Kentucky manufacturing site, at maturity. The trust, presented as restricted investment on our consolidated balance sheet, purchased long term bonds that mature in 2025 and 2026. The principal received at maturity of the bonds along with interest income that is reinvested in the trust are expected to be equal to or more than the \$80.0 million finance lease obligation that is due in 2027. Because the provisions of the trust provide us the ability, and it is our intent, to hold the investments to maturity, the investments held by the trust are accounted for as held to maturity; therefore, they are held at their amortized cost. The investments held by the trust earn interest at the stated coupon rate of the invested bonds. Interest earned on the investments held by the trust is recognized as interest income and presented within Interest income on our consolidated statement of operations.

### Debt Obligations

At December 31, 2019 and 2018, the book value of finance lease obligations was \$80.0 million, and the fair value was \$100.9 million and \$90.4 million, respectively. The fair value of our finance lease obligations is based on the period-end quoted market prices for the obligations, using Level 2 inputs.

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The carrying amount, excluding debt issuance fees, of our variable interest rate long-term debt was \$849.4 million and \$363.8 million as of December 31, 2019 and 2018, respectively. The carrying value is a reasonable estimate of the fair value of our outstanding debt as our outstanding debt is variable interest rate debt.

At December 31, 2019 and 2018, the book value of our fixed rate debt, the senior notes issued January 24, 2018, was \$300.0 million, respectively, and the fair value was \$305.4 million and \$275.2 million, respectively, based on Level 2 inputs.

**Note 7: Inventories, net**

<i>In millions</i>	December 31,	
	2019	2018
Raw materials	\$ 42.6	\$ 36.5
Production materials, stores and supplies	22.3	17.5
Finished and in-process goods	158.0	144.7
Subtotal	\$ 222.9	\$ 198.7
Less: excess of cost over LIFO cost	(10.4)	(7.3)
Inventories, net	\$ 212.5	\$ 191.4

As of December 31, 2019, approximately 31 percent, 11 percent and 58 percent of our inventories were accounted for under the FIFO, average cost, and LIFO methods, respectively. As of December 31, 2018, approximately 28 percent, 9 percent, and 63 percent of our inventories were accounted for under the FIFO, average cost, and LIFO methods, respectively.

**Note 8: Property, Plant and Equipment, net**

Property, plant and equipment, net consist of the following:

<i>In millions</i>	December 31,	
	2019	2018
Machinery and equipment	\$ 964.3	\$ 857.2
Buildings and leasehold equipment	116.9	113.1
Land and land improvements	19.0	19.6
Construction in progress	119.1	71.2
Total cost	\$ 1,219.3	\$ 1,061.1
Less: accumulated depreciation	(554.6)	(537.3)
Property, plant and equipment, net <sup>(1)</sup>	\$ 664.7	\$ 523.8

(1) This includes finance leases related to machinery and equipment at our Wickliffe, Kentucky facility of \$68.8 million and \$69.2 million, and net book value of \$6.0 million and \$6.7 million at December 31, 2019 and 2018, respectively. This also includes finance leases related to our Waynesboro, Georgia manufacturing facility for (a) machinery and equipment of \$18.4 million and \$6.5 million and net book value of \$16.8 million and \$6.0 million, (b) construction in progress of \$6.4 million and \$13.7 million and (c) buildings and leasehold improvements of \$4.2 million and \$0.1 million at December 31, 2019 and 2018, respectively. Amortization expense associated with these finance leases is included within depreciation expense. The payments remaining under these finance leases obligations are included within Note 14.

Depreciation expense was \$52.3 million, \$41.9 million, and \$35.5 million for the years ended December 31, 2019, 2018 and 2017, respectively.

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**Note 9: Goodwill and Other Intangible Assets, net**

**Goodwill**

<i>In millions</i>	Operating Segments		
	Performance Chemicals	Performance Materials	Total
December 31, 2017	\$ 8.1	\$ 4.3	\$ 12.4
Goodwill acquired <sup>(1)</sup>	118.7	—	118.7
Foreign currency translation	(0.4)	—	(0.4)
December 31, 2018	\$ 126.4	\$ 4.3	\$ 130.7
Foreign currency translation	10.6	—	10.6
Goodwill acquired <sup>(1)</sup>	295.1	—	295.1
December 31, 2019	<u>\$ 432.1</u>	<u>\$ 4.3</u>	<u>\$ 436.4</u>

(1) See Note 17 for more information about our acquisitions.

Our fiscal year 2019 annual goodwill impairment test was performed as of October 1, 2019. We determined no goodwill impairment existed. There were no events or circumstances indicating that goodwill might be impaired as of December 31, 2019. No impairment charges have been recognized historically.

**Other Intangible Assets**

All of Ingevity's other intangible assets, net are related to the Performance Chemicals operating segment. The following table summarizes our intangible assets:

<i>In millions</i>	December 31, 2019			December 31, 2018		
	Gross carrying amount	Accumulated amortization	Net	Gross carrying amount	Accumulated amortization	Net
Customer contracts and relationships	\$ 314.5	\$ 51.6	\$ 262.9	\$ 151.0	\$ 30.3	\$ 120.7
Brands <sup>(1)</sup>	80.3	11.1	69.2	11.4	9.8	1.6
Developed technology	68.6	5.7	62.9	1.9	0.2	1.7
Other	2.7	1.5	1.2	2.2	0.6	1.6
Other intangibles, net <sup>(2)</sup>	<u>\$ 466.1</u>	<u>\$ 69.9</u>	<u>\$ 396.2</u>	<u>\$ 166.5</u>	<u>\$ 40.9</u>	<u>\$ 125.6</u>

(1) Represents trademarks, trade names and know-how.

(2) See Note 17 for more information about our acquisitions and the related increase in Intangible assets. The weighted average amortization period remaining for all intangibles is 13.4 years while the weighted average amortization period remaining for customer contracts and relationships, brands, developed technology and other intangibles is 13.3 years, 15.9 years, 11.5 years, and 1.5 years, respectively.

The amortization expense related to our intangible assets in the table above is shown in the table below.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Cost of sales	\$ 0.6	\$ 0.7	\$ 1.3
Selling, general and administrative expenses	28.1	11.6	1.1
Total amortization expense <sup>(1)</sup>	<u>\$ 28.7</u>	<u>\$ 12.3</u>	<u>\$ 2.4</u>

(1) See Note 17 for more information about the Caprolactone Acquisition and Pine Chemical Acquisition and the related increase in Amortization expense.



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Based on the current carrying values of intangible assets, estimated pre-tax amortization expense for the next five years is as follows: 2020 - \$32.8 million, 2021 - \$31.9 million, 2022 - \$31.7 million, 2023 - \$31.7 million and 2024 - \$31.3 million. The estimated pre-tax amortization expense may fluctuate due to changes in foreign currency.

**Note 10: Financial Instruments and Risk Management**

**Net Investment Hedges**

During the second quarter of 2019, we entered into a fixed-to-fixed cross-currency interest rate swap with a notional amount of \$141.3 million and a maturity date of July 2023. We designated the swap to hedge a portion of our net investment in a euro functional currency denominated subsidiary against foreign currency fluctuations. This contract involves the exchange of fixed U.S. dollars with fixed euro interest payments periodically over the life of the contract and an exchange of the notional amount at maturity. This effectively converts a portion of our U.S. dollar denominated fixed-rate debt from a rate of 3.96 percent to euro denominated fixed-rate debt at a rate of 1.41 percent. Any difference between the fixed interest rate between the U.S. dollar denominated debt to euro denominated debt is recorded as interest income on the condensed consolidated statements of operations. The fair value of the fixed-to-fixed cross currency interest rate swap was an asset (liability) of \$3.0 million at December 31, 2019. During the year ended December 31, 2019 we recognized net interest income associated with this financial instrument of \$2.3 million.

**Cash Flow Hedges**

***Foreign Currency Exchange Risk Management***

We manufacture and sell our products in several countries throughout the world and, thus, we are exposed to changes in foreign currency exchange rates. To manage the volatility relating to these exposures, we net the exposures on a consolidated basis to take advantage of natural offsets. To manage the remaining exposure, from time to time, we utilize forward currency exchange contracts and zero cost collar option contracts to minimize the volatility to earnings and cash flows resulting from the effect of fluctuating foreign currency exchange rates on export sales denominated in foreign currencies (principally the euro). These contracts are generally designated as cash flow hedges. We began our foreign currency exchange risk hedging program in July 2017. As of December 31, 2019, there were no open foreign currency derivative contracts. The fair value of the foreign currency hedge was zero as of December 31, 2019, and an asset (liability) of \$0.2 million as of December 31, 2018.

***Commodity Price Risk Management***

Certain energy sources used in our manufacturing operations are subject to price volatility caused by weather, supply and demand conditions, economic variables, and other unpredictable factors. This volatility is primarily related to the market pricing of natural gas. To mitigate expected fluctuations in market prices and the volatility to earnings and cash flow resulting from changes to pricing of natural gas purchases, from time to time, we will enter into swap contracts and zero cost collar option contracts and designate these contracts as cash flow hedges. We began our commodity price risk hedging program in December 2017. As of December 31, 2019, we had 1.1 million and 0.3 million mmBTUS (millions of British Thermal Units) in aggregate notional volume of outstanding natural gas commodity swap contracts and zero cost collar option contracts, respectively, designated as cash flow hedges. As of December 31, 2019, open commodity contracts hedge forecasted transactions until December 2020. The fair value of the outstanding designated natural gas commodity hedge contracts was an asset (liability) of \$(0.5) million as of December 31, 2019 and zero as of December 31, 2018.

***Interest Rate Risk Management***

Our policy is to manage interest expense using a mix of fixed and variable rate debt. To manage interest rate risk effectively, from time to time, we may enter into cash flow interest rate derivative instruments, which can consist of forward starting swaps and treasury locks. In all cases, the notional amount of the interest rate swap agreements is equal to or less than the designated debt being hedged. Designated interest rate cash flow hedge gains or losses recorded in AOCI are recognized in "Interest expense, net" on the condensed consolidated statements of operations on a straight-line basis over the remaining maturity of the underlying debt. These instruments are designated as cash flow hedges.

During the second quarter of 2019, we entered into an interest rate swap with a notional amount of \$141.3 million to manage the variability of cash flows in the interest rate payments associated with our existing LIBOR-based interest payments,

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effectively converting \$141.3 million of our floating rate debt to a fixed rate. In accordance with the terms of this instrument we receive floating rate interest payments based upon three-month U.S. dollar LIBOR and in return are obligated to pay interest at a fixed rate of 3.96% until July 2023. The fair value of the interest rate swap was an asset (liability) of \$(3.9) million at December 31, 2019.

**Effect of Cash Flow and Net Investment Hedge Accounting on AOCI**

<i>In millions</i>	Amount of Gain (Loss) Recognized in AOCI		Amount of Gain (Loss) Reclassified from AOCI into Net income		Location of Gain (Loss) Reclassified from AOCI into Net income
	Year Ended December 31,				
	2019	2018	2019	2018	
<b>Cash flow hedging derivatives</b>					
Currency exchange contracts	\$ —	\$ 1.0	\$ —	\$ 1.0	Net sales
Natural gas contracts	(0.9)	0.7	0.3	0.2	Cost of sales
Interest rate swap contracts	(3.9)	—	—	—	Interest expense, net
<b>Total</b>	<b>\$ (4.8)</b>	<b>\$ 1.7</b>	<b>\$ 0.3</b>	<b>\$ 1.2</b>	

	Amount of Gain (Loss) Recognized in AOCI		Amount of Gain (Loss) Recognized in Income on Derivative (Amount Excluded from Effectiveness Testing)		Location of Gain or (Loss) Recognized in Income on Derivative (Amount Excluded from Effectiveness Testing)
	Year Ended December 31,				
	2019	2018	2019	2018	
<b>Net investment hedging derivative</b>					
Currency exchange contracts <sup>(1)</sup>	\$ 3.0	\$ —	\$ 2.3	\$ —	Interest expense, net
<b>Total</b>	<b>\$ 3.0</b>	<b>\$ —</b>	<b>\$ 2.3</b>	<b>\$ —</b>	

(1) Reclassifications from AOCI to Net Income were zero for all periods presented. Gains and losses would be reclassified from AOCI to Other (income) expense, net.

Within the next twelve months, we expect to reclassify \$0.5 million of losses from AOCI to earnings, before taxes.

**Fair-Value Measurements**

The following information is presented for derivative assets and liabilities that are recorded in the consolidated balance sheets at fair value measured on a recurring basis. See Note 6 for more information on our fair value measurements. There were no transfers of assets and liabilities that are recorded at fair value between Level 1 and Level 2 during the periods reported. There were no non-recurring fair value measurements during fiscal years ending December 31, 2019, 2018, or 2017, respectively.

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<i>In millions</i>	Level 1 <sup>(1)</sup>	Level 2 <sup>(2)</sup>	Level 3 <sup>(3)</sup>	Total
<b>December 31, 2019</b>				
Assets:				
Net investment hedge <sup>(4)</sup>	\$ —	\$ 3.0	\$ —	\$ 3.0
Total assets	\$ —	\$ 3.0	\$ —	3.0
Liabilities:				
Natural gas contracts <sup>(5)</sup>	—	0.5	—	0.5
Interest rate swap contracts <sup>(6)</sup>	—	3.9	—	3.9
Total liabilities	\$ —	\$ 4.4	\$ —	\$ 4.4

<i>In millions</i>	Level 1 <sup>(1)</sup>	Level 2 <sup>(2)</sup>	Level 3 <sup>(3)</sup>	Total
<b>December 31, 2018</b>				
Assets:				
Currency exchange contracts <sup>(5)</sup>	\$ —	\$ 0.2	\$ —	\$ 0.2
Natural gas contracts <sup>(5)</sup>	—	0.1	—	0.1
Total assets	\$ —	\$ 0.3	\$ —	0.3
Liabilities:				
Currency exchange contracts <sup>(7)</sup>	\$ —	\$ 3.9	\$ —	\$ 3.9
Natural gas contracts <sup>(5)</sup>	—	0.1	—	0.1
Total liabilities	\$ —	\$ 4.0	\$ —	\$ 4.0

- (1) Quoted prices in active markets for identical assets.  
(2) Quoted prices for similar assets and liabilities in active markets.  
(3) Significant unobservable inputs  
(4) Included within "Other assets" on the consolidated balance sheet.  
(5) Included within "Accrued expenses" on the consolidated balance sheet.  
(6) Included within "Other liabilities" on the consolidated balance sheet.  
(7) This amount represents a non-designated foreign currency hedge associated with the purchase price of our acquisition of Perstorp AB's caprolactone business. See Note 17 for more information. The expense recognized during the year ended December 31, 2019 and 2018 was \$12.7 million and \$3.9 million, respectively.

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**Note 11: Debt, including Finance Lease Obligations**

Current and long-term debt including finance lease obligations consisted of the following:

<i>In millions</i>	December 31, 2019		December 31,	
	Interest rate	Maturity date	2019	2018
Revolving Credit Facility <sup>(1)</sup>	3.28%	2023	\$ 131.3	\$ —
Term Loans	3.11%	2022-2023	740.6	375.0
Senior Notes	4.50%	2026	300.0	300.0
Finance lease obligations <sup>(2)</sup>	7.67%	2027	80.0	80.0
Other notes payable	4.95%	2020-2021	5.9	3.9
Total debt including capital lease obligations			\$ 1,257.8	\$ 758.9
Less: debt issuance costs			6.9	6.5
Total debt including capital lease obligations, net of debt issuance costs			\$ 1,250.9	\$ 752.4
Less: debt maturing within one year <sup>(3)</sup>			22.5	11.2
Long-term debt including capital lease obligations			\$ 1,228.4	\$ 741.2

- (1) Letters of credit outstanding under the revolving credit facility were \$2.1 million and \$1.9 million and available funds under the facility were \$616.6 million and \$748.1 million at December 31, 2019 and 2018, respectively.
- (2) See Note 14 for more information.
- (3) Debt maturing within one year is included in "Notes payable and current maturities of long-term debt" on the consolidated balance sheet.

**Revolving Credit Facility**

Our revolving credit facility has a capacity of \$750.0 million with a maturity date on August 7, 2023. The terms and conditions of our revolving credit facility are governed by the Incremental Facility Agreement and Amendment No. 4, dated as of March 7, 2019 (the "Amendment No. 4" to our existing credit agreement, dated as of March 7, 2016 ("Credit Agreement")) (as amended, supplemented or otherwise modified prior to the date hereof, including pursuant to Amendment No. 3, dated as of March 7, 2019 ("Amendment No. 3"), the Incremental Facility Agreement and Amendment No. 2, dated as of August 7, 2018 ("Amendment No. 2"), the Incremental Facility Agreement and Amendment No. 1, dated as of August 21, 2017 ("Amendment No.1"), and the Credit Agreement).

The revolving credit facility bears interest at either (a) an adjusted base rate or (b) an adjusted LIBOR rate (or a comparable or successor rate), in each case, plus an applicable margin (the "Revolving Credit Facility Applicable Margin"), in the case of base rate loans, ranging between zero percent and 0.75 percent, and in the case of adjusted LIBOR rate loans, ranging between 1.00 percent and 1.75 percent. The Revolving Credit Facility Applicable Margin is based on a total leverage based pricing grid.

Fees of zero, \$1.1 million and \$0.8 million were incurred in 2019, 2018, and 2017, respectively, to secure the various amendments associated with our Revolving Credit Facility. These fees have been deferred and will be amortized over the term of the facility.

**Term Loans**

Our term loans are comprised of two separate term loans: the 2017 Term Loan and the 2019 Term Loan.

**2019 Term Loan:**

On March 7, 2019, we entered into Amendment No.3 and Amendment No.4 (the "Amendments") to our Credit Agreement. Among other things, the Amendments established a new class of incremental term loan commitments, collectively

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referred to as the 2019 Term Loan, in the aggregate principal amount of \$375.0 million. The 2019 Term Loan of \$375.0 million is in addition to the existing 2017 Term Loan of \$375.0 million.

The 2019 Term Loan is not subject to amortization; the full principal balance is due and payable at maturity on August 7, 2022. The 2019 Term Loan bears interest at either (a) an adjusted base rate or (b) an adjusted LIBOR rate (or a comparable or successor rate), in each case, plus an applicable margin (the "2019 Term Loan Applicable Margin"), in the case of base rate loans, ranging between zero and 0.25 percent, and in the case of adjusted LIBOR rate loans, ranging between 0.75 percent and 1.25 percent. The 2019 Term Loan Applicable Margin is based on a total leverage based pricing grid.

As consideration for the Amendments, we paid to each lender party thereto a consent fee equal to 0.05 percent of the aggregate principal amount of the commitments and outstanding loans under held by such lender. Fees of \$1.8 million were incurred to secure the 2019 Term Loan. These fees have been deferred and will be amortized over the term of the loan.

We used the proceeds of the 2019 Term Loan to repay loans outstanding under our revolving credit facility.

***2017 Term Loan:***

On August 21, 2017, we entered into Amendment No.1 to our Credit Agreement. Among other things, Amendment No. 1 established incremental term loan commitments in the aggregate principal amount of \$75.0 million in addition to the existing term loan of \$300.0 million. The combined borrowings, collectively referred to as the 2017 Term Loan, of \$375.0 million which are treated as a single class.

On August 7, 2018, we entered into Amendment No.2 which, among other things, extended the maturity of the 2017 Term Loan to August 7, 2023. The 2017 Term Loan amortizes at zero percent per annum during the first, second and third years after the initial funding date of May 9, 2016 and 1.25 percent per annum during each year to maturity, with the balance due at maturity. The 2017 Term Loan bears interest at either (a) an adjusted base rate or (b) an adjusted LIBOR rate (or a comparable or successor rate), in each case, plus an applicable margin (the "2017 Term Loan Applicable Margin"), in the case of base rate loans, ranging between zero percent and 0.75 percent, and in the case of adjusted LIBOR rate loans, ranging between 1.00 percent and 1.75 percent. The 2017 Term Loan Applicable Margin is based on a total leverage based pricing grid.

As consideration for Amendment No.1 and Amendment No.2, we paid to each lender party thereto a consent fee equal to 0.05 percent of the aggregate principal amount of the commitments and outstanding loans held by such lender. Fees of \$0.3 million and \$0.5 million were incurred in 2018 and 2017, respectively to secure the amendments associated with the 2017 Term Loan. These fees have been deferred and will be amortized over the term of the loan.

**Senior Notes**

On January 24, 2018, we issued \$300.0 million aggregate principal amount of 4.50 percent senior unsecured notes due 2026 (the "Notes"). The Notes were issued pursuant to an indenture dated as of January 24, 2018 (the "Indenture"), by and among Ingevity, the subsidiary guarantors party thereto and U.S. Bank National Association, as trustee. The Notes were offered and sold only to persons reasonably believed to be qualified institutional buyers pursuant to Rule 144A and to certain non-U.S. persons outside the U.S. pursuant to Regulation S under the Securities Act of 1933, as amended (the "Securities Act"). The Notes have not been registered under the Securities Act or any state securities laws and may not be offered or sold in the U.S. absent registration or an applicable exemption from the registration requirements of the Securities Act and applicable state laws.

The net proceeds from the sale of the Notes, after deducting deferred financing fees of \$5.7 million, were approximately \$294.3 million. We used the net proceeds from the sale of the Notes to finance, in part, our purchase of substantially all the assets primarily used in the pine chemicals business of Georgia-Pacific Chemicals LLC and Georgia-Pacific LLC.

Interest payments on the Notes are due semiannually in arrears on February 1st and August 1st of each year, beginning on August 1, 2018, at a rate of 4.50 percent per year. The Notes will mature on February 1, 2026.

**Debt Covenants**

Our Indenture contains certain customary covenants (including covenants limiting Ingevity's and its restricted subsidiaries' ability to grant or permit liens on certain property securing debt, declare or pay dividends, make distributions on or repurchase or redeem capital stock, make investments in unrestricted subsidiaries, engage in sale and lease-back transactions, and engage in a consolidation or merger, or sell, transfer or otherwise dispose of all or substantially all of the assets of our and

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our restricted subsidiaries, taken as a whole) and events of default (subject in certain cases to customary exceptions, as well as grace and cure periods). The occurrence of an event of default under the Notes could result in the acceleration of the Notes and could cause a cross-default that could result in the acceleration of other indebtedness of Ingevity and its subsidiaries.

The Revolving Credit Facility and Term Loans contain customary default provisions, including defaults for non-payment, breach of representations and warranties, insolvency, non-compliance with covenants and cross-defaults to other material indebtedness. The occurrence of an uncured event of default under the Revolving Credit Facilities and Term Loans could result in all loans and other obligations becoming immediately due and payable and the facilities being terminated. The Revolving Credit Facility and Term Loans' financial covenants require Ingevity to maintain on a consolidated basis a maximum total leverage ratio of 4.0 to 1.0 (which may be increased to 4.5 to 1.0 under certain circumstances) and a minimum interest coverage ratio of 3.0 to 1.0. Our actual leverage for the four consecutive quarters ended December 31, 2019 was 3.0, and our actual interest coverage for the four consecutive quarters ended December 31, 2019 was 8.4. We were in compliance with all covenants at December 31, 2019.

**New Markets Tax Credit**

On November 14, 2019, we entered into a financing transaction with Wells Fargo Community Investment Holdings, LLC ("Wells Fargo") related to a \$7.0 million capital investment associated with a project to build out our new headquarters located in North Charleston, South Carolina (the "Project"). Wells Fargo made a \$2.3 million capital contribution to Ingevity Virginia Corporation, a wholly-owned subsidiary of Ingevity ("Ingevity VA"), which in-turn made a \$5.0 million loan to IH Investment Fund, LLC (the "Investment Fund") under a qualified New Markets Tax Credit ("NMTC") program. The NMTC program was provided for in the Community Renewal Tax Relief Act of 2000 (the "Act") and is intended to induce capital investment in qualified lower income communities. The Act permits taxpayers to claim credits against their federal income taxes for up to 39% of qualified investments in the equity of a community development entity ("CDE"). CDEs are conduit lenders through which privately managed investment institutions to make qualified low-income community investments.

Ingevity VA's \$5.0 million loan to the Investment Fund at an interest rate of one percent per annum and matures in 2041. The Investment Fund contributed the \$5.0 million loan from Ingevity VA and the initial investment of \$2.3 million (less syndication fees) by Wells Fargo to The Innovate Fund XVI, LLC ("Innovate CDE"), the CDE in this transaction. The Innovate CDE, in turn, loaned the funds (net of fees) at an interest rate of 1.21 percent and a maturity of November 14, 2044 to Ingevity. The proceeds of the loans from the Innovate CDE are to be restricted for use for the Project only. In addition, in contemplation of this transaction, on November 14, 2019, Ingevity was required to restrict \$1.0 million of cash to be used solely for the purpose of this Project.

The \$2.3 million contribution to the Investment Fund by Wells Fargo entitles Wells Fargo to substantially all of the tax benefits derived from the NMTC over a seven-year compliance period, while Ingevity effectively receives net loan proceeds equal to Wells Fargo's contributions to the Investment Fund. This transaction includes a put/call provision whereby Ingevity may be obligated or entitled to repurchase Wells Fargo's interest in the Investment Fund. The value attributed to the put/call is not significant. We believe that Wells Fargo will exercise the put option in November 2026, subsequent to the seven-year recapture period. Ingevity is required to be in compliance with various regulations and contractual provisions that apply to the NMTC arrangement, which is subject to 100 percent recapture for a period of seven years as provided by the Internal Revenue Code. Non-compliance with applicable requirements could result in the projected tax benefits not being realized and, therefore, could require Ingevity to indemnify Wells Fargo for any loss or recapture of NMTC related to the financing until such time as the obligation to deliver tax benefits is relieved. We do not anticipate any credit recaptures will be required in connection with this arrangement.

We have determined that this financing arrangement, with the Investment Fund and Innovate CDE, provides us with a controlling interest in both entities despite not having majority voting rights in either entity. Therefore, we have concluded, both entities represent a variable interest entity ("VIE"). The ongoing activities of the Investment Fund – collecting and remitting interest and fees and NMTC compliance – were all considered in the initial design and are not expected to significantly affect economic performance throughout the life of the Investment Fund. We have considered: the contractual arrangements that obligate Ingevity to deliver tax benefits and provide various other guarantees to the structure; the Innovate CDE's and Wells Fargo's overall lack of a material interest in the underlying economics of the Project; and Ingevity's obligation to absorb losses of both the Innovate CDE and Investment Fund. We have concluded that Ingevity is the primary beneficiary of each VIE and we have therefore consolidated both Innovate CDE and Investment Fund, as VIEs, in accordance with ASC 810. Post consolidation, the only material remaining balances presented on Ingevity's Consolidated Financial Statements are the original

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contribution of \$2.3 million from Wells Fargo in the Investment Fund, less the third-party debt financing (syndication) fees paid and any remaining restricted proceeds to be used solely for the purpose of the capital investments in the Project. Although ASC 810 would indicate that noncontrolling interest in these VIEs should be presented separately from Ingevity's equity based on our evaluation, we have concluded that the \$2.3 million (net of syndication fees) should be presented as a liability of Ingevity on our Consolidated Financial Statements as this more accurately reflects the substance of the financing arrangement.

As a result of this financing arrangement, we incurred \$0.6 million in syndication (debt issuance) fees, which are being amortized over the life of the note payable. The proceeds of the loans from the Innovate CDE (including loans representing the capital contribution made by Wells Fargo, net of syndication fees) of \$2.3 million, are restricted for use on the Project. As of December 31, 2019, the balance of the loan liability, net of debt issuance fees of \$0.6 million was \$1.7 million. The loan liability, net of fees is recorded in Other liabilities on our consolidated balance sheets. Additionally, at December 31, 2019, we had \$7.7 million of cash restricted for use on the Project, this amount is recorded in Prepaid expenses and other current assets in our consolidated balance sheets. We are able to request reimbursement of this restricted cash for certain expenditures made in connection with the Project which we expect to occur in the first half of 2020. Expenditures that qualify for reimbursement include leasehold improvements, equipment purchases, and other expenditures tied to the Project.

## **Note 12: Share-based Compensation**

### **Equity Incentive Plan**

The Ingevity Corporation 2016 Omnibus Incentive Plan, adopted on May 15, 2016, grants certain corporate officers, key employees and non-employee directors of Ingevity and subsidiaries different forms of benefits, including stock options, restricted stock units ("RSU"), director stock units ("DSU"), and performance stock units ("PSU"). The Ingevity Corporation 2016 Omnibus Incentive Plan has a maximum shares reserve of 4,000,000 for the grant of equity awards. As of December 31, 2019, 3,025,677 shares under the Ingevity Corporation 2016 Omnibus Incentive Plan are still available for grants, assuming that Ingevity performs at the target performance level in each year of the three-year performance period for PSU awards. Ingevity's Compensation Committee determines the long-term incentive mix, including stock options, RSUs and PSUs, and may authorize new grants annually. We typically issue new common shares for vesting of awards under our equity incentive plan.

### **Employee Stock Purchase Plan**

On December 9, 2016, our Compensation Committee and Board of Directors approved the 2017 Ingevity Corporation Employee Stock Purchase Plan ("ESPP"), which was approved by Ingevity's stockholders on April 27, 2017. The ESPP allows eligible employee participants to purchase no more than 5,000 shares of our common stock at a discount through payroll deductions up to 15 percent of their compensation deducted during the purchase period. However, no participant shall be permitted to purchase common stock with a value greater than \$25,000 in any calendar year. The ESPP is a tax-qualified plan under Section 423 of the Internal Revenue Code. The ESPP consists of a one month enrollment period preceding the three-month purchase period. Employees purchase shares in each purchase period at 85 percent of the market value of our common stock at either the beginning of the offering period or the end of the purchase period, whichever price is lower.

Under the ESPP, a total of 250,000 shares of Ingevity's common stock are reserved and authorized for issuance to participating U.S. employees, as defined by the ESPP, which excludes certain officers of Ingevity. We typically issue treasury shares for issuances under the ESPP. As of December 31, 2019, 178,506 shares under the ESPP are still available for issuance. The initial offering period under the ESPP began on July 1, 2017. During fiscal 2019, there were 33,945 shares issued under the ESPP at an average price of \$58.95.

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Our share-based compensation and ESPP expense is included in the table below.

<b>In millions</b>	<b>Years Ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
Stock option expense	\$ 3.0	\$ 2.3	\$ 1.5
ESPP expense	0.7	0.5	0.2
RSU, DSU and PSU expense	8.6	9.7	8.4
Total share-based compensation expense <sup>(1)</sup>	\$ 12.3	\$ 12.5	\$ 10.1
Income tax benefit	(2.2)	(2.9)	(3.8)
Total share-based compensation expense, net of tax	\$ 10.1	\$ 9.6	\$ 6.3

(1) Amounts reflected in "Selling, general and administrative expenses" on the Consolidated Statements of Operations.

***Stock Options***

All stock options vest in accordance with vesting conditions set by the compensation committee of Ingevity's Board of Directors. Stock options granted to date have vesting periods of one to three years from the date of grant. Incentive and non-qualified options granted under the Plan expire no later than 10 years from the grant date. Expense related to stock options granted is based on the assumptions shown in the table below:

<b>Weighted-average assumptions used to calculate expense for stock options</b>	<b>Years Ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
Risk-free interest rate	2.6 %	2.7 %	2.1 %
Average life of options (years)	6.5	6.5	6.5
Volatility	28.0 %	27.5 %	35.0 %
Dividend yield	—	—	—
Fair value per stock option	\$ 39.29	\$ 25.51	\$ 20.71



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The following table summarizes Ingevity's stock option activity.

	Number of Options (in thousands)	Weighted-average exercise price (per share)	Weighted- average remaining contractual term (years)	Aggregate intrinsic value (in thousands)
Outstanding, December 31, 2016	208	\$ 28.03	9.4	\$ 5,573
Granted	109	53.11		
Exercised	(7)	27.38		
Forfeited	(7)	31.97		
Canceled	—	—		
Outstanding, December 31, 2017	303	\$ 36.72	8.7	\$ 10,022
Granted	110	74.91		
Exercised	(6)	32.37		
Forfeited	(4)	51.66		
Canceled	—	—		
Outstanding, December 31, 2018	403	\$ 46.98	8.1	\$ 14,450
Granted	61	115.03		
Exercised	(52)	32.91		
Forfeited	(2)	106.25		
Canceled	(5)	73.73		
Outstanding, December 31, 2019	405	\$ 58.39	7.4	\$ 13,334
Exercisable, December 31, 2019	164	\$ 31.52	6.5	\$ 9,150

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

As of December 31, 2019, \$1.8 million of total unrecognized compensation cost related to stock options is expected to be recognized over a weighted-average period of one year.

***Restricted Stock Units, Deferred Stock Units and Performance-based Restricted Stock Units***

All RSUs, DSUs, and PSUs vest in accordance with vesting conditions set by the Compensation Committee of Ingevity's Board of Directors. RSUs and DSUs granted to date have vesting periods ranging from less than one year to three years from the date of grant. PSUs granted to date have vesting periods of three years from the date of grant, including grants that have a cumulative three-year performance period, subject to satisfaction of the applicable performance goals established for the respective grant. We periodically assess the probability of achievement of the performance criteria and adjust the amount of compensation expense accordingly. Compensation expense is recognized over the vesting period and adjusted for the probability of achievement of the performance criteria.

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The following table summarizes Ingevity's RSUs, DSUs and PSUs activity.

	RSUs and DSUs		PSUs	
	Number of Units (in thousands) <sup>(1)</sup>	Weighted average grant date fair value (per share)	Number of Units (in thousands) <sup>(1)</sup>	Weighted average grant date fair value (per share)
Nonvested, December 31, 2016	167	\$ 28.08	127	\$ 28.06
Granted	61	57.21	66	53.11
Vested	(75)	28.47	—	—
Forfeited	(4)	31.00	(9)	27.90
Nonvested, December 31, 2017 <sup>(2)</sup>	149	\$ 39.67	184	\$ 37.01
Granted	56	77.98	56	74.91
Vested	(89)	60.94	—	—
Forfeited	(1)	61.15	(1)	52.18
Nonvested, December 31, 2018 <sup>(2)</sup>	115	\$ 60.94	239	\$ 45.88
Granted	61	108.17	41	115.22
Vested	(59)	50.58	(118)	28.07
Forfeited	(2)	91.09	(4)	83.63
Nonvested, December 31, 2019 <sup>(2)</sup>	115	\$ 90.65	158	\$ 76.11

(1) The number granted represents the number of shares issuable upon vesting of RSUs and DSUs. For PSUs the number granted represents the number of shares issuable upon vesting assuming that Ingevity performs at the target performance level in each year of the three-year performance period.

(2) The nonvested RSU and DSU number of shares at December 31, 2019, 2018, and 2017 includes 10 thousand, 10 thousand, and eight thousand DSUs, respectively.

As of December 31, 2019, there was \$6.2 million of unrecognized share-based compensation expense related to nonvested awards. Those costs are expected to be recognized over a weighted-average period of 1.2 years.

**Ingevity Corporation**  
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**Note 13: Equity**

**Accumulated other comprehensive income (loss)**

Summarized below is the roll forward of accumulated other comprehensive income (loss), net of tax.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<b>Foreign currency translation</b>			
Beginning Balance	\$ (16.4)	\$ (10.1)	\$ (18.4)
Net gains (losses) on foreign currency translation	15.6	(6.3)	8.3
Gains (losses) on net investment hedges	3.0	—	—
Less: tax provision (benefit)	0.7	—	—
Net gains (losses) on net investment hedges	2.3	—	—
Other comprehensive income (loss), net of tax	17.9	(6.3)	8.3
Ending Balance	\$ 1.5	\$ (16.4)	\$ (10.1)
<b>Derivative Instruments</b>			
Beginning Balance	\$ 0.4	\$ —	\$ —
Gains (losses) on derivative instruments	(4.8)	1.7	(0.1)
Less: tax provision (benefit)	(1.1)	0.4	—
Net gains (losses) on derivative instruments	(3.7)	1.3	(0.1)
(Gains) losses reclassified to net income	(0.3)	(1.2)	0.1
Less: tax (provision) benefit	(0.1)	(0.3)	—
Net (gains) losses reclassified to net income	(0.2)	(0.9)	0.1
Other comprehensive income (loss), net of tax	(3.9)	0.4	—
Ending Balance	\$ (3.5)	\$ 0.4	\$ —
<b>Pension and other postretirement benefits</b>			
Beginning Balance	\$ (1.7)	\$ (1.6)	\$ (0.6)
Unrealized actuarial gains (losses) and prior service (costs) credits	(1.8)	(0.4)	(1.1)
Less: tax provision (benefit)	(0.4)	(0.1)	(0.4)
Net actuarial gains (losses) and prior service (costs) credits	(1.4)	(0.3)	(0.7)
Amortization of actuarial and other (gains) losses, prior service cost (credits), and settlement and curtailment (income) charge reclassified to net income	0.1	0.3	—
Less: tax (provision) benefit	—	0.1	—
Net actuarial and other (gains) losses, amortization of prior service cost (credits), and settlement and curtailment (income) charge reclassified to net income	0.1	0.2	—
Reclassifications of certain deferred tax effects <sup>(1)</sup>	—	—	(0.3)
Other comprehensive income (loss), net of tax	(1.3)	(0.1)	(1.0)
Ending Balance	\$ (3.0)	\$ (1.7)	\$ (1.6)
Total AOCI ending balance at December 31	<u>\$ (5.0)</u>	<u>\$ (17.7)</u>	<u>\$ (11.7)</u>

(1) Amounts reclassified to retained earnings due to early adoption of ASU 2018-02.

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**Reclassifications of accumulated other comprehensive income (loss)**

The table below provides details about the reclassifications from accumulated other comprehensive income (loss) and the affected line items in the consolidated statements of income (loss) for each of the periods presented.

<i>In millions</i>	<b>Twelve Months Ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
<b>Derivative Instruments</b>			
Currency exchange contracts <sup>(1)</sup>	\$ —	\$ 1.0	\$ 0.1
Natural gas contracts <sup>(2)</sup>	0.3	0.2	—
Total before tax	0.3	1.2	0.1
(Provision) benefit for income taxes	(0.1)	(0.3)	—
Amount included in net income (loss)	<u>\$ 0.2</u>	<u>\$ 0.9</u>	<u>\$ 0.1</u>
<b>Pension and other postretirement benefits</b>			
Amortization of prior service costs (credits) <sup>(2)</sup>	\$ —	\$ 0.5	\$ —
Amortization of unrecognized net actuarial and other gains (losses) <sup>(3)</sup>	0.1	(0.1)	—
Recognized loss due to curtailment and settlement <sup>(2)</sup>	—	(0.2)	—
Total before tax	0.1	0.2	—
(Provision) benefit for income taxes	—	—	—
Amount included in net income (loss)	<u>\$ 0.1</u>	<u>\$ 0.2</u>	<u>\$ —</u>

(1) Included within "Net sales" on the consolidated statement of operations.

(2) Included within "Cost of sales" on the consolidated statement of operations.

(3) Included within "Other (income) expense, net" on the consolidated statement of operations.

***Noncontrolling interest acquisition***

On August 1, 2018, we completed the acquisition of the remaining 30 percent noncontrolling interest in Purification Cellutions, LLC, now known as Ingevity Georgia, LLC, which was treated as a partnership for tax purposes, for a purchase price of \$80.0 million. The acquisition resulted in the elimination of Noncontrolling interest of \$11.4 million and the recognition of a Deferred tax asset of \$14.3 million, with the remainder being recorded against Additional paid in capital of \$54.3 million in our Consolidated Financial Statements.

***Share repurchases***

On February 20, 2017, the Board of Directors authorized the repurchase of up to \$100.0 million of our common stock. In addition, on November 1, 2018, the Board of Directors approved the authorization for the repurchase of up to an additional \$350.0 million of Ingevity's outstanding common stock. The repurchase program does not include a specific timetable or price targets and may be suspended or terminated at any time. Shares may be purchased through open market or privately negotiated transactions at the discretion of management based on its evaluation of market prevailing conditions and other factors.

During the year ended December 31, 2019, we repurchased \$6.4 million in common stock, representing 80,300 shares of our common stock at a weighted average cost per share of \$80.22. At December 31, 2019, \$389.5 million remained unused under our Board-authorized repurchase program. We record shares of common stock repurchased at cost as treasury stock, resulting in a reduction of stockholders' equity in the consolidated balance sheets. When the treasury shares are contributed under our employee benefit plans or issued for option exercises, we use FIFO method for determining cost. The difference between the cost of the shares and the market price at the time of contribution to an employee benefit plan is added to or deducted from Additional paid-in capital on the consolidated balance sheets.

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**Note 14: Leases**

***Operating Leases***

We lease a variety of assets for use in our operations that are classified as operating leases. At contract inception, we determine that a lease exists if the contract conveys the right to control an identified asset for a period of time in exchange for consideration. Control is considered to exist when the lessee has the right to obtain substantially all of the economic benefits from the use of an identified asset as well as the right to direct the use of that asset. If a contract is considered to be a lease, we recognize a lease liability based on the present value of the future lease payments, with an offsetting entry to recognize a right-of-use asset. As a majority of our leases do not provide an implicit rate within the lease, an incremental borrowing rate is used which is based on information available at the commencement date. Upon adoption of ASC 842, we used the incremental borrowing rate on January 1, 2019, for operating leases that commenced prior to that date. The determination of the incremental borrowing rate for each individual lease was impacted by the following assumptions: lease term, currency, and the economic environment for the physical location of the leased asset.

Our operating leases principally relate to the following leased asset classes:

Leased Asset Class	Expected Lease Term
Administrative offices	1 to 10 years
Manufacturing buildings	10 to 28 years
Manufacturing and office equipment	2 to 6 years
Warehousing and storage facilities	2 to 10 years
Vehicles	3 to 6 years
Rail cars	2 to 8 years

Leases with an initial term of 12 months or less are not recorded on the balance sheet. Lease expense is recognized on a straight-line basis over the expected lease term. Some of our leases include options to extend the lease term at our sole discretion. We account for lease and non-lease components together as a single component for all lease asset classes. The depreciable life of assets and leasehold improvements is limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise. Certain leases provide for escalation of the lease payments, as well as maintenance costs and taxes increase.

***Finance leases***

Our finance lease obligations consist of \$80.0 million at December 31, 2019 and 2018, respectively, owed to the city of Wickliffe, Kentucky, associated with Performance Materials' Wickliffe, Kentucky manufacturing site, which is due at maturity in 2027. The interest rate on the \$80.0 million finance lease obligation is 7.67%. Interest payments are payable semi-annually.

We have a finance lease obligation due in 2031 for certain assets located at our Performance Materials' Waynesboro, Georgia manufacturing facility. The lease is with the Development Authority of Burke County ("Authority"). The Authority established the sale-leaseback of these assets by issuing an industrial development revenue bond. The bond was purchased by Ingevity and the obligations under the finance lease remain with Ingevity. Accordingly, we offset the finance lease obligation and bond on our consolidated balance sheets.

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<i>In millions</i>	<b>Financial Statement Caption</b>	<b>December 31, 2019</b>
<b>Assets</b>		
Operating lease assets, net <sup>(1)</sup>	Operating lease assets, net	\$ 53.4
Finance lease assets, net <sup>(2)</sup>	Property, plant, and equipment, net	33.4
Finance lease assets, net <sup>(2)</sup>	Other assets, net	1.2
Total lease assets		<u>\$ 88.0</u>
<b>Liabilities</b>		
<b>Current</b>		
Operating lease liabilities <sup>(3)</sup>	Current operating lease liabilities	\$ 17.1
Finance lease liabilities	Notes payable and current maturities of long-term debt	—
<b>Noncurrent</b>		
Operating lease liabilities	Noncurrent operating lease liabilities	36.7
Finance lease liabilities	Long-term debt including finance lease obligations	80.0
Total lease liabilities		<u>\$ 133.8</u>

(1) Operating lease assets, net are recorded net of accumulated amortization of \$17.6 million as of December 31, 2019.

(2) Finance lease assets, net are recorded net of accumulated amortization in Property, plant, and equipment, net and Other assets, net of \$64.3 million and \$0.3 million, as of December 31, 2019, respectively.

(3) Operating lease liabilities includes \$0.2 million of accrued interest.

**Lease cost**

<i>In millions</i>	<b>Financial Statement Caption</b>	<b>December 31, 2019</b>
<b>Operating lease cost<sup>(1)</sup></b>		
	Cost of sales	\$ 21.5
	Selling, general, and administrative	2.4
<b>Finance lease cost</b>		
Amortization of leased assets	Cost of sales	\$ 1.9
Interest on lease liabilities	Interest expense, net	6.1
	Net lease cost <sup>(2)</sup>	<u>\$ 31.9</u>

(1) Includes short-term leases and variable lease costs, which are immaterial.

(2) Only on the rare occasion do we sublease our leased assets; as a result this amount excludes sublease income which is immaterial.

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**Maturity of Lease Liabilities**

<i>In millions</i>	December 31, 2019		
	Operating leases	Finance leases	Total
2020	\$ 19.4	\$ 6.1	\$ 25.5
2021	15.1	6.1	21.2
2022	10.9	6.1	17.0
2023	6.9	6.1	13.0
2024	3.4	6.1	9.5
2025 and thereafter	5.0	95.4	100.4
Total lease payments	\$ 60.7	\$ 125.9	\$ 186.6
Less: Interest	6.9	45.9	52.8
Present value of lease liabilities <sup>(1)</sup>	<u>\$ 53.8</u>	<u>\$ 80.0</u>	<u>\$ 133.8</u>

(1) As of December 31, 2019, we have additional operating lease commitments that have not yet commenced of approximately \$21.4 million for the relocation of our corporate headquarters. The lease is expected to commence in the first half of 2020 and the lease term is for 15 years with two 5 year extensions. Additionally, we have operating lease commitments that have not yet commenced of approximately \$2.3 million primarily related to rail car leases.

Minimum lease payments pursuant to agreements as of December 31, 2018, under operating leases that have non-cancelable lease terms in excess of 12 months and under capital leases presented in accordance with ASC 840 are as follows:

<i>In millions</i>	Operating leases	Finance leases
2019	\$ 21.9	\$ 6.1
2020	17.2	6.1
2021	13.3	6.1
2022	9.7	6.1
2023	6.0	6.1
2024 and thereafter	5.9	101.5
Minimum lease payments	\$ 74.0	\$ 132.0
Less: amount representing interest		52.0
Finance lease obligations		<u>\$ 80.0</u>

**Lease Term and Discount Rate**

	December 31, 2019
Weighted-average remaining lease term (years)	
Operating leases	4.2
Finance leases	8.5
Weighted-average discount rate	
Operating leases	5.67 %
Finance leases	7.67 %

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**Other Information**

<i>In millions</i>	<u>December 31, 2019</u>
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 23.8
Operating cash flows from finance leases	6.1
Financing cash flows from finance leases	—

**Note 15: Retirement Plans**

**Defined Contribution Plans**

On January 1, 2016, the Ingevity Corporation Retirement Savings Plan ("Plan") was established. The Plan is a qualified salary-reduction plan under Section 401(k) of the U.S. Internal Revenue Code. Eligible U.S. employees may participate by contributing a portion of their compensation. For non-union eligible employees participating in the Plan Ingevity makes matching contributions up to six percent of the employee deferral. In addition to the matching contributions, Ingevity also makes a non-elective contribution of three percent of eligible compensation per payroll for non-union employees. For union eligible employees participating in the Plan Ingevity makes matching contributions up to 100 percent of the first three percent of the employee deferrals and 50 percent on the next two percent of deferrals.

U.S. salaried employees who were no longer eligible to participate in our prior parent's defined benefit pension plan were provided an enhanced contribution into the Plan. The enhanced benefits consist of a transition contribution of four or ten percent of the employee's eligible compensation for employees who were grandfathered into our prior parent's cash balance and final average pay pension plan, respectively. The transition contributions will continue to December 31, 2020, unless the grandfathered employee terminates employment sooner.

Charges associated with employer contributions to the Plan were \$10.6 million, \$10.2 million, and \$9.3 million for the years ended December 31, 2019, 2018, and 2017, respectively.

**Defined Benefit Pension and Postretirement Plans**

On May 16, 2016, Ingevity established qualified and non-qualified benefit plans to provide pension and post-retirement benefits to certain employees and retirees. Our retirement obligations consist of accrued defined benefit obligations earned by Ingevity domestic hourly union employees; accrued obligations from a frozen non-qualified defined benefit pension plan for certain salaried and former salaried employees of Ingevity; and other post-retirement medical and life insurance benefits.

We are required to recognize in our consolidated balance sheets the overfunded and underfunded status of our defined benefit postretirement plans. The overfunded and underfunded status is defined as the difference between the fair value of plan assets and the projected benefit obligation. We are also required to recognize, as a component of other comprehensive income, the actuarial gains and losses and the prior service costs and credits that arise during the period.



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The following table summarizes the weighted average assumptions used and components of our defined benefit postretirement plans. The following table also reflects a measurement date of December 31:

<i>In millions, except percentages</i>	Pensions		Other Benefits	
	December 31,			
	2019	2018	2019	2018
Following are the weighted average assumptions used to determine the benefit obligations at December 31:				
Discount rate - qualified benefit plans	3.15 %	4.20 %	— %	— %
Discount rate - non-qualified benefit plans	3.10 %	4.15 %	3.05 %	4.10 %
Rate of compensation increase	N/A	N/A	N/A	N/A
Change in projected benefit obligation				
Project benefit obligation at January 1	\$ 29.4	\$ 28.8	\$ 0.7	\$ 0.8
Service cost	1.2	1.6	—	—
Interest cost	1.2	1.0	—	—
Actuarial loss (gain)	5.3	(2.0)	0.2	(0.1)
Plan amendments	—	0.5	—	—
Benefit payments	(0.6)	(0.5)	—	—
Projected benefit obligation at December 31 <sup>(1)</sup>	36.5	29.4	0.9	0.7
Change in plan assets				
Fair value of plan asset at January 1	22.6	22.6	—	—
Actual return on plan assets	4.7	(1.1)	—	—
Company contributions	0.1	1.6	—	—
Benefit payments	(0.6)	(0.5)	—	—
Fair value of plan assets at December 31	26.8	22.6	—	—
Funded Status				
Net Funded Status of the Plan (Liability)	\$ (9.7)	\$ (6.8)	\$ (0.9)	\$ (0.7)
Amount recognized in the consolidated balance sheets:				
Pension and other postretirement benefit asset <sup>(2)</sup>	\$ —	\$ —	\$ —	\$ —
Pension and other postretirement benefit (liability) <sup>(2)</sup>	(9.7)	(6.8)	(0.9)	(0.7)
Total Net Funded Status of the Plan (Liability)	\$ (9.7)	\$ (6.8)	\$ (0.9)	\$ (0.7)

- (1) The accumulated benefit obligation for all years presented equals the projected benefit obligation for each plan, respectively.
- (2) Asset balance is included in "Other assets" and liability balances are included in "Other liabilities" on the consolidated balance sheet.

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**Amounts Recognized in Other Comprehensive Income (Loss)**

Changes in plan assets and benefit obligations recognized in other comprehensive income (loss) are as follows:

<i>In millions</i>	Pensions			Other Benefits			Total		
	Years Ended December 31,								
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Current year net actuarial loss (gain)	\$ 1.7	\$ —	\$ 1.1	\$ 0.1	\$ (0.1)	\$ 0.1	\$ 1.8	\$ (0.1)	\$ 1.2
Current year prior service cost (credit)	—	0.5	—	—	—	—	—	0.5	—
Amortization of net actuarial (loss) gain and prior service (cost) credit	(0.1)	—	—	—	—	—	(0.1)	—	—
Curtailments	—	(0.2)	—	—	—	—	—	(0.2)	—
Total recognized in other comprehensive (income) loss, before taxes	1.6	0.3	1.1	0.1	(0.1)	0.1	1.7	0.2	1.2
Total recognized in other comprehensive (income) loss, after taxes	<u>\$ 1.2</u>	<u>\$ 0.3</u>	<u>\$ 0.7</u>	<u>\$ 0.1</u>	<u>\$ (0.1)</u>	<u>\$ 0.1</u>	<u>\$ 1.3</u>	<u>\$ 0.2</u>	<u>\$ 0.8</u>

**Amounts Recognized in Accumulated Other Comprehensive Income (Loss)**

The amounts in accumulated other comprehensive income (loss) that have not yet been recognized as components of net periodic benefit cost are as follows:

<i>In millions</i>	Pensions		Other Benefits		Total	
	December 31,					
	2019	2018	2019	2018	2019	2018
Net actuarial (gain) loss	\$ 3.0	\$ 1.3	\$ —	\$ (0.1)	\$ 3.0	\$ 1.2
Prior service cost (credit)	0.9	0.9	—	—	0.9	0.9
Accumulated other comprehensive (income) loss, before taxes	<u>3.9</u>	<u>2.2</u>	<u>—</u>	<u>(0.1)</u>	<u>3.9</u>	<u>2.1</u>
Accumulated other comprehensive (income) loss, after taxes	\$ 3.0	\$ 1.8	\$ —	\$ (0.1)	\$ 3.0	\$ 1.7

The estimated net actuarial loss and prior service cost that will be amortized from accumulated other comprehensive income (loss) into our net annual benefit cost during 2020 are zero and less than \$0.1 million, respectively.

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**Net Annual Benefit Costs Assumptions**

The following table summarizes the weighted-average assumptions used for the components of net annual benefit cost:

<i>In millions, except percentages</i>	Pensions			Other Benefits		
	Years Ended December 31,					
	2019	2018	2017	2019	2018	2017
Discount rate - qualified benefit plans <sup>(1)</sup>	4.20 %	3.55 %	4.10 %	— %	— %	— %
Discount rate - non-qualified benefit plans <sup>(1)</sup>	4.15 %	3.55 %	4.15 %	4.10 %	3.45 %	3.95 %
Expected return on plan assets	4.50 %	4.00 %	4.50 %	N/A	N/A	N/A
<b>Components of net annual benefit cost:</b>						
Service cost <sup>(2)</sup>	\$ 1.2	\$ 1.6	\$ 1.2	\$ —	\$ —	\$ —
Interest cost <sup>(3)</sup>	1.2	1.0	1.0	—	—	—
Expected return on plan assets <sup>(3)</sup>	(1.0)	(0.9)	(0.9)	—	—	—
Amortization of prior service cost <sup>(2)</sup>	0.1	0.1	—	—	—	—
Amortization of net actuarial and other (gain) loss <sup>(3)</sup>	—	—	—	—	—	—
Recognized (gain) loss due to curtailments	—	0.2	—	—	—	—
<b>Net annual benefit cost</b>	<b>\$ 1.5</b>	<b>\$ 2.0</b>	<b>\$ 1.3</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ —</b>

- (1) The discount rate used to calculate pension and other post-retirement obligations was based on a review of available yields on high-quality corporate bonds. In selecting a discount rate, we placed particular emphasis on a discount rate yield-curve provided by our third-party actuary which takes into consideration the projected cash flows that represent the expected timing and amount of our plans' benefit payments.
- (2) Amounts are recorded to "Cost of sales" on our consolidated statements of operations consistent with the employee compensation costs that participate in the plan.
- (3) Amounts are recorded to "Other (income) expense, net" on our consolidated statements of operations.

**Contributions**

We made a voluntary cash contribution of zero and \$1.5 million to our Union Hourly defined benefit pension plan in the years ended December 31, 2019 and 2018, respectively. There are no required cash contributions to our Union Hourly defined benefit pension plan in fiscal 2020, and we currently have no plans to make any voluntary cash contributions in fiscal 2020.

**Fair Value Hierarchy**

Following is a description of the valuation methodologies used for the investment measure at fair value. See Note 6 for the definition of fair value and the descriptions of Level 1, 2 and 3 in the fair value hierarchy.

**Cash and short-term funds** — Cash and quoted short-term instruments are valued at the closing price or the amount held on deposit by the custodian bank.

**Mutual Funds** – Mutual funds are valued at the closing price reported on the major market on which the individual securities are traded. Substantially all mutual funds are classified within Level 1 of the valuation hierarchy.

**Pooled Funds** - These investment vehicles are valued using the Net Asset Value (NAV) provided by the fund administrator. The NAV is based on the value of the underlying assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding.

**Other** - Other assets are represented by investments in a series limited partnership. These assets are not actively traded and classified as Level 2.

**Ingevity Corporation**  
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The following table presents our fair value hierarchy for our major categories of pension plan assets by asset class.

<i>In millions</i>	December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Measured at Net Asset Value
Cash and short-term investments	\$ 0.1	\$ 0.1	\$ —	\$ —	\$ —
Mutual funds	3.0	3.0	—	—	—
Pooled funds	22.4	—	—	—	22.4
Other	1.3	—	1.3	—	—
<b>Total assets</b>	<b>\$ 26.8</b>	<b>\$ 3.1</b>	<b>\$ 1.3</b>	<b>\$ —</b>	<b>\$ 22.4</b>

<i>In millions</i>	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Measured at Net Asset Value
Cash and short-term investments	\$ 0.1	\$ 0.1	\$ —	\$ —	\$ —
Mutual funds	3.1	3.1	—	—	—
Pooled funds	18.8	—	—	—	18.8
Other	0.6	—	0.6	—	—
<b>Total assets</b>	<b>\$ 22.6</b>	<b>\$ 3.2</b>	<b>\$ 0.6</b>	<b>\$ —</b>	<b>\$ 18.8</b>

**Estimated Future Benefit Payments**

The following table reflects the estimated future benefit payments for our pension and other postretirement benefit plans. These estimates take into consideration expected future service, as appropriate.

<i>In millions</i>	Pensions	Other Benefits
2020	\$ 0.6	\$ —
2021	0.8	—
2022	1.0	—
2023	1.1	—
2024	1.2	—
2025-2029	8.3	0.2

**Sensitivity Analysis**

A one-half percent increase in the assumed discount rate would have decreased our qualified pension benefit obligations by \$2.6 million at December 31, 2019 and decreased our qualified pension benefit costs by \$0.1 million for 2019. A one-half percent decrease in the assumed discount rate would have increased our qualified pension obligations by \$3.0 million at December 31, 2019 and increased our qualified pension benefit cost by \$0.2 million for 2019.

A one-half percent increase in the assumed expected long-term rate of return on plan assets would have decreased our qualified pension costs by \$0.1 million for 2019. A one-half percent decrease in the assumed expected long-term rate of return on plan assets would have increased our qualified pension costs by \$0.1 million for 2019.

**Note 16: Restructuring and Other (Income) Charges, net**

We continually perform strategic reviews and assess the return on our operations which sometimes results in a plan to restructure the business. The cost and benefit of these strategic restructuring initiatives are recorded as restructuring and other (income) charges, net recorded within Restructuring and other (income) charges, net on our consolidated statement of operations. These costs are excluded from our operating segment results.

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We record an accrual for severance and other non-recurring costs under the provisions of the relevant accounting guidance. Additionally, in some restructuring plans write-downs of long-lived assets may occur. Two types of assets are impacted: assets to be disposed of by sale and assets to be abandoned. Assets to be disposed of by sale are measured at the lower of carrying amount or estimated net proceeds from the sale. Assets to be abandoned with no remaining future service potential are written down to amounts expected to be recovered. The useful lives of assets to be abandoned that have a remaining future service potential are adjusted and depreciation is recorded over the adjusted useful life. Below provides detail of the restructuring and other (income) charges, net incurred.

**2019 activities**

During the third quarter of 2019, we initiated a reorganization as part of an effort to improve our Performance Chemical's workflow and efficiency to best serve our customers' needs and reduce costs. As a result of this reorganization, we recorded \$1.5 million in severance and other employee-related costs in the year ended December 31, 2019.

In April 2019, we sold assets from the Performance Chemicals derivatives operations in Palmeira, Brazil. These assets were part of a facility that was closed as a result of a restructuring event in 2016. As a result of this sale, we recorded \$0.4 million as a gain on sale of assets, as well as \$0.7 million charge related to other miscellaneous exit costs, in the year ended December 31, 2019.

**2018 activities**

In February 2018, we sold assets from the Performance Chemicals derivatives operations in Duque De Caxias, Rio de Janeiro, Brazil. These assets were part of a facility that was closed as a result of a restructuring event in 2016. As a result of this sale, we recorded \$0.6 million as a gain on sale of assets offset by other employee related costs of \$0.1 million for the year ended December 31, 2018.

**2017 activities**

In January 2017, we initiated a reorganization to streamline our leadership team, flatten the organization and reduce costs. Because of this reorganization, we recorded \$1.3 million in severance and other employee-related costs for the year ended December 31, 2017.

During the year ended December 31, 2017, we also recorded \$2.4 million of additional miscellaneous exit costs primarily associated with the exit of our Performance Chemicals' manufacturing operations in Palmeira, Santa Catarina, Brazil, which began in the fourth quarter of 2016.

Detail on the restructuring charges and asset disposal activities is provided below.

<i>In millions</i>	<b>Years Ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
Restructuring and other (income) charges, net			
Gain on sale of assets and businesses	\$ (0.4)	\$ (0.6)	\$ —
Severance and other employee-related costs <sup>(1)</sup>	1.5	0.1	1.3
Other (income) charges, net <sup>(2)</sup>	0.7	—	2.4
<b>Total restructuring and other (income) charges, net</b>	<b>\$ 1.8</b>	<b>\$ (0.5)</b>	<b>\$ 3.7</b>

(1) Represents severance and employee benefit charges.

(2) Primarily represents costs associated with rental payments, contract terminations, and other miscellaneous exit costs. Other income primarily represents favorable developments on previously recorded exit costs as recoveries associated with restructuring activities.

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**Roll forward of Restructuring Reserves**

The following table shows a roll forward of restructuring reserves that will result in cash spending.

Balance at 12/31/2017 <sup>(1)</sup>	Change in Reserve <sup>(2)</sup>	Cash Payments	Other <sup>(3)</sup>	Balance at 12/31/2018 <sup>(1)</sup>	Change in Reserve <sup>(2)</sup>	Cash Payments	Other <sup>(3)</sup>	Balance at 12/31/2019 <sup>(1)</sup>
\$ 0.2	0.1	(0.3)	—	\$ —	2.2	(1.8)	—	\$ 0.4

(1) Included in "Accrued Expenses" on the consolidated balance sheet.

(2) Includes severance and other employee-related costs, exited leases, contract terminations and other miscellaneous exit costs. Any asset write-downs including accelerated depreciation and impairment charges are not included in the above table.

(3) Primarily non-cash charges and foreign currency translation adjustments.

**Note 17: Acquisitions**

**Perstorp Holding AB's Caprolactone Business**

On February 13, 2019, we completed the acquisition of 100 percent of the equity of Perstorp UK Ltd. with Perstorp Holding AB ("Seller"), including the Seller's entire caprolactone business ("Caprolactone Business"), herein referred to as the "Caprolactone Acquisition." The Caprolactone Acquisition was completed for an aggregate purchase price of €578.9 million (\$652.5 million), less assumed debt of €100.4 million (\$113.1 million). At closing, the assumed debt was settled with an affiliate of the Seller. The Caprolactone Acquisition is being integrated into our Performance Chemicals segment and is included within our engineered polymers product line. Our revolving credit facility was utilized as the primary source of funds, along with available cash on hand, to fund the Caprolactone Acquisition.

The Caprolactone Acquisition contributed Net sales of \$122.1 million for the year ended December 31, 2019, to the consolidated operating results. Although the integration is not complete, a substantial portion of the Caprolactone Business was integrated into our existing Performance Chemicals operations during the fourth quarter of 2019. As a result, we were no longer able to separate operating performance of the Caprolactone Acquisition from our existing Performance Chemicals' operating results.

***Purchase Price Allocation***

The Caprolactone Acquisition is considered an acquisition of a business under business combinations accounting guidance, and therefore we applied acquisition accounting. Acquisition accounting requires, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. The aggregate purchase price noted above was allocated to the major categories of assets acquired and liabilities assumed based upon their estimated fair values at the acquisition date using primarily Level 2 and Level 3 inputs. These Level 2 and Level 3 valuation inputs include an estimate of future cash flows and discount rates. Additionally, estimated fair values are based, in part, upon outside appraisals for certain assets, including specifically-identified intangible assets. See Note 6 for additional explanation of Level 2 and Level 3 inputs. We finalized the purchase price allocation in Q4 2019. The following table represents our final purchase price allocation as well as an explanation of changes from the initial preliminary purchase price allocation.

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**Purchase Price Allocation**

<i>In millions</i>	<b>Weighted Average Amortization Period</b>	<b>Fair Value</b>
Cash and cash equivalents		\$ 0.7
Accounts receivable, net		15.7
Inventories <sup>(1)</sup>		21.7
Prepaid and other current assets		1.9
Property, plant and equipment <sup>(5)</sup>		86.3
Operating lease assets, net <sup>(5)</sup>		1.8
Intangible assets <sup>(2)</sup>		
Customer relationships <sup>(6)</sup>	17 years	159.0
Developed technology <sup>(6)</sup>	12 years	64.8
Brands <sup>(6)</sup>	17 years	67.0
Non-compete agreement	3 years	0.5
Goodwill <sup>(3)(5)</sup>		295.1
Other assets		1.3
Total fair value of assets acquired		\$ 715.8
Accounts payable		13.6
Accrued expenses <sup>(5)</sup>		2.3
Long-term debt		113.1
Operating lease liabilities <sup>(5)</sup>		1.7
Deferred income taxes <sup>(5)</sup>		45.7
Total fair value of liabilities assumed		\$ 176.4
Cash and restricted cash acquired <sup>(4)</sup>		1.5
	<b>Total cash paid, less cash and restricted cash acquired</b>	<b>\$ 537.9</b>

(1) Fair value of finished goods inventories acquired included a step-up in the value of \$8.4 million, all of which was expensed in the three months ended March 31, 2019. The expense is included in "Cost of sales" on the consolidated statement of operations. Inventories are accounted for on a FIFO basis of accounting.

(2) The aggregate amortization expense was \$14.4 million for the year ended December 31, 2019. Estimated amortization expense is as follows: 2020 - \$19.6 million, 2021 - \$19.6 million, 2022 - \$19.5 million, 2023 - \$19.5 million, and 2024 - \$19.5 million. The estimated pre-tax amortization expense may fluctuate due to changes in foreign currency.

(3) Goodwill consists of estimated future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. This acquired goodwill has been included within our Performance Chemicals reporting unit, see Note 9 for further information regarding our allocation of goodwill among our reportable segments. None of the acquired goodwill will be deductible for income tax purposes.

(4) Cash and cash equivalents and restricted cash were \$0.7 million and \$0.8 million, respectively, at closing. Restricted cash is included in "Prepaid and other current assets" on the consolidated balance sheet.

(5) Since the acquisition, we completed a full physical asset inspection and assessment of the property, plant and equipment acquired. We identified \$2.5 million of assets, which were included in the original valuation that were no longer in use after the acquisition. Reducing the asset value also required a reduction of the previously established deferred tax liability by \$0.4 million. The net adjustment resulted in an increase to Goodwill of \$2.1 million. We also obtained all outstanding lease contracts for the Caprolactone Business, and completed our assessment of the leases under ASC 842. The result was the identification of operating lease assets, current lease liabilities, and noncurrent lease liabilities at the date of acquisition in the amounts of \$1.8 million, \$0.1 million, and \$1.7 million, respectively. Finally, we completed the acquired legal entity fiscal year 2018 tax filings, our assessment of potential uncertain tax positions, as well as our of the realizability of acquired deferred taxes at the acquisition date. The result was a decrease to goodwill of \$2.3 million and deferred income taxes of \$1.7 million and an increase to taxes receivable of \$0.6 million from the preliminary purchase price allocation.

(6) The fair values assigned to the Customer Relationships intangible asset was determined by using a multi-period excess earnings model ("MP-Model"). Significant assumptions utilized in MP-Model are the attrition rate, revenue growth rates, and the discount rate. The fair values assigned to the Developed Technology and Brands were determined using a relief from royalty model ("RfR-Model"). The RfR-Model's significant assumptions include the revenue growth rates, royalty rate, and discount rate considered in the aggregate.

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**Georgia-Pacific's Pine Chemical Business**

On March 8, 2018, pursuant to the terms and conditions set forth in the asset purchase agreement with Georgia-Pacific Chemicals LLC, Georgia-Pacific LLC (together with Georgia-Pacific Chemicals LLC, "GP") and Ingevity Arkansas, LLC, a wholly-owned subsidiary of Ingevity, we completed the acquisition (the "Pine Chemical Acquisition") of substantially all the assets primarily used in GP's pine chemical business (the "Pine Chemical Business") for an aggregate purchase price of \$315.5 million. The aggregate purchase price was finalized during the third quarter of 2018 with a final payment to GP in the amount of \$0.5 million to finalize the net working capital acquired on March 8, 2018. The Pine Chemical Business included the assets and facilities related to tall oil fractionation operations and the production or modification of tall oil fatty acids, tall oil rosins, rosin derivatives and formulated products. In addition, on the Pine Chemical Acquisition, the Company and GP entered into a 20-year, market-based crude tall oil ("CTO") supply contract with certain of Georgia-Pacific's paper mill operations.

The Pine Chemical Business was integrated into our Performance Chemicals segment and has been included within our results of operations since March 8, 2018. Although the integration was not complete, a substantial portion of the Pine Chemical Business was integrated into our existing Performance Chemicals operations as of September 30, 2018. As a result, we were no longer able to separate net sales and operating performance of the Pine Chemical Acquisition from our existing Performance Chemicals' operating results.

***Purchase Price Allocation***

The following table summarizes the consideration paid for the Pine Chemical Business and the assets acquired and liabilities assumed:



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**Purchase Price Allocation**

<i>In millions</i>	<b>Weighted Average Amortization Period</b>	<b>Fair Value</b>
Accounts receivable		\$ 16.2
Inventories <sup>(1)</sup>		9.4
Property, plant and equipment		39.3
Intangible assets <sup>(2)</sup>		
Patents	12 years	1.9
Non-compete agreement	3 years	2.2
Customer relationships	11 years	129.0
Goodwill <sup>(3)</sup>		118.7
Other assets		0.1
<b>Total fair value of assets acquired</b>		<b>\$ 316.8</b>
Accounts payable		0.8
Accrued expenses		0.5
<b>Total fair value of liabilities assumed</b>		<b>\$ 1.3</b>
	<b>Total cash paid</b>	<b>\$ 315.5</b>

- (1) Fair value of finished goods inventories acquired included a step-up in the value of \$1.4 million, which was expensed in the year ended December 31, 2018. The expense is included in "Cost of sales" on the consolidated statement of operations. Inventories are accounted for on a LIFO basis of accounting.
- (2) The aggregate amortization expense was \$12.7 million and \$10.6 million for the years ended December 31, 2019 and 2018, respectively. Estimated amortization expense is as follows: 2020 - \$12.7 million, 2021 - \$12.0 million, 2022 - \$11.8 million, 2023 - \$11.8 million, and 2024 - \$11.8 million.
- (3) Goodwill largely consists of expected cost synergies and economies of scale resulting from the business combination. We expect the full amount to be deductible for income tax purposes. This acquired goodwill has been included within our Performance Chemicals reporting unit, see Note 9 for further information regarding our allocation of goodwill among our reporting segments.

***Unaudited Pro Forma Financial Information***

The following unaudited pro forma financial information assume that the Caprolactone Acquisition as well as the acquisition of the Pine Chemical Business occurred at the beginning of the periods presented. These unaudited pro forma results are presented for informational purposes only and are not necessarily indicative of what the actual results of operations would have been if the acquisitions occurred at the beginning of the periods presented, nor are they indicative of future results of operations. The pro forma results include additional interest expense on the debt issued to finance the acquisition, amortization and depreciation expense based on the estimated fair value and useful lives of intangible assets and tangible assets, and related tax effects. The pro forma results presented below are adjusted for the removal of Acquisition and other related costs of \$35.3 million and \$12.2 million for the years ended December 31, 2019 and 2018, respectively.

<i>In millions</i>	<b>Years Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
Net sales	\$ 1,310.6	\$ 1,320.8
Income (loss) before income taxes	262.8	247.0
Diluted earnings (loss) per share attributable to Ingevity stockholders	\$ 5.01	\$ 4.48

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**Acquisition and other-related costs**

Costs incurred to complete and integrate the acquisitions noted above into our Performance Chemicals reporting segment are expensed as incurred on our consolidated statement of operations. The following table summarizes the costs incurred associated with these combined activities.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Legal and professional service fees	\$ 14.2	\$ 6.9	\$ 7.1
Loss on hedging purchase price	12.7	3.9	—
Acquisition-related costs	26.9	10.8	7.1
Inventory fair value step-up amortization <sup>(1)</sup>	8.4	1.4	—
Acquisition and other-related costs	\$ 35.3	\$ 12.2	\$ 7.1

(1) Included within "Cost of sales" on the consolidated statement of operations.

**Note 18: Income Taxes**

Domestic and foreign components of Income (loss) before income taxes are shown below:

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Domestic	\$ 203.2	\$ 213.3	\$ 180.1
Foreign	24.7	8.5	(5.3)
Total	\$ 227.9	\$ 221.8	\$ 174.8

The provision (benefit) for income taxes consisted of:

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<b>Current</b>			
Federal	\$ 19.9	\$ 32.5	\$ 51.6
State and local	5.0	6.0	3.7
Foreign	4.5	0.6	—
Total current	\$ 29.4	\$ 39.1	\$ 55.3
<b>Deferred</b>			
Federal	\$ 13.8	\$ 1.6	\$ (25.3)
State and local	2.5	(1.1)	(1.3)
Foreign	(1.5)	0.4	0.9
Total deferred	\$ 14.8	\$ 0.9	\$ (25.7)
Provision (benefit) for income taxes	\$ 44.2	\$ 40.0	\$ 29.6

We recorded \$(0.9) million, \$0.1 million, and \$(0.4) million of deferred tax provision (benefit) in components of other comprehensive income during the years ended December 31, 2019, 2018 and 2017, respectively.

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The following table summarizes the major differences between taxes computed at the U.S. federal statutory rate and the actual income tax provision attributable to operations:

<i>In millions, except percentage data</i>	Years Ended December 31,		
	2019	2018	2017
Federal statutory tax rate	\$ 47.9	\$ 46.6	\$ 61.2
State and local income taxes, net of federal benefit	6.3	4.4	2.4
Changes in valuation allowance	(1.9)	(2.2)	1.7
Domestic manufacturing deduction	—	—	(5.1)
Noncontrolling interest in consolidated partnership	—	(2.7)	(6.6)
Excess stock compensation	(5.9)	(0.9)	(0.7)
Federal and state tax credits	(1.9)	(2.1)	(0.7)
U.S. Tax Reform	—	(1.9)	(24.5)
Foreign derived intangible income	(3.8)	(3.2)	—
Officers compensation	3.3	0.6	0.2
Other	0.2	1.4	1.7
Provision (benefit) for income taxes	<u>\$ 44.2</u>	<u>\$ 40.0</u>	<u>\$ 29.6</u>
Effective tax rate	19.4 %	18.0 %	16.9 %

The increase in our effective tax rate from 2018 to 2019 was due to several factors as described below.

The August 1, 2018 acquisition of the remaining 30 percent noncontrolling interest in Purification Cellutions, LLC (see Note 13 for more information) resulted in an increase to our effective tax rate in 2019 as compared to 2018. We recognized \$5.0 million of excess tax benefits from the vesting of share-based awards. We incurred nondeductible acquisition-related charges during the year, resulting in a tax impact of \$1.4 million. Also, as a result of finalized regulations stemming from U.S. Tax Reform, we incurred tax expense relating to an adjustment of our net deferred tax liabilities to account for the future non-deductible portion of our officer's compensation of \$1.1 million. Additionally, in 2018, we adjusted our net deferred tax liabilities by \$1.9 million due to further interpretations of U.S. Tax Reform the impact of which did not repeat in 2019. The remaining driver to the change in our effective tax rate from 2018 to 2019 is due to an increase in our earnings recognized in foreign jurisdictions some of which are taxed at higher rates than our U.S. domestic earnings.

The increase in our effective tax rate from 2017 to 2018 is mainly due to the benefit of reducing our net deferred tax liability to the 21.0 percent rate in 2017 and effects of certain provisions under U.S. Tax Reform. Our U.S. net deferred tax liabilities as of December 31, 2017 were remeasured from 35.0 percent to 21.0 percent, resulting in \$24.5 million of provisional deferred income tax benefit and a reduction in our effective tax rate of 14.0 percent in 2017. During the year ended December 31, 2018, we further adjusted our net deferred tax liabilities by \$1.9 million due to further interpretations of U.S. Tax Reform. The remaining difference in our effective tax rate for the years ended December 31, 2018 and 2017, respectively, is due to the change in certain favorable tax deductions under U.S. Tax Reform, such as the elimination of the domestic manufacturing deduction and the addition of the foreign-derived intangible income deduction. In addition to the impact of U.S. Tax Reform, the change in the effective tax rate period over period was also driven by the acquisition of our noncontrolling interest.

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The significant components of deferred tax assets and liabilities are as follows

<i>In millions</i>	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
Deferred tax assets:		
Accrued restructuring	\$ 0.1	\$ 7.7
Employee benefits	12.0	14.9
Intangibles	—	17.1
Net operating losses	15.4	8.1
Leases	10.3	—
Other	7.3	8.2
Total deferred tax assets	<u>\$ 45.1</u>	<u>\$ 56.0</u>
Valuation allowance	(13.0)	(15.5)
Total deferred tax assets, net of valuation allowance	<u>\$ 32.1</u>	<u>\$ 40.5</u>
Deferred tax liabilities:		
Fixed assets	\$ 83.4	\$ 68.3
Intangibles	28.6	—
Inventory	3.4	4.8
Leases	10.4	—
Other	1.6	1.4
Total deferred tax liabilities	<u>\$ 127.4</u>	<u>\$ 74.5</u>
Net deferred tax asset (liability) <sup>(1)</sup>	<u>\$ (95.3)</u>	<u>\$ (34.0)</u>

(1) Presentation in the table above is on a gross basis, however due to jurisdictional netting, our net deferred tax asset and liability recorded on our consolidated balance sheets is \$5.0 million and \$100.3 million million, respectively, as of December 31, 2019 and \$2.9 million and \$36.9 million, respectively, as of December 31, 2018.

Our net deferred tax liabilities increased \$61.3 million at December 31, 2019 as compared to December 31, 2018. The Caprolactone Acquisition, completed on February 13, 2019, resulted in the recognition of \$45.7 million of net deferred tax liabilities (see Note 17 for more information). In April 2019, we sold assets from the Performance Chemicals derivatives operations in Palmeira, Brazil (see Note 16 for more information) the resulting loss increased our net operating loss deferred tax asset by \$6.0 million in 2019. Additionally, deferred tax liabilities associated with fixed assets increased significantly in 2019 due to an increase in assets placed in service in 2019 versus 2018 resulting in additional bonus depreciation deductions. Also, in connection with the adoption of ASC 842 (see Note 14 for more information), we recorded a deferred tax asset and corresponding deferred tax liability, which effectively offset.

We have deferred tax assets, including net operating loss carryforwards, which are available to offset future taxable income. A valuation allowance has been provided where management has determined that it is more likely than not that the deferred tax assets will not be realized. In 2019, we recognized a tax benefit of \$2.4 million by releasing a valuation allowance that was associated with our Chinese operations. The decision to release the valuation allowance due to positive evidence supporting future taxable income available to offset these losses.

At December 31, 2019, foreign net operating loss carryforwards totaled \$52.0 million. Of this total, \$4.0 million will expire in 3 to 10 years and \$48.0 million has no expiration date.

Due to the global nature of our operations, a portion of our cash is held outside the U.S. The cash and cash equivalent balance at December 31, 2019 included \$54.0 million held by our foreign subsidiaries. At December 31, 2019, 2018, and 2017, no deferred income taxes have been provided for our share of undistributed net earnings of foreign operations due to management's intent to reinvest such amounts indefinitely. The determination of the amount of taxes that may be due if

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earnings are remitted is not practicable because such liability, if any, is dependent on circumstances that exist if and when remittance occurs. The circumstances that would affect the calculations include the source location and amount of the distribution, the underlying tax rate already paid on the earnings, foreign withholding taxes, the opportunity to use foreign tax credits, and the potential impact of U.S. Tax Reform. Positive undistributed earnings considered to be indefinitely reinvested totaled \$17.5 million at December 31, 2019.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

<i>In millions</i>	December 31,		
	2019	2018	2017
Balance at beginning of year	\$ 0.3	\$ 0.3	\$ 0.6
Additions for tax positions related to current year	—	0.2	—
Additions for tax positions related to prior years	—	—	0.1
Reduction from lapse of statute of limitation	(0.2)	(0.2)	(0.4)
Balance at end of year	<u>\$ 0.1</u>	<u>\$ 0.3</u>	<u>\$ 0.3</u>

As of December 31, 2019, 2018, and 2017, \$0.1 million, \$0.3 million, and \$0.5 million, respectively, of unrecognized tax benefit, including penalties and interest, would, if recognized, impact our effective tax rate. We recognize interest accrued related to unrecognized tax benefits and penalties as income tax expense.

**Note 19: Commitments and Contingencies**

**Legal Proceedings**

We are, from time to time, involved in routine litigation incidental to our operations. None of the litigation in which we are currently involved, individually or in the aggregate, is material to our consolidated financial condition, liquidity or results of operations nor are we aware of any material pending or contemplated proceedings.

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**Note 20: Segment Information**

Ingevity's operating segments are (i) Performance Materials and (ii) Performance Chemicals, a description of both operating segments is included in Note 1.

<i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
<b>Net sales</b>			
Performance Materials	\$ 490.6	\$ 400.4	\$ 349.3
Performance Chemicals	802.3	733.2	623.1
<b>Total net sales <sup>(1)</sup></b>	<b>\$ 1,292.9</b>	<b>\$ 1,133.6</b>	<b>\$ 972.4</b>
<b>Segment EBITDA <sup>(2)</sup></b>			
Performance Materials	\$ 213.4	\$ 169.4	\$ 141.8
Performance Chemicals	183.5	151.1	100.9
<b>Total Segment EBITDA <sup>(2)</sup></b>	<b>\$ 396.9</b>	<b>\$ 320.5</b>	<b>\$ 242.7</b>
Interest expense	\$ (54.6)	\$ (33.2)	\$ (18.1)
Interest income	7.7	3.4	2.3
(Provision) benefit for income taxes	(44.2)	(40.0)	(29.6)
Depreciation and amortization - Performance Materials	(24.2)	(22.2)	(19.8)
Depreciation and amortization - Performance Chemicals	(60.8)	(34.8)	(20.6)
Pension and postretirement settlement and curtailment charges (income) <sup>(3)</sup>	—	(0.2)	—
Separation costs	—	—	(0.9)
Restructuring and other income (charges), net <sup>(4)</sup>	(1.8)	0.5	(3.7)
Acquisition and other-related costs <sup>(5)</sup>	(35.3)	(12.2)	(7.1)
Net (income) loss attributable to noncontrolling interests	—	(12.7)	(18.7)
<b>Net income (loss) attributable to Ingevity stockholders</b>	<b>\$ 183.7</b>	<b>\$ 169.1</b>	<b>\$ 126.5</b>

- (1) Relates to external customers only, all intersegment sales and related profit have been eliminated in consolidation.
- (2) Segment EBITDA is the primary measure used by our chief operating decision maker to evaluate the performance of and allocate resources among our operating segments. Segment EBITDA is defined as segment revenue less segment operating expenses (segment operating expenses consist of costs of sales, selling, general and administrative expenses, other (income) expense, net, excluding depreciation and amortization). We have excluded the following items from segment EBITDA: interest expense associated with corporate debt facilities, income taxes, depreciation, amortization, restructuring and other (income) charges, acquisition and other related costs, pension and postretirement settlement and curtailment (income) charge.
- (3) Our pension and postretirement settlement and curtailment (income) charges are related to the acceleration of prior service costs, as a result of a reduction in the number of participants within the Union Hourly defined benefit pension plan during 2018. These are excluded from our segment results because we consider these costs to be outside our operational performance. We continue to include the service cost, amortization of prior service cost, interest costs, expected return on plan assets, and amortized actual gains and losses in our segment EBITDA.
- (4) Information about how restructuring and other (income) charges relate to our reporting segments is discussed in Note 16.
- (5) These charges are associated with the acquisition and integration of the Pine Chemical Business and the acquisition and integration of the Caprolactone Business. For more detail on these charges see Note 17 within these Consolidated Financial Statements.

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<i>In millions</i>	Depreciation and amortization			Capital expenditures		
	Years Ended December 31,			Years Ended December 31,		
	2019	2018	2017	2019	2018	2017
Performance Materials	\$ 24.2	\$ 22.2	\$ 19.8	\$ 77.6	\$ 65.4	\$ 36.9
Performance Chemicals	60.8	34.8	20.6	37.2	28.5	15.7
Total	<u>\$ 85.0</u>	<u>\$ 57.0</u>	<u>\$ 40.4</u>	<u>\$ 114.8</u>	<u>\$ 93.9</u>	<u>\$ 52.6</u>

<i>In millions</i>	December 31,	
	2019	2018
Property, plant, and equipment, net	\$ 499.5	\$ 444.4
North America	75.6	78.7
Asia Pacific	89.5	0.6
Europe, Middle East, and Africa	0.1	0.1
South America	<u>\$ 664.7</u>	<u>\$ 523.8</u>
Property, plant, and equipment, net		

<i>In millions</i>	December 31,	
	2019	2018
Total assets	\$ 642.9	\$ 547.8
Performance Materials	1,485.4	755.7
Performance Chemicals	2,128.3	1,303.5
Total segment assets <sup>(1)</sup>	13.4	11.7
Corporate and other	<u>\$ 2,141.7</u>	<u>\$ 1,315.2</u>
Total assets		

(1) Segment assets exclude assets not specifically managed as part of one specific segment herein referred to as "Corporate and other."

**Note 21: Earnings (Loss) per Share**

Basic earnings (loss) per share is computed by dividing net income (loss) for the period by the weighted average number of common shares outstanding during the period. Diluted earnings (loss) per share is computed by dividing net income (loss) for the period by the weighted average number of shares of common stock and potentially dilutive common stock outstanding for the period. The calculation of diluted net income per share excludes all anti-dilutive common shares.

**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2019**

<i>In millions (except share and per share data)</i>	Years Ended December 31,		
	2019	2018	2017
Net income (loss) attributable to Ingevity stockholders	\$ 183.7	\$ 169.1	\$ 126.5
<b>Basic and Diluted earnings (loss) per share <sup>(1)</sup></b>			
Basic earnings (loss) per share	\$ 4.39	\$ 4.02	\$ 3.00
Diluted earnings (loss) per share	\$ 4.35	\$ 3.97	\$ 2.97
<b>Shares <sup>(2)</sup></b>			
Weighted average number of shares of common stock outstanding - Basic	41,801	42,037	42,130
Weighted average additional shares assuming conversion of potential common shares	399	564	399
<b>Shares - diluted basis</b>	<b>42,200</b>	<b>42,601</b>	<b>42,529</b>

(1) Diluted earnings (loss) per share is calculated using net income (loss) available to common stockholders divided by diluted weighted-average shares of common shares outstanding during each period, which includes the dilutive effect of outstanding equity awards.

(2) Shares are presented in thousands.

The following average number of potential common shares were antidilutive and, therefore, were not included in the diluted earnings per share calculation:

<i>In thousands</i>	Years Ended December 31,		
	2019	2018	2017
Average number of potential common shares - antidilutive	66	84	79



**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2019**

**Note 22: Supplemental Information**

The following tables include details of prepaid and other current assets, other assets, accrued expenses and other liabilities as presented on the consolidated balance sheets, as well as other (income) expense, net on the consolidated statement of operations:

<b>Prepaid and other current assets:</b> <i>In millions</i>	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
Income and value added tax receivables	\$ 14.6	\$ 15.0
Prepaid freight and supply agreements	1.3	1.1
Prepaid insurance	2.1	1.7
Non-trade receivables	4.5	3.4
Advances to suppliers	0.5	1.5
Equity securities (Note 6)	0.4	0.4
Contract asset (Note 5)	6.2	5.1
Restricted cash	8.1	0.3
Other	6.5	6.4
	<u>\$ 44.2</u>	<u>\$ 34.9</u>

<b>Other assets:</b> <i>In millions</i>	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
Deferred financing charges	\$ 2.5	\$ 3.1
Capitalized software, net (Note 3)	16.9	14.2
Land-use rights	5.6	5.6
Planned major maintenance activities (Note 3)	3.5	3.2
Deferred compensation plan assets (Note 6)	9.8	4.4
Net investment hedge (Note 10)	3.0	—
Other	8.9	7.8
	<u>\$ 50.2</u>	<u>\$ 38.3</u>

<b>Accrued expenses:</b> <i>In millions</i>	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
Accrued interest	\$ 10.8	\$ 8.5
Accrued taxes	1.5	3.0
Accrued freight	4.2	5.1
Accrued rebates	3.9	6.4
Restructuring reserves (Note 16)	0.4	—
Separation-related reimbursement awards (Notes 6)	0.1	0.1
Accrued royalties and commissions	2.0	1.8
Currency exchange and natural gas contracts (Note 10)	0.5	4.0
Accrued energy	2.0	2.1
Other	7.9	5.7
	<u>\$ 33.3</u>	<u>\$ 36.7</u>

**Ingevity Corporation**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2019**

<b>Other liabilities:</b> <i>In millions</i>	December 31,	
	2019	2018
Deferred compensation arrangements (Note 6)	\$ 10.0	\$ 4.6
Pension & OPEB liabilities (Note 15)	10.7	7.5
Unrecognized tax benefits (Note 18)	0.1	0.3
Interest rate swaps (Note 10)	3.9	—
New market tax credit payable (Note 11)	1.7	—
Other	3.6	2.7
	\$ 30.0	\$ 15.1

<b>Other (income) expense, net:</b> <i>In millions</i>	Years Ended December 31,		
	2019	2018	2017
Foreign currency translation (gain)/loss	\$ 0.2	\$ 2.0	\$ 1.2
Royalty (income)/expense	(1.9)	(0.8)	(0.7)
Impairment of equity investment	—	1.5	—
Other (gain)/loss	(2.6)	(1.7)	—
	\$ (4.3)	\$ 1.0	\$ 0.5

**Note 23: Quarterly Financial Information (Unaudited)**

The following is a summary of the quarterly results of operations for the years ended December 31, 2019 and 2018.

<i>In millions, except earnings per share amounts</i>	2019				2018			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Net sales	\$ 276.8	\$ 352.8	\$ 359.9	\$ 303.4	\$ 235.2	\$ 308.6	\$ 311.2	\$ 278.6
Gross profit	97.1	134.4	139.5	111.0	85.1	115.5	118.6	97.6
Income (loss) before taxes	22.7	72.7	77.4	55.1	45.5	64.6	68.1	43.6
Net income (loss)	22.7	56.8	59.9	44.3	35.8	52.2	51.7	42.1
Less: Net income (loss) attributable to noncontrolling interests	—	—	—	—	5.0	5.5	2.2	—
<b>Net income (loss) attributable to Ingevity stockholders</b>	<b>\$ 22.7</b>	<b>\$ 56.8</b>	<b>\$ 59.9</b>	<b>\$ 44.3</b>	<b>\$ 30.8</b>	<b>\$ 46.7</b>	<b>\$ 49.5</b>	<b>\$ 42.1</b>
Basic earnings (loss) per common share attributable to Ingevity stockholders	\$ 0.54	\$ 1.36	\$ 1.42	\$ 1.06	\$ 0.73	\$ 1.11	\$ 1.18	\$ 1.01
Diluted earnings (loss) per common share attributable to Ingevity stockholders <sup>(1)</sup>	\$ 0.54	\$ 1.34	\$ 1.41	\$ 1.05	\$ 0.72	\$ 1.10	\$ 1.16	\$ 0.99
Weighted average shares outstanding								
Basic	41.7	41.8	42.3	41.8	42.1	42.1	42.0	41.9
Diluted	42.2	42.2	42.6	42.2	42.6	42.6	42.7	42.5

- (1) Basic and diluted earnings (loss) per share are calculated using the weighted average number of common shares outstanding for the period. The sum of quarterly earnings per common share may differ from the full-year amount.

**INGEVITY CORPORATION**

**SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES**

**FOR YEARS ENDED DECEMBER 31, 2019, 2018, and 2017**

<i>(in millions)</i>	Provision/ (Benefit)				Write-offs (1)	Balance, End of Year
	Balance, Beginning of Year	Charged to Costs and Expenses	Charged to Other Comprehensive Income			
December 31, 2019						
Reserve for doubtful accounts <sup>(2)</sup>	\$ 0.4	0.1	—	—	—	\$ 0.5
Deferred tax valuation allowance	\$ 15.5	(1.9)	(0.6)	—	—	\$ 13.0
December 31, 2018						
Reserve for doubtful accounts <sup>(2)</sup>	\$ 0.4	—	—	—	—	\$ 0.4
Deferred tax valuation allowance	\$ 20.4	(2.6)	(2.3)	—	—	\$ 15.5
December 31, 2017						
Reserve for doubtful accounts <sup>(2)</sup>	\$ 0.3	0.1	—	—	—	\$ 0.4
Deferred tax valuation allowance	\$ 18.8	1.7	(0.1)	—	—	\$ 20.4

(1) Write-offs are net of recoveries.

(2) Reserve for doubtful accounts is included within Accounts receivable, net on the consolidated balance sheet.

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

None.

**ITEM 9A. CONTROLS AND PROCEDURES**

The Company maintains a system of disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed in the Company's reports filed or submitted under the Securities Exchange Act of 1934, as amended ("Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. These controls and procedures also provide reasonable assurance that information required to be disclosed in such reports is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosures.

As of December 31, 2019, the Company's Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), together with management, conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures pursuant to Rules 13a-15(b) and 15d-15(b) of the Exchange Act. Based on that evaluation, the CEO and CFO concluded that these disclosure controls and procedures are effective at the reasonable assurance level.

**Changes in Internal Control over Financial Reporting**

As a result of our acquisition of the Caprolactone Business on February 13, 2019, Ingevity's internal control over financial reporting, subsequent to the date of acquisition, includes certain additional internal controls relating to Caprolactone Business. Except as described above, there have been no changes in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**Management's Report on Internal Control of Financial Reporting**

Refer to Management's Report on Internal Control Over Financial Reporting, which is included within Part II. Item 8 of this Form 10-K and is incorporated by reference to this Item 9A.

**Report of Independent Registered Public Accounting Firm**

Refer to the Report of Independent Registered Public Accounting Firm, which is included within Part II. Item 8 of this Form 10-K and is incorporated by reference to this Item 9A.

**ITEM 9B. OTHER INFORMATION**

None.

## PART III

### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information concerning directors, appearing under the caption “Proposal No. 1 - Election of Directors” in our Proxy Statement to be filed with the SEC in connection with the Annual Meeting of Stockholders scheduled to be held on April 23, 2020 (the “Proxy Statement”), information concerning executive officers, appearing under the caption “Information about our Executive Officers” in Part I of this Form 10-K, information concerning the Audit Committee, appearing under the caption “Corporate Governance - Committees of our Board - Audit Committee” in the Proxy Statement, and Code of Ethics, appearing under the caption “Corporate Governance - Codes of Business Conduct and Ethics” in the Proxy Statement, is incorporated herein by reference in response to this Item 10.

### ITEM 11. EXECUTIVE COMPENSATION

The information contained in the Proxy Statement in the section titled “Compensation of Executive Officers” with respect to executive compensation, in the section titled “Director Compensation,” in the section titled “Compensation Committee Report,” and in the section titled “Corporate Governance—Compensation Committee Interlocks and Insider Participation” is incorporated herein by reference in response to this Item 11.

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

The information contained in the section titled “Common Stock Ownership of Executive Officers and Directors” in the Proxy Statement, with respect to security ownership of certain beneficial owners and management, is incorporated herein by reference in response to this Item 12.

#### Equity Compensation Plan Information

The table below sets forth information with respect to compensation plans under which equity securities of Ingevity are authorized for issuance as of December 31, 2019. All of the equity compensation plans pursuant to which we are currently granting equity awards have been approved by stockholders.

Plan Category	Number of Securities to be issued upon exercise of outstanding options and restricted stock awards (A) <sup>(2)</sup>	Weighted-average exercise price of outstanding options and restricted stock awards (B) <sup>(3)</sup>	Number of Securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (A)) (C) <sup>(4)</sup>
Equity Compensation Plans approved by stockholders <sup>(1)</sup>	784,253	\$ 58.39	3,025,677

- (1) Plans approved by WestRock as sole stockholder prior to the Separation while the Company was a wholly owned subsidiary.
- (2) Includes 404,737 stock options, 112,703 restricted stock units (RSUs) and 257,273 performance-based restricted stock units (PSUs) granted to employees and 9,540 RSUs held by directors. In accordance with SEC rules, the number of shares to be issued for performance based stock unit awards has been calculated based on the assumption that the awards granted in 2017 and 2018 will pay out at the maximum performance level (2x) because these awards are tracking above target, and the awards granted in 2019 will pay out at the threshold (0.5x) because these awards are tracking below threshold. The target payout of the performance based vesting restricted stock unit awards is 158,158 shares.
- (3) Represents the weighted-average exercise price of the outstanding stock options only. The outstanding RSUs and PSUs are not included in this calculation.
- (4) Includes 178,506 shares available for future issuance under the 2018 Ingevity Corporation Employee Stock Purchase Plan.

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

The information contained in the Proxy Statement concerning our independent directors under the caption “Corporate Governance - Director Independence” and the information contained in the Proxy Statement concerning related party transactions and our review, approval or ratification thereof appearing under the caption “Related Party Transactions” is incorporated herein by reference in response to this Item 13.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information contained in the Proxy Statement in the section titled “Proposal No. 2 - To Ratify Appointment of Independent Registered Public Accounting Firm” is incorporated herein by reference in response to this Item 14.

## PART IV

### ITEM 15. EXHIBITS

#### (a) Documents filed with this Report

- i. Consolidated financial statements of Ingevity Corporation and its subsidiaries are incorporated under Item 8 of this Form 10-K.
- ii. The following supplementary financial information is filed in this Form 10-K:

	<u>Page</u>
Financial Statements Schedule II – Valuation and qualifying accounts and reserves for the years ended December 31, 2019, 2018, and 2017	119

The schedules not included herein are omitted because they are not applicable or the required information is presented in the financial statements or related notes.

- iii. Exhibits: See attached Index of Exhibits

#### (b) Exhibits

<u>Exhibit No.</u>	<u>Exhibit Description</u>
2.1	Separation and Distribution Agreement between Ingevity Corporation and WestRock Company (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).
2.2	Asset Purchase Agreement, by and among Georgia-Pacific Chemicals, LLC, Georgia-Pacific LLC, Ingevity Arkansas, LLC, and Ingevity Corporation, dated as of August 22, 2017 (incorporated by reference to Exhibit 2.1 to Form 8-K (File No. 001-37586) filed August 22, 2017).
2.3	First Amendment to Asset Purchase Agreement among Ingevity Corporation, Ingevity Arkansas, LLC, Georgia-Pacific Chemicals LLC and Georgia-Pacific LLC, dated as of March 8, 2018 (incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 8, 2018).
2.4	Agreement for the Sale and Purchase of Perstorp UK Ltd., dated as of December 10, 2018, by and amount Perstorp AB and Ingevity Corporation (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on December 10, 2018).
3.1	Ingevity Corporation Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on April 25, 2019).
3.2	Ingevity Corporation Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on April 25, 2019).
4.1	Indenture, dated as of January 24, 2018, among Ingevity Corporation, the Guarantors, and U.S. Bank National Association, a national banking association (incorporated by reference to Exhibit 4.1 to Form 8-K filed January 24, 2018).
4.2	Description of Registrant's Securities.
10.1	Tax Matters Agreement between Ingevity Corporation and WestRock Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).
10.2	Transition Services Agreement between Ingevity Corporation and WestRock Company (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).

<b><u>Exhibit No.</u></b>	<b><u>Exhibit Description</u></b>
10.3	Employee Matters Agreement between Ingevity Corporation and WestRock Company (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).
10.4	Covington Plant Services Agreement between Ingevity Virginia Corporation and WestRock Virginia, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 11, 2016).
10.5	Covington Plant Ground Lease Agreement between Ingevity Virginia Corporation and WestRock Virginia, LLC (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 11, 2016).
10.6	Crude Tall Oil and Black Liquor Soap Skimmings Agreement by and between Ingevity Corporation, WestRock Shared Services, LLC and WestRock MWV, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).
10.7	Amendment No. 1 dated March 1, 2017, to Crude Tall Oil and Black Liquor Soap Skimming Agreement by and between WestRock Shared Services, LLC, WestRock MWV, LLC, on behalf of the affiliates of WestRock Company, and Ingevity Corporation. (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q, as filed with the U.S. Securities and Exchange Commission on May 4, 2017).
10.8	Credit Agreement, dated as of March 7, 2016, among Ingevity Corporation, as U.S. borrower, the lenders from time to time party thereto and Wells Fargo Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.8 to the Company's Amendment No. 2 to Form 10, as filed with the U.S. Securities and Exchange Commission on March 7, 2016).
10.9	Incremental Facility Agreement and Amendment No. 1, by and among Ingevity Corporation, Ingevity Holdings SPRL, the other loan parties party thereto, the lenders party thereto and Wells Fargo Bank, N.A., as administrative agent, dated as of August 21, 2017 (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 001-37586) filed August 22, 2017).
10.10	Incremental Facility Agreement 2nd Amendment No. 2, by and among Ingevity Corporation, Ingevity Holdings SPRL, the other loan parties party thereto, the lenders party thereto and Wells Fargo Bank, N.A., as administrative agent, dated as of August 7, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on August 9, 2018).
10.11	Amendment No. 3, by and among Ingevity Corporation, Ingevity Holdings SPRL, the other loan parties party thereto, the lenders party thereto and Wells Fargo Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 001-37586) filed March 7, 2019).
10.12	Incremental Facility Agreement and Amendment No. 4, by and among Ingevity Corporation, Ingevity Holdings SPRL, the other loan parties party thereto, the lenders party thereto and Wells Fargo Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.2 to Form 8-K (File No. 001-37586) filed March 7, 2019).
10.13	Intellectual Property Agreement by and between WestRock Company and Ingevity Corporation (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 16, 2016).
10.14+	Employment Letter, dated September 18, 2015, between WestRock Company, Ingevity Corporation and John Fortson (incorporated by reference to Exhibit 10.10 to the Company's Amendment No. 3 to Form 10, as filed with the U.S. Securities and Exchange Commission on April 4, 2016).
10.15+	Employment Letter, dated October 2, 2015, between WestRock Company, Ingevity Corporation and Katherine P. Burgeson (incorporated by reference to Exhibit 10.11 to the Company's Amendment No. 3 to Form 10, as filed with the U.S. Securities and Exchange Commission on April 4, 2016).
10.16+	Employment Letter, dated July 24, 2015, between WestRock Company, Ingevity Corporation and Michael Wilson (incorporated by reference to Exhibit 10.12 to the Company's Amendment No. 3 to Form 10, as filed with the U.S. Securities and Exchange Commission on April 4, 2016).



<b><u>Exhibit No.</u></b>	<b><u>Exhibit Description</u></b>
10.17+	Ingevity Corporation Amended and Restated 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 10-Q, as filed with the U.S. Securities and Exchange Commission on October 30, 2019).
10.18	Trust Agreement, between Ingevity Corporation, The Bank of New York Mellon Trust Company, N.A. and WestRock Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on May 11, 2016).
10.19a+	Form of Option Award Term under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13a to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19b+	Form of Performance-based Restricted Stock Unit Terms under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13b to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19c+	Form of Replacement Cash Awards under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13c to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19d+	Form of Restricted Stock Unit Terms (three year vesting) under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13d to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19e+	Form of Restricted Stock Unit Terms (cliff vesting) under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13e to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19f+	Form of Restricted Stock Unit Terms (D. Michael Wilson) under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.13f to the company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016).
10.19g+	Non-Employee Director Terms and Conditions for Restricted Stock Units under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.14g to the company's Annual Report on Form 10-K for the year ended December 31, 2016).
10.19h+	Non-Employee Director Terms and Conditions for Deferred Stock Units in lieu of Restricted Stock Units under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.14h to the company's Annual Report on Form 10-K for the year ended December 31, 2016).
10.19i+	Non-Employee Director Terms and Conditions for Deferred Stock Units in lieu of Annual Cash Retainer under the Ingevity Corporation 2016 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.14i to the company's Annual Report on Form 10-K for the year ended December 31, 2016).
10.20+	Ingevity Corporation Deferred Compensation Plan, effective January 1, 2016. (incorporated by reference to Exhibit 10.15 to the company's Annual Report on Form 10-K for the year ended December 31, 2016).
10.21+	Ingevity Corporation Non-Employee Director Deferred Compensation Plan (incorporated by reference to Exhibit 10.16 to the company's Annual Report on Form 10-K for the year ended December 31, 2016).
10.22+	Ingevity Corporation Non-Employee Director Compensation Policy (incorporated by reference to Exhibit 10.3 to the company's Current Report on Form 10-Q, as filed with the U.S. Securities and Exchange Commission on May 2, 2019).
10.23+	Change in control and severance agreement between Ingevity Corporation and D. Michael Wilson dated March 1, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 7, 2017).

<b><u>Exhibit No.</u></b>	<b><u>Exhibit Description</u></b>
10.24+	Separation and Release Agreement, between Ingevity Corporation and D. Michael Wilson, dated as of February 20, 2020.
10.25+	Change in control and severance agreement between Ingevity Corporation and John C. Fortson dated March 1, 2017 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 7, 2017).
10.26+	Change in control and severance agreement between Ingevity Corporation and Katherine P. Burgeson dated March 1, 2017 (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 7, 2017).
10.27+	Change in control and severance agreement between Ingevity Corporation and S. Edward Woodcock, Jr. dated March 1, 2017 (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 7, 2017).
10.28+	Change in control and severance agreement between Ingevity Corporation and Michael P. Smith dated March 1, 2017.
10.29	2017 Ingevity Corporation Employee Stock Purchase Plan (incorporated by reference to Exhibit 4.1 to the Company's Form S-8, as filed with the U.S. Securities and Exchange Commission on May 23, 2017).
10.30	Crude Tall Oil Supply Agreement between Ingevity Corporation and Georgia-Pacific LLC, dated as of March 8, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the U.S. Securities and Exchange Commission on March 8, 2018).
21.1	Ingevity Corporation List of Significant Subsidiaries
23.1	Consent of PricewaterhouseCoopers LLP
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 Securities and Exchange Commission 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 Securities and Exchange Commission nor incorporated by reference in any registration statement filed by the registrant under the Securities Act of 1933, as amended.
101	Inline XBRL Instance Document and Related Items - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
104	The cover page from the Company's Annual Report on Form 10-K formatted in Inline XBRL (included in Exhibit 101).
	+ Management contract or compensatory plan or arrangement

**ITEM 16. FORM 10-K SUMMARY**

None.



## Non-GAAP Financial Measures Reconciliation

Ingevity has presented certain financial measures, defined below, which have not been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) and has provided a reconciliation to the most directly comparable financial measure calculated in accordance with GAAP. These financial measures are not meant to be considered in isolation or as a substitute for the most directly comparable financial measure calculated in accordance with GAAP. The company believes these non-GAAP measures provide investors, potential investors, securities analysts and others with useful information to evaluate the performance of the business, because such measures, when viewed together with our financial results computed in accordance with GAAP, provide a more complete understanding of the factors and trends affecting our historical financial performance and projected future results.

Ingevity also uses the above financial measures as the primary measures of profitability used by managers of the business and its segments. In addition, Ingevity believes Adjusted EBITDA, Adjusted EBITDA Margin, and Net Debt Ratio are useful measures because they exclude the effects of financing and investment activities as well as non-operating activities. These non-GAAP financial measures are not intended to replace the presentation of financial results in accordance with GAAP and investors should consider the limitations associated with these non-GAAP measures, including the potential lack of comparability of these measures from one company to another. Reconciliations of these non-GAAP financial measures are set forth within the following pages.

**Adjusted earnings (loss)** is defined as net income (loss) attributable to Ingevity stockholders plus restructuring and other (income) charges, acquisition and other-related costs, pension and postretirement settlement and curtailment (income) charges, and the income tax expense (benefit) on those items, less the provision (benefit) from certain tax items.

<b>Reconciliation Net Income (Loss) (GAAP) to Adjusted Earnings (Loss) (Non-GAAP)</b>			
<i>In millions, except per share amounts (unaudited)</i>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Net income (loss)</b>	\$ 145.2	\$ 181.8	\$ 183.7
Less: Net income (loss) attributable to noncontrolling interests	18.7	12.7	—
Net income (loss) attributable to Ingevity stockholders (GAAP)	126.5	169.1	183.7
Restructuring and other (income) charges, net	3.7	(0.5)	1.8
Separation costs	0.9	—	—
Acquisition and other related costs	7.1	12.2	35.3
Pension and postretirement settlement and curtailment (income) charges	—	0.2	—
Tax effect on items above	(3.6)	(3.0)	(6.8)
Certain tax provision (benefit) items, including U.S. Tax Reform <sup>1</sup>	(24.5)	(2.8)	(5.9)
<b>Adjusted earnings (loss) (Non-GAAP)</b>	<b>\$ 110.1</b>	<b>\$ 175.2</b>	<b>\$ 208.1</b>
<b>Diluted earnings (loss) per common share (GAAP)</b>	<b>\$ 2.97</b>	<b>\$ 3.97</b>	<b>\$ 4.35</b>
Restructuring and other (income) charges, net	0.09	(0.01)	0.04
Separation costs	0.02	—	—
Acquisition and other related costs	0.17	0.28	0.84
Pension and postretirement settlement and curtailment charges (income)	—	0.01	—
Tax effect on items above	(0.09)	(0.07)	(0.16)
Tax impact from U.S. Tax Reform	(0.58)	(0.07)	(0.14)
<b>Diluted adjusted earnings (loss) per share (Non-GAAP)</b>	<b>\$ 2.58</b>	<b>\$ 4.11</b>	<b>\$ 4.93</b>

(1) Represents certain tax items such as excess tax benefits on stock compensation and in 2018 impacts of changes associated with U.S. Tax Reform. Management believes excluding these tax items assists investors, potential investors, securities analysts, and others in understanding the tax provision and the effective tax rate related to continuing operating results thereby providing useful supplemental information about operational performance.

**Adjusted EBITDA** is defined as net income (loss) plus provision for income taxes, interest expense, net, depreciation and amortization, restructuring and other (income) charges, separation costs and acquisition and other related costs, pension and postretirement settlement and curtailment (income) charges. **Adjusted EBITDA Margin** is defined as Adjusted EBITDA divided by Net sales.

#### **Reconciliation Net Income (Loss) (GAAP) to Adjusted EBITDA (Non-GAAP)**

<i>In millions (unaudited)</i>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Net income (loss) (GAAP)</b>	\$ 145.2	\$ 181.8	\$ 183.7
Provision for income taxes	29.6	40.0	44.2
Interest expense	18.1	33.2	54.6
Interest income	(2.3)	(3.4)	(7.7)
Depreciation and amortization	40.4	57.0	85.0
Separation costs	0.9	—	—
Restructuring and other (income) charges, net	3.7	(0.5)	1.8
Acquisition and other related costs	7.1	12.2	35.3
Pension and postretirement settlement and curtailment charges (income)	—	0.2	—
<b>Adjusted EBITDA (Non-GAAP)</b>	<b>\$ 242.7</b>	<b>\$ 320.5</b>	<b>\$ 396.9</b>
Net sales	\$ 972.4	\$ 1,133.6	\$ 1,292.9
Net income (loss) margin	14.9 %	16.0 %	14.2 %
<b>Adjusted EBITDA Margin (Non-GAAP)</b>	<b>25.0 %</b>	<b>28.3 %</b>	<b>30.7 %</b>

**Net Debt** is defined as the sum of notes payable, short-term debt, current maturities of long-term debt and long-term debt less the sum of cash and cash equivalents, restricted cash associated with our New Market Tax Credit financing arrangement, and restricted investment. **Net Debt Ratio** is defined as Net Debt divided by last twelve months Adjusted EBITDA, inclusive of acquisition-related pro forma adjustments.

#### **Calculation of Total Debt to Net Income (Loss) Ratio (GAAP) to Net Debt to Adjusted EBITDA Ratio (Non-GAAP)**

<i>In millions, except ratios (unaudited)</i>	<b>December 31, 2019</b>
Notes payable and current maturities of long-term debt	22.5
Long-term debt including finance lease obligations	1,228.4
Debt issuance costs	6.9
<b>Total Debt</b>	<b>1,257.8</b>
Less:	
Cash and cash equivalents <sup>(1)</sup>	64.2
Restricted investment	72.6
<b>Net Debt</b>	<b>1,121.0</b>
<b>Total Debt to Net income (loss) Ratio (GAAP)</b>	
Net income (loss) - last twelve months (LTM) as of December 31, 2019	\$ 183.7
Total debt to Net income (loss) ratio (GAAP)	6.85x
<b>Net Debt Ratio (Non GAAP)</b>	
Adjusted EBITDA - LTM as of December 31, 2019	396.9
Caprolactone Business Pro Forma Adjusted EBITDA LTM as of December 31, 2019 <sup>(2)</sup>	5.5
Adjusted EBITDA LTM inclusive of pro forma as of December 31, 2019	\$ 402.4
Net debt ratio (Non GAAP)	2.79x

(1) Includes \$7.7 million of Restricted Cash related to the New Market Tax Credit financing transaction which was entered into in November 2019.

(2) Pro forma amount includes historical results of the Caprolactone Business, prior to the acquisition date of February 13, 2019. This amount also includes adjustments as if the acquisition had occurred on January 1, 2018, including the effects of purchase accounting. The pro forma amounts do not include adjustments for expenses related to integration activities, cost savings, or synergies that have been or may have been realized had we acquired the businesses on January 1, 2018.

# Board of Directors



**Rick Kelson** ●  
Chairman of the Board, and  
Interim President and CEO at  
Ingevity



**Jean Blackwell** ●●●  
Former Exec. Vice President  
and CFO, Cummins Inc.



**Mike Fitzpatrick** ●●●  
Exec. Advisor Partner at  
Wind Point Partners, Inc.



**Diane Gulyas** ●  
Former President, DuPont  
Performance Polymers at  
E.I. du Pont de Nemours and  
Company



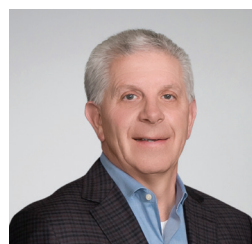
**Fred Lynch** ●●●  
Operating Partner, AEA  
Investors, LP, and Former CEO  
and President at Masonite  
International Corporation



**Luis Fernandez-Moreno** ●●●  
Sole Manager and Member  
at Strat and Praxis LLC



**Karen Narwold** ●  
Exec. Vice President, Chief  
Administrative Officer and  
General Counsel  
at Albemarle Corporation



**Dan Sansone** ●●●  
former Exec. Vice President,  
Strategy at Vulcan Materials  
Company

- Audit Committee
- Compensation Committee
- Executive Committee
- Nominating Governance and Sustainability Committee

# Leadership Team



**Rick Kelson**  
Chairman of the Board, and  
Interim President and CEO



**John Fortson**  
Exec. Vice President,  
CFO and Treasurer



**Kathy Burgeson**  
Exec. Vice President, General  
Counsel and Secretary



**Mike Smith**  
Exec. Vice President and  
President, Performance  
Chemicals, Strategy and  
Business Development



**Ed Woodcock**  
Exec. Vice President  
and President,  
Performance Materials



**Cindy Cartmell Burns**  
Sr. Vice President, Human  
Resources



**Marty Heyne**  
Sr. Vice President, Operations



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