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, 2021
or

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

Commission file number
001-34581

KRATON™

KRATON CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Delaware	**20-0411521**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

15710 John F. Kennedy Blvd.
Suite 300
Houston, TX 77032
(Address of principal executive offices, including zip code)

281 504-4700
(Registrant's telephone number, including area code)

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, par value $0.01	KRA	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 x No o

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 o No x

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 x No o

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller

reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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. o

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

Estimated aggregate market value of the common equity held by nonaffiliates of Kraton Corporation at June 30, 2021: $736,749,273. Number of shares of Kraton Corporation Common Stock, $0.01 par value, outstanding at February 21, 2022: 32,230,354.

DOCUMENTS INCORPORATED BY REFERENCE

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

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Year Ended December 31, 2021

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Some of the statements and information in this Annual Report on Form 10-K contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We may also make written or oral forward-looking statements in our reports on Forms 10-Q and 8-K, in press releases and other written materials and in oral statements made by our officers, directors or employees to third parties. Statements that are not historical facts, including statements about our beliefs and expectations, are forward-looking statements. Forward-looking statements are often characterized by the use of words such as “outlook,” “believes,” “estimates,” “expects,” “projects,” “may,” “intends,” “plans,” “anticipates,” “foresees,” “future,” or by discussions of strategy, plans, or intentions. The statements in this report that are not historical statements, are forward-looking statements, including, but not limited to, statements regarding our expectations as to:

- the satisfaction of the conditions precedent to the consummation of the proposed merger pursuant to the Agreement and Plan of Merger (the “Merger Agreement”) dated as of September 27, 2021 by and among Kraton, DL Chemical Co., Ltd. (“DL Chemical”), DLC US Holdings, Inc. (“Intermediate Merger Subsidiary”), and DLC US, Inc. (“Merger Subsidiary”), whereby Merger Subsidiary will merge with and into Kraton, with Kraton surviving as an indirect and wholly-owned subsidiary of DL Chemical (the “Merger”), including, without limitation, our ability to obtain necessary regulatory or other approvals for the Merger; unexpected costs, liabilities, or delays of the merger; uncertainties surrounding the Merger, which may cause our business to suffer; any stockholder litigation in connection with the Merger, which may affect the timing or occurrence of the merger or result in significant costs of defense, indemnification and liability; the occurrence of any event, change or other circumstances which, under the terms of the Merger Agreement, could give rise to a termination of the Merger Agreement; whether the proposed transactions would disrupt our current plans and operations or divert management’s attention from ongoing business operations; difficulties with our ability to retain and hire key personnel and maintain relationships with third parties as a result of the proposed Merger; the ability of DL Chemical to obtain debt financing in connection with the Merger; and other risks to the consummation of the proposed Merger, including the risk that the proposed merger will not be consummated within the expect time period or at all;
- the continued impact of the coronavirus (“COVID-19”) pandemic (including governmental and regulatory actions relating thereto) on demand for our products, on the national and global economy and on our customers, suppliers, employees, business and results of operations;
- the potential impact of actions by our competitors in response to the COVID-19 pandemic on the price and demand for our products;
- expectations regarding the possibility for future impairment of goodwill or other assets, including as a result of the impact of the COVID-19 pandemic;
- anticipated benefits of or performance of our products;
- beliefs regarding opportunities for new, differentiated applications, and other innovations;
- our ability to obtain necessary regulatory approvals for BiaXam™ on our anticipated timeline, or at all, and whether the expected benefits of the product will be realized;
- our expectations with respect to debt reduction and our ability to refinance our debt from time to time;
- beliefs regarding strengthening relationships with customers;
- adequacy of cash flows to fund our working capital requirements;
- our investment in the joint venture with Formosa Petrochemical Corporation (“FPCC”);
- our expectations regarding indebtedness to be incurred by our joint venture with FPCC;
- debt payments, interest payments, benefit plan contributions, and income tax obligations;
- our anticipated capital expenditures, health, safety, environmental, and security and infrastructure and maintenance projects, expected facility turnaround costs and timing, projects to optimize the production capabilities of our manufacturing assets and to support our innovation platform;
- our ability to fully access our senior secured credit facilities;
- expectations regarding future dividend payments;
- expectations regarding our counterparties’ ability to perform, including with respect to trade receivables;
- estimates regarding tax expense of repatriating certain cash and short-term investments related to foreign operations;
- expectations regarding differentiated applications;
- our ability to realize certain deferred tax assets and our beliefs with respect to tax positions;
- expectations regarding our full year effective tax rate;
- estimates related to the useful lives of certain assets for tax purposes;
- expectations regarding our pension contributions;
- estimates or expectations related to raw material costs or availability, ending inventory levels and related estimated charges;
- expectations regarding inflation of transportation and logistics costs and associated availability;
- the outcome and financial impact of legal proceedings;
- expectations regarding the spread between FIFO and ECRC (each as defined herein) in future periods;

- expectations regarding the impact of extraordinary events such as natural disasters, other weather events, or terrorist attacks;
- estimated impacts of changing tariff rates;
- expectations or estimated impacts of anticipated legislative or regulatory changes; and
- projections regarding environmental costs and capital expenditures and related operational savings.

Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual results, performance or our achievements, or industry results, to differ materially from historical results, any future results, or performance or achievements expressed or implied by such forward-looking statements. There are a number of risks and uncertainties that could cause our actual results to differ materially from the forward-looking statements contained in this report. Important factors that could cause our actual results to differ materially from those expressed as forward-looking statements include, but are not limited to the factors set forth in this report, including but not limited to under Part I, Item 1A. "*Risk Factors*" and Part II, Item 7. "*Management's Discussion and Analysis of Financial Condition and Results of Operations*," and in our other filings with the Securities and Exchange Commission (the "SEC").

There may be other factors of which we are currently unaware or deem immaterial that may cause our actual results to differ materially from the forward-looking statements. In addition, to the extent any inconsistency or conflict exists between the information included in this report and the information included in our prior reports and other filings with the SEC, the information contained in this report updates and supersedes such information.

Forward-looking statements are based on current plans, estimates, assumptions, and projections, and, therefore, you should not place undue reliance on them. Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update them in light of new information or future events.

PART I

Item 1. Business.

THE COMPANY

General

We are a leading global sustainable specialty chemicals company that manufactures styrenic block copolymers (“SBCs”), specialty polymers, and high-value bio-based products primarily derived from pine wood pulping co-products. Our operations are managed through two operating segments: (i) Polymer segment and (ii) Chemical segment. See Note 13 *Industry Segment and Foreign Operations* to the consolidated financial statements for segment reporting of financial results.

References in this report to “Kraton,” “our company,” “we,” “our,” “ours,” and “us” as used in this report refer collectively to Kraton Corporation, and its consolidated subsidiaries, unless the context otherwise requires. *Except as expressly stated otherwise in this Form 10-K, disclosures herein relate to Kraton as a standalone corporation and do not take into account the status or closing of the Merger and any effect on the Company thereafter. Following the closing of the Merger, Kraton will be a privately held company and no longer subject to the disclosure requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”).*

This Form 10-K includes financial statements and related notes that present the consolidated financial position, results of operations, comprehensive income (loss), and cash flows of Kraton Corporation. Kraton Corporation is a holding company whose only material asset is its investment in its wholly owned subsidiary, Kraton Polymers LLC. Kraton Polymers LLC and its subsidiaries own all of our consolidated operating assets.

Corporate History

Kraton Corporation was incorporated in 2009 under Delaware law and is the successor to a Delaware limited liability company formed in 2003. In December 2009, we completed our initial public offering and our common stock commenced trading on the New York Stock Exchange (“NYSE”). On January 6, 2016, we completed the acquisition of Arizona Chemical (the “Arizona Chemical Acquisition”). We conduct our business through Kraton Polymers LLC and its consolidated subsidiaries.

On March 6, 2020, we completed the sale of our Cariflex business to Daelim Industrial Co, Ltd. (subsequently renamed “DL Holdings Co., Ltd.”). As part of the sale, we entered into a multi-year Isoprene Rubber Supply Agreement (“IRSA”) with DL Chemical. In accordance with the IRSA, we will supply Isoprene Rubber (“IR”) to DL Chemical for a period of five years, with an optional extension for an additional five years. See Note 4 *Disposition and Exit of Business Activities* for further discussion of the IRSA. On September 27, 2021, we entered into a definitive merger agreement (the “Merger Agreement”) pursuant to which DL Chemical, a subsidiary of DL Holdings Co., Ltd. (formerly Daelim Industrial Co., Ltd.), agreed to acquire 100.0% of us in an all-cash transaction.

Agreement and Plan of Merger. On September 27, 2021, Kraton Corporation (the “Company” for purposes of this section) entered into the Merger Agreement. Pursuant to the Merger Agreement, and subject to the terms and conditions thereof, the Merger Subsidiary will merge with and into the Company, with the Company surviving the Merger as an indirect and wholly-owned subsidiary of Parent. Subject to the terms and conditions set forth in the Merger Agreement, at the effective time of the Merger (the “Effective Time”), each share of common stock of the Company then outstanding will be converted into the right to receive $46.50 in cash, without interest, other than (1) those shares owned by Parent or any subsidiary of Parent or the Company (which will be cancelled without any consideration) and (2) any shares as to which appraisal rights have been properly exercised, and not withdrawn, in accordance with the Delaware General Corporation Law.

On December 9, 2021, the Company held a special meeting of the stockholders of the Company, at which stockholders of Kraton overwhelmingly approved and adopted the Merger Agreement. The acquisition is subject to certain customary closing conditions, including the receipt of regulatory approvals, and is expected to close by the end of the first quarter of 2022.

POLYMER SEGMENT PRODUCTS AND COMMERCIAL APPLICATIONS

SBCs are highly-engineered synthetic elastomers, which we invented and commercialized over 50 years ago. We developed the first unhydrogenated styrenic block copolymers (“USBC”) in 1964 and the first hydrogenated styrenic block copolymers (“HSBC”) in the late 1960s. Our SBCs enhance the performance of numerous products by imparting greater flexibility, resilience, strength, durability, and processability, and are used in a wide range of applications, including adhesives, coatings, consumer and personal care products, sealants, lubricants, medical, packaging, automotive, paving and roofing, and footwear products. Prior to the sale of our Cariflex business, under the Cariflex brand name, we also sold IR and isoprene rubber latex (“IRL”), which are non-SBC products primarily used in applications such as medical products, personal care, adhesives, tackifiers, paints, and coatings. As part of the sale, we continue to produce and sell IR in accordance with the IRSA with DL Chemical.

We believe our SBC products offer many characteristics that help our customers drive towards their sustainability goals. Among others, our SBCs may offer features such as greater recyclability, increased durability that reduces the costly need for maintenance and replacement, and alternatives to less environmentally friendly materials, such as PVCs.

Our SBCs are high performance elastomers that are engineered for a wide range of applications. Our SBC products possess a combination of high strength and low viscosity, which facilitates ease of processing at elevated temperatures and high processing speeds. Our products can be processed in a variety of manufacturing applications, including injection molding, blow molding, compression molding, extrusion and hot melt, and solution applied coatings.

The majority of worldwide SBC production is dedicated to USBCs, which are primarily used in paving, roofing, adhesives, sealants, coatings, and footwear applications. HSBCs, which are significantly more complex and capital-intensive to manufacture than USBCs, are used in applications such as lubricant additives, soft touch and flexible materials, personal hygiene products, medical products, automotive components, certain adhesive and sealant applications, and protective films.

Our Polymer segment products are manufactured and our commercial activities are organized in the following product groups based upon polymer chemistry and process technologies: Performance Products, Specialty Polymers, IR sold exclusively to DL Chemical in accordance with the IRSA, and Cariflex (prior to March 6, 2020).

Performance Products

Our Performance Products are comprised of USBC product grades, which impart characteristics such as:

- resistance to temperature and weather extremes in roads and roofing;
- resistance to cracking, reduced road noise, and better water dispersion; and
- increased processing flexibility in adhesive formulations for packaging tapes and labels, and materials used in disposable diapers.

In paving and roofing applications, our Performance Products primarily consist of styrene-butadiene-styrene (“SBS”) for use in modified asphalt applications, which in roofing applications produces stronger and more durable felts and shingles, and in paving applications enhances the strength and elasticity of asphalt-based paving compositions over an extended temperature range. In paving applications, we believe our polymers extend road life by allowing pavements to withstand heavy traffic loads and varying climate conditions, and our HiMA technology can reduce required inputs while extending road life in new road construction. Our roofing applications provide a more sustainable alternative by increasing durability and system life. Our sustainable paving applications allow thinner full-depth pavements and longer road life, reducing raw materials required for paving and lessening pollution caused by congestion arising from frequent repairs of roads. Our products primarily compete with chemicals such as styrene-butadiene rubber latex, acetates, polyphosphoric acids and thermoplastic materials like ethylene-propylene-diene-monomer, polyethylene, atactic polypropylene and unmodified asphalts. We believe that customer choice for these markets is driven principally by total end-product cost, temperature performance, bitumen source and application.

In personal care applications, our Performance Products primarily consist of SBS and styrene-isoprene-styrene (“SIS”) for the manufacturing of ultra-thin stretchable films used for the production of diapers. In addition, our SIS polymers are also used in the lamination process for other personal care products. Our products primarily compete against low priced alternatives such as metallocenes. We believe that customer choice for these markets is driven principally by total end-product cost and performance.

In adhesives applications, our Performance Products primarily compete with ethylene-vinyl acetate, polyolefins, and metallocene polyolefins. The choice between these materials is influenced by bond strength, specific adhesion, consistent performance to specification, processing speed, hot-melt application, resistance to water and cost. Our SBCs are compatible with many other formulating ingredients. We believe demand for utilization of SBC-based adhesives is primarily driven by cost reduction and higher performance.

Specialty Polymers. Our Specialty Polymers are comprised of HSBC products that are significantly more complex to produce than our Performance Products. As a result, our Specialty Polymers generally generate higher margins than our Performance Products.

Our Specialty Polymers impart characteristics such as:

- improved flow characteristics for many industrial and consumer sealant and lubricating fluids;
- soft feel in numerous consumer products such as razor handles, power tools, and automobile components;
- impact resistance for demanding engineered plastic applications;
- flexibility for wire and cable plastic outer layers;
- stretch properties in disposable diapers and adult incontinence products;

- resistance to ultraviolet light;
- processing stability and viscosity; and
- elevated temperature resistance.

We believe our HSBC offerings are often the more sustainable choice when compared to alternatives. Among other features, our HSBCs can offer improved recyclability of polyethylene-terephthalate and polypropylene streams, and function as replacements for less sustainable alternatives such as PVC, mainly in medical applications.

Our products primarily compete against a variety of chemical and non-chemical alternatives including, but not limited to, thermoplastic vulcanizate, thermoplastic polyurethane, PVC, thermoplastic polyolefin, polyethylene terephthalate, polycarbonate, polyamide, and ethylene-propylene-diene-monomer based products. We believe demand for our Specialty Polymers portfolio is principally driven by customer-specific needs and the ability to balance performance characteristics such as soft-touch, durability, stretch and impact.

Because many of our products are highly engineered and customized formulations, they require specialized product testing and validation, production and process evaluation. This results in potentially long lead times to achieve customer and industry established approvals. Our innovation-led growth strategy focuses on translating the inherent strengths of our product technologies such as flexibility, resilience, impact and moisture resistance, and aesthetics (clarity and haptics) to target opportunities in which we can expand and/or have the potential to create new market spaces for our solutions.

Cariflex. Prior to the sale of our Cariflex business, we produced Cariflex IR and IRL. Cariflex products were based on synthetic polyisoprene polymer and did not contain natural rubber latex or other natural rubber products, making them an ideal substitute for natural rubber latex, particularly in applications with high purity requirements such as medical, healthcare, personal care, and food contact. Cariflex is included in our results of operations through March 6, 2020.

Isoprene Rubber. In connection with the sale of our Cariflex business, we entered into the IRSA with DL Chemical, under the terms of which we will supply IR to DL Chemical for a period of five years, with an optional extension for an additional five years. As the IRSA product sales are at cost, we deferred approximately $180.6 million of the aggregate purchase price for our Cariflex business. The deferred income will be amortized into revenue as a non-cash transaction when the products are sold. See Note 4 *Disposition and Exit of Business Activities* for further discussion of the IRSA.

CHEMICAL SEGMENT PRODUCTS AND COMMERCIAL APPLICATIONS

We manufacture and sell sustainable, high value products primarily derived from pine wood pulping co-products. We refine and further upgrade two primary feedstocks, crude tall oil ("CTO") and crude sulfate turpentine ("CST"), both of which are co-products of the wood pulping process, into value-added biobased specialty chemicals. We refine CTO through a distillation process into four primary constituent fractions: tall oil fatty acids ("TOFA"); tall oil rosin ("TOR"); distilled tall oil ("DTO"); and tall oil pitch. We further upgrade TOFA and TOR into derivatives such as dimer acids, polyamide resins, rosin resins, dispersions, and disproportionated resins. We refine CST into terpene monomer fractions, which can be further upgraded into specialty terpene resins. The various fractions and derivatives resulting from our CTO and CST refining process provide for distinct functionalities and properties, determining their respective applications and end markets. Our products derived from CTO and CST offer sustainable, non-genetically modified ("GMO"), bio-based alternatives.

Our Chemical segment is based predominantly on the refining and upgrading of CTO and CST. We also have the capacity to upgrade hydrocarbon-based raw materials, such as alpha-methyl-styrene ("AMS"), and bio-based gum rosins, where appropriate, and are able to offer tailored solutions for our customers.

The segment's products are manufactured and our commercial activities are organized in the following product groups based upon end markets and process technologies: Adhesives, Performance Chemicals, and Tires.

Adhesives. We offer a broad range of products to service target adhesives submarkets, including rosin-based tackifiers for packaging and pressure-sensitive adhesive applications, terpene-based tackifiers for bookbinding, hygiene and pressure-sensitive adhesive applications, AMS resins for bookbinding and pressure-sensitive adhesive applications, and hot melt polyamides for flexible packaging, industrial applications, and road marking. We seek to position our renewable, non-GMO, bio-based offerings as the material of choice for producers seeking to meet consumer demand for products that do not use less sustainable and GMO materials, like hydrocarbon-based solutions. We provide rosin based tackifiers with similar performance to hydrocarbon-based alternatives.

Our tackifiers are primarily used in hot melt adhesives, which are heavily used in the packaging submarket. Our focus in packaging is to improve our competitive position by introducing higher quality tackifiers that work in new polymer systems. We believe our efforts to improve functionality of tackifier offerings will enable differentiated and profitable growth in emerging markets.

Roads and Construction. Within the pavement marking submarket, we provide rosin-based binders for the thermoplastic pavement marking submarket and produce insoluble maleic-based tackifiers. We believe our advanced bio-based offerings in the pavement marking submarket enable our customers to formulate more durable road markings, improving sustainability by lessening raw material use.

Performance Chemicals. We serve various submarkets with a wide product offering, providing value across several different applications including, among others, fuel additives, oilfield chemicals, mining fluids, coatings, and metalworking fluids and lubricants. Our products include:

TOFA. Compared to other fatty acids obtained from various vegetable and animal origins, TOFA has a chemical composition characterized by distinctive features used as components in various applications. For example:

End use market (examples)	***Features***
Coatings	• serves as a binder in solvent-based paints as well as in hybrid coatings • preferred over soybean oil due to its higher unsaturation, better reactivity, flexibility, compatibility, and superior sustainability
Mining	• lower viscosity and higher affinity with the ore extract allows for a higher recovery yield • preferred over oleic acid
Oilfield chemicals	• easier handling, better solubility in drilling muds, as well as higher surface activity and emulsifying power • preferred over oleic acid
Fuel additives	• improves the lubricity of low-sulfur diesel fuel, preventing engine fuel pump wear

Dimer Acids. Our dimer acids are used for the production of polyamide resins used in applications such as epoxy coatings, flexographic inks, and high performance adhesive applications. In addition, dimer acids are building blocks in the production of corrosion inhibitors and emulsifiers used in the production and recovery of petroleum and natural gas. Our dimer acids compete with dimer acids derived from other feedstocks such as rapeseed and cottonseed oil.

TOR. TOR is used in all major rosin applications for the manufacture of adhesives, inks, pavement markers, rubber, and paper.

DTO. DTO is a mixture of TOFA and rosin acids. Our DTO is primarily used as an emulsifier for metalworking fluids and lubricants, in which our product offers improved performance attributes and, in many cases, offers a more sustainable alternative by replacing less environmentally friendly hydrocarbon-based chemicals. In these applications, it is sometimes used in place of TOFA.

Terpene Fractions. We supply terpene fractions, alpha-pinene and beta-pinene, and upgrade them mainly as specialty tackifiers for the adhesives market and tread enhancers for the tires market.

Tires. We sell a range of products that enhance the performance and manufacturing of high performance, winter, and all-season tires. Our terpene-based tread enhancement resins optimize wet grip of tire treads while maintaining reduced rolling resistance and enhanced durability which contribute to improved vehicle fuel efficiency. We market our AMS-based tread enhancement additives through product attributes that include reduced rolling resistance, increased durability, wet grip enhancement, and exceptional compatibility with rubber compounds, especially solution styrene-butadiene rubber polymers. We also sell TOFA, DTO, and rosins as processing aids, which provide select functionalities at various steps in the rubber and tire manufacturing process.

We were one of the first companies to supply tread enhancement resins to the tire industry and won early qualifications with innovative tire manufacturers. We believe our tires products are a key enabler for our customers to achieve their sustainability goals. The quest for improved fuel economy has prompted the introduction of silica-based “green tires” in which certain of our products are a key component. AMS resins were the first tread enhancement additive commercialized beyond basic hydrocarbon tackifiers, and we believe they offer a good balance of properties, price, and performance for current generation tires. Our SYLVATRAXX™ terpene-base tread enhancement additives are made of up to 100% bio-renewable materials.

GENERAL

Human Capital

As of December 31, 2021, we had 1,751 employees worldwide, the majority of which were substantial full-time employees. We have collective bargaining agreements in place in multiple global Kraton locations, and employee representatives or employee representative bodies, such as works councils, are established at Kraton facilities across the world. As of December 31, 2021, approximately 23.4% of our employees in the United States were unionized.

To remain a leading global producer of specialty polymers and high-value biobased products derived from pine wood pulping co-products, it is crucial that we continue to attract new and retain our current talent. Through our diverse and inclusive workplace, our comprehensive compensation and benefits, our career management, and our focus on health, safety and employee wellbeing, we strive to support our employees in all aspects of their lives.

Diversity and Inclusion. Innovation at Kraton stems from the diverse perspectives, knowledge, and experiences of our employees. We strive to create an inclusive workplace where all employees are treated with dignity and respect. Our commitment to diversity and inclusion starts at the top with a highly skilled and diverse board of directors. Of our independent directors, 57% are female, 14% are ethnically diverse and 14% are based outside of the United States. As of December 31, 2021, women represented 20% of Kraton's full-time executive positions and 23% of full-time employees, globally. Our workforce is globally diverse, with approximately 64% working in North America, 29% in Europe, 1% in South America and 6% in Asia. Our board of directors has ongoing oversight of our diversity and inclusion programs.

Total Rewards. To ensure a compelling total rewards philosophy and practice, we have practices in place to deliver fair and equitable compensation to employees based on their role, contribution, and performance. All full-time employees are covered by a health care package, as applicable in their particular country, and all full-time employees have access to paid annual leave and company-paid holidays, based on the particular country in which they live.

Career Management. Human capital development underpins our efforts to execute our strategy and remain a leading global producer of innovative products. We continually invest in our employees' career growth and provide employees with a wide range of development opportunities. Particularly, our career development framework enables leaders and team members to identify career paths and opportunities. The individual development plan is the first step in this framework. Employees take ownership of their career development in consultation with their leaders and create a plan covering an appropriate time frame, given the person's individual situation. We also conduct an annual assessment of individual performance and provide skills and leadership development training. In 2021, 100% of our eligible employees received an annual performance review.

Health, Safety and Wellness. The physical health, financial wellbeing, life balance, and mental health of our employees is fundamental to our success. We are committed to ensuring that employees have a safe working environment. We conduct internal audits on health and safety issues at our locations. We provide protective equipment to all impacted employees and conduct recurring employee health and detailed safety risk assessments. We also offer training of relevant employees on health and safety risks and best working practices. All of our sites are certified as having either a responsible care management or environmental management system in place. Some sites have both certifications.

Throughout the year, we support the physical, financial, and mental wellbeing of all of our employees around the world through regular communications, educational sessions, voluntary progress tracking, wellness challenges, and other benefits. Since the onset of the COVID-19 pandemic, we have taken an integrated approach to helping our employees manage their work and personal responsibilities, with a strong focus on employee wellbeing, health, and safety. Among other actions, we continued the meetings of our COVID-19 crisis management team to provide guidance to the organization as we navigate the challenges presented by the pandemic. We have also continued work-from-home requirements, social-distancing, restrictions on visitors to our facilities, and limited in-person meetings and other gatherings. See *COVID-19 Pandemic* included in Part II, Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operation*s for additional information on our response to the COVID-19 pandemic.

Sales and Marketing

Our business is predominantly based on a short sales cycle. We sell our products through a number of channels, including a direct sales force, marketing representatives, and distributors. We use third-party marketing representatives and distributors in markets where they have existing platforms and are more cost effective in completing market coverage. We have long-term relationships and a wide network of distributors across North America, Europe, Latin America, and Asia Pacific.

Our sales personnel are primarily responsible for maintaining relationships with our customer base and providing product advice. In general, they coordinate contact between our customers and our research and development personnel to provide quality control and new product solutions. Our close interaction with our customers has allowed us to develop and maintain what we consider to be strong customer relationships.

Our customers are facing increasing demands for more sustainable products and solutions. As a bio-based supplier of specialty chemicals and as a producer of specialty polymers that provides alternatives to non-recyclable materials, as well as solutions that can facilitate the circular economy, we believe we are positioned to benefit from these developing market trends.

Competition

In each of our markets, we compete on a range of factors, including price, breadth of product availability, product quality, sustainability features, and the speed of service from order to delivery. We believe our customers also base their supply decisions on the supplier's ability to design and produce customized products and the availability of technical support. We also compete against a broad range of alternative materials throughout our product groups, including petrochemical, animal and vegetable-based substitutes. Major competitors in our market include large domestic and international companies. No one or small number of competitors is dominant across all industries in which we compete and no single customer accounted for 10.0% or more of our total revenue during the years ended December 31, 2021, 2020, and 2019.

Sources and Availability of Raw Materials

We use butadiene, styrene, and isoprene as our primary raw materials in our Polymer segment and CTO and CST in our Chemical segment as our primary raw materials.

For our Polymer segment, we procure our raw materials from multiple sources in the U.S. and foreign countries, through a range of short-term and long-term supply agreements.

For our Chemical segment, we have an exclusive long-term supply contract with International Paper, which extends through 2027, under which it has agreed to sell to us, and we have agreed to purchase from it, all of the CTO and CST produced at its paper mills. We also maintain long-standing relationships with other major suppliers of our raw materials in the U.S. and Europe. Additionally, our CTO supply sources are further diversified by our ability to refine and process black liquor soap into CTO in the U.S. Most of our Chemical segment manufacturing facilities are located in close proximity to the facilities of our raw material suppliers, allowing us to procure our raw materials at a low delivered cost. Furthermore, we work directly with our suppliers at their production facilities to enhance their CTO and CST yields through technological improvements, which we believe allows us to maximize our raw material supplies, to improve the efficiency of our suppliers' operations, and to foster strong, long-lasting relationships with them.

We believe that raw material supplies for both segments will be available in quantities sufficient to meet demand in 2022. The cost of these raw materials has generally correlated with changes in energy prices and is generally influenced by supply and demand factors, and for our isoprene monomers the prices of natural and synthetic rubber. Each of our reportable segments were impacted in 2021 by the inflationary environment of raw material costs and these conditions may continue in 2022.

Research, Development, and Technology

Our primary research and development activities are conducted in laboratories in Almere, Netherlands; Amsterdam, Netherlands; Houston, Texas; Savannah, Georgia; and Shanghai, China. We also have a world class facility located at our Belpre, Ohio, site that accelerates polymer development efforts and the commercialization of new products and reduces customer qualification lead times. In addition to our core research activities, research and development personnel also support maintenance of ongoing business activities and other support functions. The below details our significant research and development activities:

Core research and development

- new product and process development
- technical support and new application development
- technology platform development

Business support

- safety and regulatory compliance
- operations and quality support
- technical support to sales team and customers

Patents, Trademarks, Copyrights, and Other Intellectual Property Rights

We rely on a variety of intellectual property rights to conduct our business, including patents, trademarks, and trade secrets. We had 787 granted patents and 252 pending patent applications at December 31, 2021. These patents protect our innovative technologies and applications against infringement, and create long-term, sustainable competitive advantages in our core growth markets. Since patents are generally in effect for a period of 20 years from the filing date, and therefore, assuming most of these applications will be granted, we expect a significant portion of our patent portfolio to remain in effect for a significant period. The granted patents and the applications cover both the U.S. and foreign countries. We do not expect that the expiration of any single patent or specific group of patents would have a material impact on our business, and the overall profitability of our business is not dependent on any single patent, trademark, license, or franchise.

Our material trademarks will remain in effect unless we decide to abandon any of them, subject to possible third-party claims challenging our rights. Similarly, our trade secrets will preserve their status as such for as long as they are the subject of reasonable efforts, on our part, to maintain their secrecy. We maintain a number of trade names that are protected by trademark laws.

Governmental Regulation

Our operations in the U.S. and abroad are subject to a wide range of environmental laws and regulations at the international, national, state, and local levels. Matters pertaining to the environment are discussed in Part I, Item 1A. *Risk Factors*; Part I, Item 3. *Legal Proceedings*; and Part II, Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operation*s.

We have made, and intend to continue to make, the expenditures necessary for compliance with applicable laws and regulations relating to health, safety, environmental, risk reduction, and security matters. We incurred capital expenditures in 2021 for regulatory purposes of $8.0 million and estimate such expenditures will be approximately $4.0 million in 2022 and $4.0 million in 2023.

Costs of remediation at our current and former facilities are covered by indemnification agreements, insurance or through allocated reserves. We currently estimate that the costs of remediation will not materially affect our operations or cause us to materially exceed our anticipated level of capital expenditures. Although resolution of environmental liabilities will require future cash outlays, it is not expected that such outlays will materially impact our liquidity position, although there can be no assurance that such impacts would not occur.

Many of our products and operations are subject to laws of the countries in which our products are manufactured or imported. These laws include the Registration, Evaluation, and Authorization of Chemicals ("REACH") regulation in the European Union. REACH places great responsibility on companies to manage the risks that chemical substances may pose to health and the environment by requiring additional testing, documentation, risk assessments and registrations. These registrations of our chemical substances are a license to operate and are a prerequisite for the Company to manufacture or import our products in the European Union. The Company has successfully registered all required chemical substances to allow manufacturing and import of Kraton products into the European Union. The Company is also actively preparing for future registration needs. The cost of compliance with any new laws or regulations cannot be estimated until the manner in which they will be implemented has been precisely defined.

Seasonality

Seasonal changes and weather conditions typically affect our sales of products in our paving, pavement marking, roofing, and construction applications, which generally results in higher sales volumes in the second and third quarters of the calendar year compared to the first and fourth quarters of the calendar year. Sales for our other product applications tend to show relatively little seasonality.

Available Information

We electronically file reports with the SEC, including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports. The SEC maintains an internet site that contains reports and information statements, and other information regarding issuers that file electronically with the SEC at *www.sec.gov.* Additionally, information about us, including our reports filed with the SEC, is available through our web site at *www.kraton.com.* Such reports are accessible at no charge through our web site and are made available as soon as reasonably practicable after such material is filed with or furnished to the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated by reference into this report.

Item 1A. Risk Factors.

Summary

- Failure of the Merger to be consummated, the termination of the Merger Agreement or a significant delay in the consummation of the Merger could have a material adverse impact on our business, financial condition, and results of operations.
- We are subject to business uncertainties and contractual restrictions while the Merger is pending.
- Litigation against us, or the members of our board of directors, could prevent or delay the completion of the Merger.
- The Merger Agreement limits our ability to pursue alternatives to the Merger and may discourage other companies from trying to acquire the Company for greater consideration than what Parent has agreed to pay pursuant to the Merger Agreement.
- Conditions in the global economy and capital markets, and in the petrochemical industry in particular, may have an adverse effect on our results of operations, financial condition, and cash flow.
- The failure of our raw material suppliers to perform their obligations under long-term supply agreements, or our inability to replace or renew these agreements when they expire, could increase our cost for these materials, interrupt production or otherwise adversely affect our results of operations.
- If the availability of our raw materials, including butadiene, styrene, isoprene, CST, and CTO is limited, we may be unable to produce some of our products in quantities sufficient to meet customer demand or on favorable economic terms, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Increases in the costs of our raw materials may occur, which may have an adverse effect on our results of operations, financial condition, and cash flow if those costs cannot be passed through to our customers.
- Significant fluctuations in raw material costs may result in volatility in our quarterly operating results and impact the market price of our common stock.
- Maintenance, expansion and refurbishment of our facilities, the construction of new facilities and the development and implementation of new manufacturing processes involve significant risks, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Third parties provide significant operating and other services under agreements that are important to our business. The failure of these third parties to perform their obligations, or the termination of these agreements could occur, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Our industry is highly competitive, and we may lose market share to other producers of SBCs, pine-based specialty chemicals or other products that can be substituted for our products, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Our business is subject to seasonality that may affect our quarterly operating results and impact the market price of our common stock.
- Chemical manufacturing is inherently hazardous, which could result in accidents that disrupt our operations or expose us to significant losses or liabilities.
- Our relationship with our employees could deteriorate, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Loss of key personnel or our inability to attract and retain new qualified personnel could hurt our business and inhibit our ability to operate and grow successfully.
- We generally do not have long-term contracts with our customers, and the loss of customers could adversely affect our sales and profitability.
- Domestic or international natural disasters, health epidemics or pandemics, or terrorist attacks may disrupt our operations, decrease the demand for our products or otherwise have an adverse impact on our business.
- The COVID-19 pandemic is adversely impacting our business.
- Climate change and sustainability initiatives may result in significant operational changes and expenditures and adversely affect our business.
- Our substantial indebtedness could adversely affect our financial condition and prevent us from fulfilling our obligations under the terms of our indebtedness, including our senior notes and our senior secured credit facilities.
- Despite current indebtedness levels and restrictive covenants, we and our subsidiaries may incur additional indebtedness, or we may pay dividends in the future. This could further exacerbate the risks associated with our financial leverage.
- Our current and future debt instruments may impose significant operating and financial restrictions on us and affect our ability to access liquidity.
- To service our current, and any future, indebtedness, we will require a significant amount of cash, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

- Fluctuations in currency exchange rates may significantly impact our results of operations and may significantly affect the comparability of our results between financial periods.
- We may have additional tax liabilities, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- We may be unable to realize the benefits of our net operating loss carry-forwards (“NOLs”).
- A decrease in the fair value of pension and other post-retirement assets could materially increase future funding requirements of the pension and other post-retirement plans.
- The European Union’s Renewable Energy Directive 2009/28 on the promotion of the use of energy from renewable resources (“RED”), was repealed on July 1, 2021 (the “RED”) and replaced by Directive 2018/2001, which had to be transposed by the 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, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- We may be liable for damages based on product liability claims brought against our customers, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Failure to comply with the Foreign Corrupt Practices Act and other similar worldwide anti-bribery, anti-corruption, and anti-fraud laws or sanction laws may subject us to penalties, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- As a global business, we are exposed to local business risks in different countries, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Compliance with extensive environmental, health, and safety laws and regulations (including changes to such laws and regulations) could require material expenditures, changes in our operations or site remediation.
- Regulation of our employees’ exposure to certain chemicals could require material expenditures or changes in our operations, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- We may be subject to losses due to lawsuits arising out of environmental damage or personal injuries associated with chemical manufacturing, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- We are subject to customs, international trade, export control, data privacy, antitrust, zoning and occupancy and labor and employment laws that could require us to modify our current business practices and incur increased costs.
- Delaware law and certain provisions of our organizational documents may make a takeover of our company more difficult.
- We are a holding company with nominal net worth and will depend on dividends and distributions from our subsidiaries to pay any dividends.
- Investor sentiment towards climate change and sustainability could adversely affect our business and our stock price.
- If we are not able to continue the technological innovation and successful commercial introduction of new products, our customers may turn to other producers to meet their requirements.
- Our business relies on intellectual property and other proprietary information, and our failure to protect our rights could harm our competitive advantages with respect to the manufacturing of some of our products, which may have an adverse effect on our results of operations, financial condition, and cash flow.
- Our products may infringe on the intellectual property rights of others, which may cause us to incur unexpected costs or prevent us from selling our products.
- Increased information systems security threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks, products, and services.

Risks Related to Our Industry and Operations

Failure of the Merger to be consummated, the termination of the Merger Agreement or a significant delay in the consummation of the Merger could have a material adverse impact on our business, financial condition, and results of operations.

The Merger Agreement is subject to a number of conditions that must be fulfilled in order to complete the Merger, including remaining regulatory approvals. Our stockholders approved the Merger on December 9, 2021. These conditions to the consummation of the Merger may not be fulfilled and, accordingly, the Merger may not be completed or may be significantly delayed. In addition, if the Merger is not completed by September 26, 2022, either Parent or we may choose to terminate the Merger Agreement at any time after that date if the failure to consummate the transactions contemplated by the Merger Agreement is not primarily caused by any failure to fulfill any obligation under the Merger Agreement by the party electing to terminate the Merger Agreement.

If the Merger is not consummated or is significantly delayed, our ongoing business, financial condition and results of operations may be materially adversely affected. We have incurred and will incur substantial expenses in connection with the negotiation and completion of the transactions contemplated by the Merger Agreement. If the Merger is not completed or is significantly delayed, we would have to recognize these expenses without realizing the expected benefits of the Merger.

Additionally, our business may have been and may in the future be adversely impacted by the failure to pursue other beneficial opportunities due to the focus of management on the Merger, without realizing any of the anticipated benefits of completing the Merger. If the Merger Agreement is terminated, our stockholders cannot be certain that we will be able to find a party willing to engage in a transaction on more attractive terms than the Merger Agreement, or at all, and our results of operations may be adversely impacted by the costs incurred, and by the diversion of management attention, in connection with the Merger. Moreover, the market price of our common stock might decline to the extent that the current market price reflects a market assumption that the Merger will be completed. Any of the foregoing, or other risks arising in connection with the failure of or delay in consummating the Merger, could have a material adverse effect on our business, financial condition and results of operations.

We are subject to business uncertainties and contractual restrictions while the Merger is pending.

Uncertainty about the effect of the Merger may have an adverse effect on our business, financial condition and results of operations. These uncertainties may impair our ability to attract, retain and motivate key personnel and maintain relationships with third parties pending the consummation of the Merger. Additionally, these uncertainties could cause third parties with whom we deal to seek to change, or fail to extend, existing business relationships with us.

The pursuit of the Merger and preparation for a potential closing thereof places a burden on our management and internal resources. Significant diversion of management attention away from ongoing business concerns and any difficulties encountered in the closing process could have a material adverse effect on the Company's business, financial condition and results of operations.

In addition, the Merger Agreement restricts us from taking certain actions without Parent's consent while the Merger is pending. If the Merger is not completed, our inability to take such actions while the Merger is pending could have a material adverse effect on our business, financial condition and results of operations.

Litigation against us, or the members of our board of directors, could prevent or delay the completion of the Merger.

While we believe that claims made to date and any claims which may be asserted by purported shareholder plaintiffs related to the Merger would be without merit, the results of any such potential legal proceedings are difficult to predict and could delay or prevent the Merger from being competed in a timely manner. Moreover, any litigation could be time consuming and expensive, could divert our management's attention away from our regular business and, any lawsuit adversely resolved against us or members of our board of directors, could have a material adverse effect on our business, financial condition and results of operations.

One of the conditions to the consummation of the Merger is the absence of any law enacted, issued or promulgated by a governmental authority or any issuance or granting of any decree, ruling injunction or other order (whether temporary, preliminary or permanent) by a governmental authority that has the effect of restraining, enjoining or otherwise prohibiting the consummation of the Merger. Consequently, if a settlement or other resolution is not reached in any lawsuit that is filed or any regulatory proceeding and a claimant secures injunctive or other relief or a regulatory authority issues an order or other directive having the effect of making the Merger illegal or otherwise prohibiting consummation of the Merger, then such injunctive or other relief may prevent the Merger from becoming effective in a timely manner or at all, which could have the adverse consequences set forth above.

The Merger Agreement limits our ability to pursue alternatives to the Merger and may discourage other companies from trying to acquire the Company for greater consideration than what Parent has agreed to pay pursuant to the Merger Agreement.

The Merger Agreement contains provisions that make it virtually impossible for us to sell our business to a party other than Parent. The Merger Agreement provides that the Company must comply with customary non-solicitation restrictions, including certain restrictions on its ability to solicit alternative acquisition proposals from third parties, to provide non-public information to third parties and to engage in negotiations with third parties regarding alternative acquisition proposals.

The Merger Agreement also allows either the Company or Parent to terminate the Merger Agreement in certain circumstances. Upon termination of the Merger Agreement (other than a termination as a result of the failure of the debt financing being available to Parent), we will be required to pay a termination fee of $63.0 million to Parent. While both the Company and Parent believe these provisions and agreements are reasonable and customary and are not preclusive of other offers, the restrictions, including the added expense of the $63.0 million termination fee that may become payable by the Company to Parent in certain circumstances, discourage a third party that has an interest in acquiring all or a significant part of the Company from considering or proposing that acquisition, even if that party were prepared to pay consideration with a higher per share value than the consideration payable in the Merger pursuant to the Merger Agreement.

Conditions in the global economy and capital markets, and in the petrochemical industry in particular, may have an adverse effect on our results of operations, financial condition, and cash flow.

Our products are sold in markets that are sensitive to changes in general economic conditions, such as automotive, construction and consumer products. Moreover, the petrochemical industry in general has historically been subject to volatility and cyclical downturns. Downturns in general economic conditions, or in the petrochemical industry in particular, can cause fluctuations in demand for our products, product prices, sales volumes and margins. A decline in the demand for our products or a shift to lower-margin products due to deteriorating economic conditions could adversely affect sales of our products and our profitability and could also result in impairments of certain of our assets.

Our business and operating results have been affected by fluctuating commodity prices, volatile exchange rates and other challenges currently affecting the global economy and our customers. Uncertainty regarding global economic conditions, especially as a result of the continued COVID-19 pandemic, poses a continuing risk to our business, as consumers and businesses may postpone spending in response to tighter credit, negative financial news or declines in income or asset values, which may reduce demand for our products. If global economic and market conditions, or economic conditions in key markets, remain uncertain or deteriorate further, our results of operations, financial condition and cash flows could be materially adversely affected.

The failure of our raw material suppliers to perform their obligations under long-term supply agreements, or our inability to replace or renew these agreements when they expire, could increase our cost for these materials, interrupt production or otherwise adversely affect our results of operations.

Our manufacturing processes use the following primary raw materials: butadiene, styrene, isoprene, CTO, including black liquor soap that we refine into CTO, and CST. We have long-term supply agreements with LyondellBasell Industries ("LyondellBasell"), International Paper, and others to supply our raw material needs in the U.S. and Europe.

However, most of our long-term contracts contain provisions that allow our suppliers to limit, or allocate, the amount of raw materials shipped to us below the contracted amount in certain circumstances. If we are required to obtain alternate sources for raw materials because a supplier is unwilling or unable to perform under raw material supply agreements, if a supplier terminates its agreements with us, if we are unable to renew our existing contract, or if we are unable to obtain new long-term supply agreements to meet changing demand, we may not be able to obtain these raw materials in sufficient quantities, on economic terms, or in a timely manner, and we may not be able to enter into long-term supply agreements on terms as favorable to us, if at all. A lack of availability of raw materials could have a material adverse effect on our results of operations, financial condition and cash flows.

If the availability of our raw materials, including butadiene, styrene, isoprene, CST, and CTO is limited, we may be unable to produce some of our products in quantities sufficient to meet customer demand or on favorable economic terms, which may have an adverse effect on our results of operations, financial condition, and cash flow.

We use butadiene, styrene, and isoprene as our primary raw materials in our Polymer segment and CTO and CST in our Chemical segment and use additional non-primary raw materials in the production of our products. The global supply chain and logistics environment has been constrained for the year ended December 31, 2021 as a result of the global congestion of supply chains and logistic equipment rebalance resulting from the COVID-19 pandemic and severe weather events. Suppliers may not be able to meet our raw material requirements, and we may not be able to obtain substitute supplies from alternative suppliers in sufficient quantities, on economic terms, or in a timely manner. A lack of availability of our raw materials in the quantities we require to produce our products could result in our inability to meet customer demand and could have a material adverse effect on our results of operations, financial condition and cash flows.We implemented a number of mitigation measures, including cross-regional optimization, planning contingencies, and utilization of alternative carriers. Given the current global supply chain and logistics environment outlook, we expect these trends to continue into fiscal year 2022.

Increases in the costs of our raw materials may occur, which may have an adverse effect on our results of operations, financial condition, and cash flow if those costs cannot be passed through to our customers.

The price of raw materials may be impacted by external factors, including uncertainties associated with war, terrorist attacks, weather and natural disasters, health epidemics or pandemics, civil unrest, the effects of climate change or political instability, plant or production disruptions, strikes or other labor unrest, breakdown or degradation of transportation infrastructure used in the delivery of raw materials, changes in laws or regulations in any of the countries in which we have significant suppliers, or general economic conditions.

We use butadiene, styrene, and isoprene in our Polymer segment and CTO and CST in our Chemical segment as our primary raw materials. The cost of these raw materials has generally correlated with changes in energy prices and is generally influenced by supply and demand factors, and for our isoprene monomers, the prices for natural and synthetic rubber.

Our results of operations are directly affected by the cost of raw materials. Since the cost of these primary raw materials comprises a significant amount of our total cost of goods sold, the selling prices for our products and therefore our total revenue is impacted by movements in these raw material costs, as well as by the cost of other inputs. In the past we have experienced erratic and significant changes in the costs of these raw materials, butadiene in particular. In addition, product mix can have an impact on our overall unit selling prices, since we provide an extensive product offering and therefore experience a wide range of unit selling prices. Because of the significant portion of our cost of goods sold represented by these raw materials, our gross profit margins could be adversely affected by changes in the cost of these raw materials if we are unable to pass the increases on to our customers.

Due to inflationary pressures, our Polymer and Chemical segments experienced significant increases in all primary raw materials, including monomers in the Polymer segment and CTO and CST in the Chemical segment. Additionally, we continue to experience inflationary pressures within our utilities and secondary costs, which have added to the increase in our conversion costs.

While we have implemented price right strategies to minimize the inflationary impacts, due to volatile raw material prices, there can be no assurance that we can continue to recover raw material costs or retain customers in the future. As a result of our pricing actions, customers may become more likely to consider competitors' products, some of which may be available at a lower cost. Significant loss of customers could result in a material adverse effect on our results of operations, financial condition and cash flows.

Significant fluctuations in raw material costs may result in volatility in our quarterly operating results and impact the market price of our common stock.

We use the FIFO basis of accounting for inventory and cost of goods sold, and therefore gross profit. In periods of raw material price volatility, reported results under U.S. generally accepted accounting principles ("U.S. GAAP") will differ from what the results would have been if cost of goods sold were based on estimated current replacement cost ("ECRC"). Specifically, in periods of declining raw material costs, reported gross profit will be lower under U.S. GAAP than under ECRC, and in periods of rising raw material costs, gross profit will be higher under U.S. GAAP than under ECRC. However, because raw material costs are difficult to predict, we cannot accurately anticipate fluctuations in raw material costs with precision, or effectively or economically hedge against the effects of any such change. If raw material costs fluctuate in a quarter, our results of operations and cash flows will be affected, the magnitude of which could be significant, which could cause our earnings and cash flows to depart from the periodic expectations of financial analysts or investors, and therefore, the market price of our common stock may be volatile as a result.

Maintenance, expansion and refurbishment of our facilities, the construction of new facilities and the development and implementation of new manufacturing processes involve significant risks, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Our facilities may require regulatory or periodic maintenance, upgrading, expansion, refurbishment or improvement. Any unexpected operational or mechanical failure, including failure associated with breakdowns and forced outages, could reduce our facilities' production capacity below expected levels, which would reduce our revenues. Unanticipated capital expenditures associated with maintaining, upgrading, expanding, repairing, refurbishing, or improving our facilities may also reduce profitability. Our facilities may also be subject to unanticipated damage as a result of natural disasters or terrorist attacks, as was the case for our Panama City, Florida, manufacturing facility during Hurricane Michael in October 2018.

If we make any major modifications to our facilities, such modifications likely would result in substantial additional capital expenditures and could prolong the time necessary to bring the facility on line. We may also choose to refurbish or upgrade our facilities based on our assessment that such activity will provide adequate financial returns. However, such activities require time for development and capital expenditures before commencement of commercial operations, and key assumptions underpinning a decision to make such an investment may prove incorrect, including assumptions regarding construction costs and timing, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

The construction of new manufacturing facilities entails a number of risks, including the ability to begin production within the cost and timeframe estimated and to attract a sufficient number of skilled workers to meet the needs of the new facility. Additionally, our assessment of the projected benefits associated with the construction of new manufacturing facilities is subject to a number of estimates and assumptions, which in turn are subject to significant economic, competitive and other uncertainties that are beyond our control. If we experience delays or increased costs, our estimates and assumptions are incorrect, or other unforeseen events occur, our business, ability to supply customers, financial condition, results of operations and cash flows could be adversely impacted.

Finally, we may not be successful or efficient in developing or implementing new production processes. Innovation in production processes involves significant expense and carries inherent risks, including difficulties in designing and developing new process technologies, development and production timing delays, lower than anticipated manufacturing yields, and product defects. Disruptions in the production process can also result from errors, defects in materials, delays in obtaining or revising operating permits and licenses, returns of product from customers, interruption in our supply of materials or resources, and disruptions at our facilities due to accidents, maintenance issues, or unsafe working conditions, all of which could affect the timing of production ramps and yields. Production issues can lead to increased costs and may affect our ability to meet product demand, which could adversely impact our business and the results from operations.

Third parties provide significant operating and other services under agreements that are important to our business. The failure of these third parties to perform their obligations, or the termination of these agreements could occur, which may have an adverse effect on our results of operations, financial condition, and cash flow.

We are party to agreements with third parties who provide site services, utilities, materials and facilities. Additionally, our Berre, France, and Wesseling, Germany, plants are operated and maintained by a third party who also employs and provides substantially all of the staff for those facilities. If relationships with these third parties were to deteriorate or if the agreements for these services were to terminate, we would be forced to obtain these services from other parties or provide them ourselves. Additionally, at Berre and Wesseling, a termination of the third party agreement would require us to relocate our manufacturing facilities at those locations. The failure of our third party service providers and partners at our manufacturing facilities to perform their obligations under, or the termination of, any of these agreements could materially adversely affect our operations and, depending on market conditions at the time of any such termination, we might not be able to enter into substitute arrangements in a timely manner, if at all, and if we are able to enter into a substitute arrangement, it may not be on terms as favorable to us.

Our industry is highly competitive, and we may lose market share to other producers of SBCs, pine-based specialty chemicals or other products that can be substituted for our products, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Our industry is highly competitive, and we face significant competition from both large international producers and from smaller regional competitors. Our competitors may improve their competitive position in our core markets by successfully introducing new products, improving their manufacturing processes, or expanding their capacity or manufacturing facilities. Further, some of our competitors benefit from advantageous cost positions that could make it increasingly difficult for us to compete in markets for less-differentiated applications. If we are unable to keep pace with our competitors' product and manufacturing process innovations or cost position, it could have a material adverse effect on our results of operations, financial condition, and cash flows.

In addition, competition in the various product applications in which we compete is intense. Increased competition from existing or newly developed SBCs, pine-based specialty chemicals or other products may reduce demand for our products in the future, and our customers may decide on alternate sources to meet their requirements. If we are unable to successfully compete with other producers of SBCs or refiners of CTO, or if other products can be successfully substituted for our products, our sales may decline. Our tall oil-based resins compete against hydrocarbon and gum-based resins in the adhesives and inks submarkets, and our TOFA competes against animal and vegetable-based fatty acids. We could be subject to pricing pressure from Chinese manufacturers of gum rosins, and hydrocarbon competitors have introduced metallocene-based products that compete directly with many of our adhesive tackifiers.

Our business is subject to seasonality that may affect our quarterly operating results and impact the market price of our common stock.

Seasonal changes and weather conditions typically affect our sales in our paving (including pavement markings), roofing, and construction applications. In particular, sales volumes generally rise in the warmer months and generally decline during the colder months of fall and winter, or during abnormally wet seasons. In addition, sales into the ink submarket are typically highest in the third quarter of the year due to increased demand for holiday catalog printing. However, because seasonal weather patterns are difficult to predict, we cannot accurately estimate quarterly fluctuations in sales into our paving, roofing, construction, and ink submarkets in any given year.

Seasonality also affects the availability of CTO and CST, two of our primary raw materials. Yields of CTO and CST are higher during the first half of the year, generally peaking during the early summer months, due to the natural growth and associated chemical yield cycles of trees, in addition to higher yields from kraft pulping during the cooler months.

Chemical manufacturing is inherently hazardous, which could result in accidents that disrupt our operations or expose us to significant losses or liabilities.

Hazards associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes exist in our operations and the operations of other occupants with whom we share manufacturing sites. 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 our business as a whole. These potential risks include, but are not necessarily limited to:

- pipeline and storage tank leaks and ruptures;
- explosions and fires;
- inclement weather and natural disasters;
- terrorist attacks;
- mechanical failure; and
- chemical spills and other discharges or releases of toxic or hazardous substances or gases.

These hazards may result in personal injury and loss of life, damage to property and contamination of the environment, which may result in a suspension of operations and the imposition of civil or criminal penalties, including governmental fines, expenses for remediation and claims brought by governmental entities or third parties. The loss or shutdown of operations over an extended period at any of our major operating facilities could have a material adverse effect on our industry, reputation, or our financial condition and results of operations. Our property, business interruption and casualty insurance may not fully insure us against all potential hazards incidental to our business.

Our relationship with our employees could deteriorate, which may have an adverse effect on our results of operations, financial condition, and cash flow.

As a manufacturing company, we rely on our employees and good relations with our employees to produce our products and maintain our production processes and productivity. A significant number of our non-U.S. employees are subject to collective bargaining arrangements or works counsel representation. Approximately 23.4% of our combined U.S. employees are represented by unions. We may not be able to negotiate existing or future arrangements on satisfactory terms or at all, the earliest of which expires in 2021, which may adversely affect our business. If these workers were to engage in a strike, work stoppage or other slowdown, our operations could be disrupted or we could experience higher labor costs, which could adversely affect our business, results of operations, financial condition, and cash flow.

In addition, if our other employees were to become unionized, in particular our employees at our Belpre, Ohio, facility, we could experience significant operating disruptions and higher ongoing labor costs, which could adversely affect our results of operations, financial condition, and cash flow. Because many of the personnel who operate our European facilities are employees of a third party, relations between the third party and its employees may also adversely affect our business, results of operations, financial condition, and cash flow.

Loss of key personnel or our inability to attract and retain new qualified personnel could hurt our business and inhibit our ability to operate and grow successfully.

Our success in the highly competitive markets in which we operate will continue to depend to a significant extent on our key employees. We are dependent on the expertise of our executive officers and other key employees. Loss of the services of any of our executive officers or other key employees could have an adverse effect on our prospects. We may not be able to retain our key employees or to recruit qualified individuals to join our company. The loss of key employees could result in high transition costs and could disrupt our operations.

We generally do not have long-term contracts with our customers, and the loss of customers could adversely affect our sales and profitability.

With some exceptions, our business is based primarily upon individual sales orders by our customers. As such, our customers could cease buying products from us at any time, for any reason, with little or no notice or recourse. If multiple customers elected not to purchase products from us, our business prospects, results of operations, financial condition, and cash flow could be adversely affected.

Domestic or international natural disasters, health epidemics or pandemics, or terrorist attacks may disrupt our operations, decrease the demand for our products or otherwise have an adverse impact on our business.

Chemical-related assets, and U.S. corporations such as ours, may be at a greater risk of future terrorist attacks (including both physical attacks and cyber-attacks) than other possible targets in the U.S. and throughout the world. Moreover, extraordinary events such as natural disasters or global or local health epidemics or pandemics could result in significant damage to our facilities and/or disruption of our operations and may negatively affect local economies, including those of our customers or suppliers. The occurrence of such events cannot be predicted, although their occurrence can be expected to continue to adversely impact the economy in general and our specific markets.

The resulting damage from a natural disaster or terrorist attack could include loss of life, property damage or site closure. Several of our facilities are located in regions where natural disasters have previously disrupted, and may in the future disrupt, our ability to manufacture and deliver products from certain facilities and require us to temporarily declare an excused performance, or *force majeure*, on certain products under our existing agreements with customers. Any damage resulting in stoppage or reduction of our facilities' production capacity could reduce our revenues, and any unanticipated capital expenditures to repair such damage (to the extent not covered by our insurance policies) may reduce profitability. Any, or a combination, of these factors could also adversely impact our results of operations, financial position and cash flows.

The COVID-19 pandemic is adversely impacting our business.

We are monitoring and continue to assess the ongoing effects of the COVID-19 pandemic on our business and operations. The scope of the effects of the COVID-19 pandemic and its related economic impact on our business depends on many factors beyond our control, and the effects are difficult to assess or predict with meaningful precision both generally and specifically. Despite recent progress in the administration of vaccines, both the outbreak of recent variants, including Delta and Omicron, and the related containment and mitigation measures that have been put into place across the globe, have had and are likely to continue to have a serious adverse impact on the global economy and our business, the severity and duration of which are uncertain.

The COVID-19 pandemic has resulted in a decrease in the availability of, and an increase in the cost of, contractors and subcontractors, including as a result of infections, recommended self-quarantining or governmental mandates to direct production activities to support public health efforts. We have taken actions to help ensure the continuity of business through the COVID-19 pandemic, including activating our business continuity plans, implementing other steps to enable employees to work remotely, and safety protocols established within our innovation centers and manufacturing facilities. The impact of these steps on our workforce has presented new challenges for our employees as they balance the demands of the pandemic with their daily operating responsibilities.

Importantly, the COVID-19 pandemic may have a material adverse effect on other third parties upon which we rely, and our ability to assess those effects in any meaningful manner are difficult at this time. In addition, a number of third parties upon which we depend may experience financial difficulties or file for bankruptcy protection. Such third parties may not be able to perform their obligations or may be relieved of their obligations to us as part of the bankruptcy process, which in either case could adversely affect our business.

Lastly, going forward, this and other global or local heath epidemics and pandemics could have a material adverse effect on our results of operations, financial position, and cash flows.

Climate change and sustainability initiatives may result in significant operational changes and expenditures and adversely affect our business.

Continuing political and social attention to the issue of climate change and sustainability has resulted in both existing and pending international agreements and national, regional or local legislation and regulatory measures to limit greenhouse gas emissions. These agreements and measures may require, or could result in future legislation and regulatory measures that require, significant equipment modifications, operational changes, taxes, or purchase of emission credits to reduce emission of greenhouse gases from our operations, which may result in substantial capital expenditures and compliance, operating, maintenance and remediation costs.

Risks Related to Financing and Tax

Our substantial indebtedness could adversely affect our financial condition and prevent us from fulfilling our obligations under the terms of our indebtedness, including our senior notes and our senior secured credit facilities.

As of December 31, 2021, we had €85.0 million, or approximately $96.7 million, in outstanding borrowings under the Euro dollar denominated tranche (the "Euro Tranche") of our senior secured term loan facility (the "Term Loan Facility"). In addition, we had $400.0 million of 4.25% Senior Notes due 2025 (the "4.25% Senior Notes") and €290.0 million (or approximately $329.8 million) of 5.25% Senior Notes due 2026 (the "5.25% Senior Notes" and, together with the 4.25% Senior Notes, the "Senior Notes") outstanding as of December 31, 2021. We also have a $300.0 million asset-based revolving credit facility (the “ABL Facility”), under which we had no outstanding borrowings as of December 31, 2021. Pursuant to the terms of our Term Loan Facility and ABL Facility, we may request up to an aggregate of $350.0 million and $100.0 million, respectively, of additional facility commitments subject to compliance with certain covenants and other conditions.

In addition, our KFPC joint venture has a syndicated loan agreement due in full by January 2022 (“KFPC Loan Agreement”) in the amount of 5.5 billion new Taiwanese dollars (“NTD”) (or approximately $198.7 million) which provided additional funding to construct the HSBC facility in Taiwan and provided funding for working capital requirements and/or general corporate purposes. FPCC and Kraton Polymers LLC are guarantors of the KFPC Loan Agreement with each guaranteeing fifty percent (50%) of the indebtedness, of which NTD 494.0 million (or approximately $17.9 million) of indebtedness was outstanding as of December 31, 2021. KFPC also has revolving credit facilities (the “KFPC Revolving Facilities”) to provide funding for working capital requirements and/or general corporate purposes, which allow for total borrowings of up to NTD 2.5 billion (or approximately $90.4 million). As of December 31, 2021, NTD 1.4 billion (or approximately $49.9 million) was drawn on the KFPC Revolving Facilities. Kraton Polymers LLC does not guarantee any of the KFPC Revolving Facilities.

Our current, or any future, indebtedness could:

- make it more difficult for us to satisfy our financial obligations;
- increase our vulnerability to adverse economic, industry, and market conditions;
- increase the risk that we breach financial covenants and other restrictions in our debt agreements, which can be exacerbated by volatility in the cost of our raw materials and the resulting impact on our earnings;
- require us to dedicate a substantial portion of our cash flow from operations to make payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in the business and industry in which we operate;
- restrict us from exploiting business opportunities;
- place us at a disadvantage compared to our competitors that have less debt and lease obligations; or
- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy and other general corporate purposes or to refinance our existing debt.

In addition, our ability to pay principal of and interest on indebtedness, fund working capital and make anticipated capital expenditures depends on our future performance, which is subject to general economic conditions and other factors, some of which are beyond our control. There can be no assurance that our business will generate sufficient cash flow from operations or that future borrowings will be available under our indebtedness to fund liquidity needs, including debt service. Furthermore, if we decide to undertake additional investments in existing or new facilities, this will likely require additional capital, and there can be no assurance that this capital will be available.

Despite current indebtedness levels and restrictive covenants, we and our subsidiaries may incur additional indebtedness, or we may pay dividends in the future. This could further exacerbate the risks associated with our financial leverage.

We and our subsidiaries may incur significant additional indebtedness in the future under the agreements governing our indebtedness. Although the terms of the Term Loan Facility, the ABL Facility and the Senior Notes contain restrictions on the incurrence of additional indebtedness and the payment of distributions to our equity holders, these restrictions are subject to a number of thresholds, qualifications and exceptions, and the additional indebtedness incurred, and distributions paid, in compliance with these restrictions could be substantial. Additionally, these restrictions also permit us to incur obligations that, although preferential to our common stock in terms of payment, do not constitute indebtedness. As of the date of this filing, we had no outstanding borrowings under the ABL Facility with a remaining available borrowing capacity of $262.7 million. In addition, if we and/or our subsidiaries incur new debt, the related risks that we now face as a result of our leverage would intensify.

Our current and future debt instruments may impose significant operating and financial restrictions on us and affect our ability to access liquidity.

Our current debt instruments do, and any future debt instruments may, contain a number of restrictive covenants that impose significant operating and financial restrictions on us. Under the terms of our ABL Facility, we are subject to a financial covenant requiring us to maintain a fixed charge coverage ratio of 1.0 to 1.0 if availability under the facility is below specified amounts. In addition, our debt instruments may include restrictions on our ability to, among other things:

- place liens on our or our restricted subsidiaries’ assets;

- make investments other than permitted investments;
- incur additional indebtedness;
- merge, consolidate or dissolve;
- sell assets;
- engage in transactions with affiliates;
- change the nature of our business;
- change our or our subsidiaries' fiscal year or organizational documents; or
- make restricted payments (including certain equity issuances).

A failure by us or our subsidiaries to comply with the covenants and restrictions contained in the agreements governing our indebtedness could result in an event of default under such indebtedness, which could adversely affect our ability to respond to changes in our business and manage our operations. Upon the occurrence of an event of default under any of the agreements governing our indebtedness, the lenders could elect to declare all amounts outstanding to be due and payable and exercise other remedies as set forth in the agreements. Further, an event of default or acceleration of indebtedness under one instrument may constitute an event of default under another instrument. If any of our indebtedness were to be accelerated, there can be no assurance that our assets would be sufficient to repay this indebtedness in full, which could have a material adverse effect on our ability to continue to operate as a going concern.

To service our current, and any future, indebtedness, we will require a significant amount of cash, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Our ability to generate cash depends on many factors beyond our control, and any failure to meet our debt service obligations could harm our business, financial condition and results of operations. Our ability to make payments on and to refinance our indebtedness, and to fund working capital needs and planned capital expenditures, will depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive, business, legislative, regulatory and other factors that are beyond our control, including, among other things, the costs of raw materials used in the production of our products.

If our business does not generate sufficient cash flow from operations or if future borrowings are not available to us in an amount sufficient to enable us to pay our indebtedness, or to fund our other liquidity needs, we may need to refinance all or a portion of our indebtedness on or before the maturity thereof, sell assets, reduce or delay capital investments or seek to raise additional capital, any of which could have a material adverse effect on our operations. We might not generate sufficient cash flow to repay indebtedness as currently anticipated. In addition, we may not be able to effect any of these actions, if necessary, on commercially reasonable terms, or at all. Our ability to restructure or refinance our indebtedness will depend on the condition of the capital markets and our financial condition at such time. Any refinancing of our indebtedness could be at higher interest rates and could require us to comply with more onerous covenants, which could further restrict our business operations. The terms of existing or future debt instruments may limit or prevent us from taking any of these actions. In addition, any failure to make scheduled payments of interest and principal on our outstanding indebtedness would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness on commercially reasonable terms, or at all. Our inability to generate sufficient cash flow to satisfy our debt service obligations, or to refinance or restructure our obligations on commercially reasonable terms would have a material adverse effect on our business, financial condition and results of operations.

Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

Borrowings under the Term Loan Facility, the ABL Facility, KFPC Loan Agreement, and KFPC Revolving Facilities are, and additional borrowings in the future may be, at variable rates of interest that expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness will increase even though the amount borrowed will remain the same, and our net income and cash flows, including cash available for servicing our indebtedness, will correspondingly decrease. At December 31, 2021, approximately $164.4 million, or 18.3%, of our $897.3 million total debt was at a variable rate. Additionally, any interest rate swaps we enter may not fully mitigate our interest rate risk.

Fluctuations in currency exchange rates may significantly impact our results of operations and may significantly affect the comparability of our results between financial periods.

Our operations are conducted by our subsidiaries in many countries. The results of the operations and the financial position of these subsidiaries are reported in the relevant foreign currencies and then translated into U.S. dollars at the applicable exchange rates for inclusion in our consolidated financial statements. The main currencies to which we are exposed, besides the U.S. dollar, are the Euro, Japanese Yen, British Pound, Brazilian Real, Swedish Krona, Chinese Yuan Renminbi, Taiwanese Dollar, and Mexican Peso. The exchange rates between these currencies and the U.S. dollar in recent years have fluctuated significantly and may continue to do so in the future. A depreciation of these currencies against the U.S. dollar, including as a result of differentials in inflation and interest rates, will decrease the U.S. dollar equivalent of the amounts derived from these operations reported in our consolidated financial statements and an appreciation of these currencies will result in a corresponding increase in such amounts. Because many of our raw material costs are determined with respect to the U.S. dollar rather than these currencies, depreciation of these currencies may have an adverse effect on our profit margins or our reported results of operations. Conversely, to the extent that we are required to pay for goods or services in foreign currencies, the appreciation of such currencies against the U.S. dollar will tend to negatively impact our results of operations. In addition, currency fluctuations may affect the comparability of our results of operations between financial periods.

We incur currency transaction risk whenever we enter into either a purchase or sale transaction using a currency other than the local currency of the transacting entity. From time to time, we use hedging strategies to reduce our exposure to currency fluctuations. Given the volatility of exchange rates, exacerbated by increasing and varying levels of inflation globally, there can be no assurance that we will be able to effectively manage our currency transaction risks, that our hedging activities will be effective or that any volatility in currency exchange rates will not have a material adverse effect on our financial condition or results of operations.

We may have additional tax liabilities, which may have an adverse effect on our results of operations, financial condition, and cash flow.

We are subject to taxes in the U.S., as well as numerous foreign jurisdictions. Significant judgment is required in determining our provision for income taxes, deferred tax assets and liabilities and any valuation allowances recorded against net deferred tax assets. We make these estimates and judgments about our future taxable income that are based on assumptions that are consistent with our future plans. Tax laws, regulations and administrative practices may be subject to change due to economic or political conditions including fundamental changes to the tax laws applicable to corporate multinationals. The U.S., countries in the European Union and a number of other countries are actively considering changes in this regard.

In addition, our tax returns are subject to examination by the U.S. and other tax authorities and governmental bodies. We regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of our provision for taxes. There can be no assurance as to the outcome of the examinations. Changes in tax laws, increase of tax rates, or adverse outcomes resulting from examinations of our tax returns could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition.

We may be unable to realize the benefits of our net operating loss carry-forwards ("NOLs").

NOLs may be carried forward to offset taxable income in future years and eliminate income taxes otherwise payable on such taxable income, subject to certain requirements and limitations. Based on various corporate income tax rates in various jurisdictions, our NOLs and other tax attributes carried forward could provide a benefit to us, if fully utilized, of significant future tax savings. However, our ability to use these tax benefits in future years will depend upon the amount of our otherwise taxable income. If we do not have sufficient taxable income in future years to use the tax benefits before they expire, we will lose the benefit of these NOLs permanently.

The amount of NOLs that we have claimed has not been audited or otherwise validated by each tax jurisdiction. The various tax authorities could challenge our tax positions that could impact the amount of our NOLs. The tax law provisions for the various tax jurisdiction may limit our ability to utilize the NOLs carried forward to offset taxable income in future years. If the various tax authorities were successful with respect to any such challenge, the potential tax benefit of the NOLs to us could be substantially reduced that may have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition.

A decrease in the fair value of pension and other post-retirement assets could materially increase future funding requirements of the pension and other post-retirement plans.

We sponsor defined benefit pension and other post-retirement plans. The total projected benefit obligation of our defined benefit pension and other post-retirement plans exceeded the fair value of the plan assets by approximately $96.3 million at December 31, 2021. We contributed $17.1 million to the pension and other post-retirement plans in 2021. Among the key assumptions inherent in the actuarially calculated pension and other post-retirement plan obligations and pension and other post-retirement plan expenses are the discount rate and the expected rate of return on plan assets. If discount rates or actual rates of return on invested plan assets were to decrease, the pension and other post-retirement plan obligations could increase materially. The size of future required pension contributions could result in our dedicating a substantial portion of our cash flow from operations to making the contributions, which could materially adversely affect our business, financial condition and results of operations.

Risks Related to Legal and Regulatory Matters

The European Union's Renewable Energy Directive 2009/28 on the promotion of the use of energy from renewable resources (the "RED"), was repealed on July 1, 2021 and replaced by Directive 2018/2001, which had to be transposed by the 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, which may have an adverse effect on our results of operations, financial condition, and cash flow.

In December 2008, the European Union ("EU") adopted the RED, which established a 20% EU-wide target for the overall share of energy from renewable sources in the EU's gross final consumption of energy in 2020, as well as a 10% target for energy consumed from renewable sources in the transport sector by 2020. To facilitate the achievement of these EU wide targets, the RED established mandatory targets for each Member State requiring 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 fulfilled the RED's biofuel sustainability criteria.

In spring 2015, Directive (EU) 2015/1513 amending inter alia the RED was adopted. It introduced a cap for food-based biofuels in transport and put more emphasis on advanced biofuels from waste feedstocks. It also added a new Annex IX expressly listing CTO under Part A as a residue-type feedstock, the use of which in biofuel would make that biofuel eligible for double counting towards the 10% 2020 target for renewable fuels in transport under the RED.

In December 2018, the RED II entered into force, covering the period 2021-2030, which includes slightly modified sustainability criteria. Compared to the RED, the RED II sets out stricter obligations and higher goals; an EU-wide binding target of at least a 32% share of energy from renewable sources in the EU's gross final consumption of energy by 2030; as well as minimum share of 14 % of renewable energy in the transport sector in each Member State by 2030. According to the RED II, Member States set out national indicative trajectories for their contributions to the EU-wide target. In the absence of revised national targets, the national renewables targets for 2020 should constitute the minimum contribution of each Member State for 2030.

As for the transport sector target, the RED II provides that by 2030, Member States shall require fuel suppliers to supply a share of at least 14% of fuels from renewable sources, including a share of 3.5% of advanced biofuels. CTO based biofuels shall, according to Annex IX, Part A, of the RED II, be counted as advanced biofuels, and Member States may still double count the contribution of such fuels. The RED II had to be transposed by Member States by June 30, 2021 at the latest and repealed the RED as of July 1, 2021.

In July 2021, two weeks after the end of the transposition period for the RED II, the EU Commission published a proposal for amendments to the RED II to align its renewable energy targets with EU's higher climate ambitions set out in the European Green Deal, which establishes the objective of a climate neutral EU by 2050. As an intermediate target, the EU shall reduce its greenhouse gas emissions by 55% by 2030. These objectives were made legally binding in the European Climate Law (EU Regulation 2021/1119) which entered into force on July 29, 2021. Since the current EU-wide target of at least 32% renewable energy by 2030, set out in the RED II, is not deemed sufficient to achieve such a reduction. the European Commission has proposed to increase the binding target of renewable sources in the EU's energy mix to 40% by 2030.

Moreover, the European Commission's proposal promotes an increase of the ambition level of the targets relevant for the transport sector: instead of a minimum share of 14 % of renewable energy in the transport sector in each Member State by 2030, it has proposed to focus on the greenhouse gas intensity reduction target according to which fuel suppliers shall ensure that the amount of renewable fuels and renewable electricity supplied to the transport sector leads to a greenhouse gas intensity reduction of at least 13% by 2030, compared to a baseline provided in the Directive and in accordance with indicative trajectories set by each Member State. Further, the advanced biofuel sub-targets are proposed to take the form of minimum shares of the total energy supplied to the transport sector (at least 0.2% in 2022, 0.5% in 2025 and 2.2% in 2030). In the proposal CTO remains listed in proposal Annex IX, Part A, as a residue eligible as feedstock for advanced biofuels. As such, CTO based biofuels would continue to contribute to the renewable energy targets. However, according to the proposal, it will no longer be possible to double count feedstocks listed in Annex IX.

The European Commission's proposal is currently subject to the legislative procedure before the European Parliament and the Council of the European Union. The Commission has proposed that amendments to the RED II should be transposed by the Member States by December 31, 2024 at the latest. Should the proposed amendments be adopted, it is likely to affect the demand for CTO.

In addition to these developments in the EU, various pieces of legislation regarding the use of alternative fuels have been introduced in the U.S.

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. A reduced ability to procure an adequate supply of CTO due to competing new uses such as for biofuel production could have a material adverse effect on our results of operations, financial condition and cash flows.

We may be liable for damages based on product liability claims brought against our customers, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Many of our products provide critical performance attributes to our customers' products, which are sold to consumers who could potentially bring product liability suits in which we could be named as a defendant. For example, certain of the chemicals or substances that are used in our businesses, including alkyl phenols such as bisphenol A and nonylphenol, flammable solvents such as toluene, xylene and alcohols, and rosin, formaldehyde and resin dust, have been identified as having potentially harmful health effects. The sale of these products entails the risk of product liability claims. If a person were to bring a product liability suit against one of our customers, the customer may attempt to seek contribution from us. A person may also bring a product liability claim directly against us. A successful product liability claim or series of claims against us in excess of our insurance coverage, for which we are not otherwise indemnified, could have a material adverse effect on our industry, our reputation, or on our financial condition or results of operations. There can be no assurance that our efforts to protect ourselves from product liability claims in this regard will ultimately protect us from any such claims.

Failure to comply with the Foreign Corrupt Practices Act ("FCPA") and other similar worldwide anti-bribery, anti-corruption, and anti-fraud laws or sanction laws may subject us to penalties, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Our international operations require us to comply with a number of U.S. and international laws and regulations, including those involving anti-bribery, anti-corruption and anti-fraud. In particular, our international operations are subject to U.S. and foreign anti-corruption laws and regulations, including the regulations imposed by the FCPA, which generally prohibits issuers and their strategic or local partners, agents or representatives, which we refer to as our intermediaries (even if those intermediaries are not themselves subject to the FCPA or other similar laws), from making improper payments to foreign officials for the purpose of obtaining or keeping business or obtaining an improper business benefit, and the United Kingdom Bribery Act 2010 (the "Bribery Act") as well as anti-bribery and anti-corruption laws of the various jurisdictions in which we operate. Sanction laws prohibit sales to certain persons or locations and impose other restrictions on our operations.

We currently take precautions to comply with these laws. However, these precautions may not protect us against liability, particularly as a result of actions by our intermediaries through whom we have exposure under these anti-bribery, anti-corruption and anti-fraud laws, as well as sanction laws, even though we may have limited or no ability to control such intermediaries. Additionally, we have operations in certain countries where strict compliance with anti-bribery and anti-corruption laws may conflict with local customs and practices.

In order to effectively operate in certain foreign jurisdictions, circumstances may require that we establish joint ventures with local operators or use third-party agents, distributors and marketing representatives. The establishment of joint ventures with local operators and the use of third-party intermediaries may expose us to the risk of violating, or being accused of violating, the foregoing or other anti-bribery, anti-corruption laws or anti-fraud. Such violations could be punishable by criminal fines, imprisonment, civil penalties, disgorgement of profits, injunctions and exclusion from government contracts, as well as other remedial measures. Investigations of alleged violations can be very expensive, disruptive and damaging to our reputation and could negatively impact our stock price. Failure by us or our intermediaries to comply with the foregoing or other anti-bribery, anti-corruption and anti-fraud laws, as well as sanction laws, could adversely impact our results of operations, financial position, and cash flows, damage our reputation and negatively impact our stock price.

As a global business, we are exposed to local business risks in different countries, which may have an adverse effect on our results of operations, financial condition, and cash flow.

We procure raw materials from foreign countries and have significant operations in foreign countries, including manufacturing facilities, research and development facilities, offices, sales personnel and customer support operations. Currently, we operate, or others operate on our behalf, manufacturing facilities in Finland, France, Germany, Japan and Sweden, in addition to our operations in the U.S. Furthermore, we are a 50/50 joint venture partner with FPCC to own and operate a 30 kiloton HSBC plant at FPCC's petrochemical site in Mailiao, Taiwan.

Our foreign operations are subject to risks inherent in doing business in foreign countries, including, but not necessarily limited to:

- new and different legal and regulatory requirements in local jurisdictions;

- data privacy regulations;
- export duties or import quotas;
- domestic and foreign customs and tariffs or other trade barriers;
- potential staffing difficulties and labor disputes;
- risk of non-compliance with the FCPA, the Bribery Act, or similar anti-bribery legislation in other countries by agents or other third-party representatives;
- managing and obtaining support and distribution for local operations;
- increased costs of transportation or shipping;
- credit risk and financial conditions of local customers and distributors;
- potential difficulties in protecting intellectual property;
- risk of nationalization of private enterprises by foreign governments;
- potential imposition of restrictions on investments;
- varying permitting and approval requirements;
- potentially adverse tax consequences, including imposition or increase of withholding and other taxes on remittances and other payments by subsidiaries;
- foreign currency exchange restrictions and fluctuations;
- local political and social conditions, including the possibility of hyperinflationary conditions and political instability in certain countries;
- the outbreak of global or regional health epidemics or pandemics; and
- civil unrest, including labor unrest, in response to local political conditions.

We may not be successful in developing and implementing policies and strategies to address the foregoing risks in a timely and effective manner at each location where we do business or from where we procure raw materials. Consequently, the occurrence of one or more of the foregoing risks could have a material adverse effect on our international operations or upon our financial condition, results of operations, and cash flows.

Compliance with extensive environmental, health, and safety laws and regulations (including changes to such laws and regulations) could require material expenditures, changes in our operations or site remediation.

The manufacture and sale of our products can present potentially significant health and safety concerns and are also under increased public and governmental scrutiny. Our products are also used in a variety of applications that have specific regulatory requirements, such as those relating to products that have contact with food or are used for medical applications.

We use large quantities of hazardous substances and generate hazardous wastes in our manufacturing operations. Consequently, our operations are subject to extensive environmental, health and safety laws and regulations at the international, national, state and local level in multiple jurisdictions. These laws and regulations govern, among other things, air emissions, wastewater discharges, solid and hazardous waste management and disposal, occupational health and safety, including dust and noise control, site remediation programs and chemical use and management. Many of these laws and regulations have become more stringent over time, and the costs of compliance with these requirements may increase, including costs associated with any necessary capital investments. In addition, our production facilities require operating permits that are subject to renewal and, in some circumstances, revocation. The necessary permits may not be issued or continue in effect, and renewals of any issued permits may contain significant new requirements or restrictions. The nature of the chemical industry exposes us to risks of liability due to the use, production, management, storage, transportation and sale of materials that are heavily regulated or hazardous and can cause contamination or personal injury or damage if released into the environment.

Because of the nature of our operations, we could be subject to legislation and regulation affecting the emission of greenhouse gases. The U.S. Environmental Protection Agency ("EPA") has promulgated regulations applicable to projects involving greenhouse gas emissions above a certain threshold, and the U.S. and certain states within the U.S. have enacted, or are considering, limitations on greenhouse gas emissions.

Jurisdictions outside the U.S. are also addressing greenhouse gases by legislation or regulation. In addition, efforts have been made and continue to be made at the international level toward the adoption of international treaties or protocols that would address global greenhouse gas emissions. These requirements to limit greenhouse gas emissions may require us to incur capital investments to upgrade our operations to comply with any future greenhouse gas emissions controls. While the impact of any such legislation, regulation, treaties or protocols is currently unknown, any such legislation, regulation, treaties or protocols, if enacted, may have an adverse effect on our operations or financial condition.

In addition to the above, various petrochemical products, including plastics, have faced increased public scrutiny due to negative coverage of plastic waste in the environment, which has resulted in local, state, federal and foreign governments proposing and, in some cases, approving, restrictions on the manufacture, consumption and disposal of certain petrochemical products. Increased regulation on the use of our products or other products in our industry, whatever their scope or form, could increase our costs of production, impact overall consumption of our products or result in negative publicity.

Compliance with environmental laws and regulations generally increases the costs of transportation and storage of raw materials and finished products, as well as the costs of storage and disposal of wastes. We may incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations for violations arising under environmental laws, regulations or permit requirements.

Regulation of our employees' exposure to certain chemicals could require material expenditures or changes in our operations, which may have an adverse effect on our results of operations, financial condition, and cash flow.

The Occupational Safety and Health Act in the U.S. and the REACH, directive in Europe, prescribe limitations restricting exposure to a number of chemicals used in our operations, including butadiene, formaldehyde and nonylphenol, a raw material used in the manufacture of phenolic ink resins. Butadiene is a known carcinogen in laboratory animals at high doses and is being studied for its potential adverse health effects. Future studies on the health effects of these, and other, chemicals may result in additional regulations or new regulations that further restrict or prohibit the use of, and exposure to, such chemicals. Additional regulation of or requirements for these chemicals could require us to change our operations, and these changes could affect the quality of our products and materially increase our costs.

We may be subject to losses due to lawsuits arising out of environmental damage or personal injuries associated with chemical manufacturing, which may have an adverse effect on our results of operations, financial condition, and cash flow.

We face the risk that individuals could, in the future, seek damages for personal injury due to exposure to chemicals at our facilities or to chemicals otherwise owned or controlled by us. We may be subject to future claims with respect to workplace exposure, workers' compensation, and other matters. Additionally, under certain of the lease and operating agreements for our sites, we are required to indemnify the third party in certain circumstances, including in certain circumstances for loss and damages resulting from their negligence in performing their obligations.

Some environmental laws could impose on us the entire cost of clean-up of contamination present at a facility even though we did not cause the contamination, and we may be required to undertake and pay for remediation of on-site contamination resulting from past operations at our current sites.

In general, there is always the possibility that a third-party plaintiff or claimant, or governmental or regulatory authority, could seek to include us in an action or claim for damages, clean-up, or remediation pertaining to events or circumstances occurring or existing at one or more of our sites prior to the time of our ownership or occupation of the applicable site. In the event that any of these actions or claims were asserted against us, our results of operations could be adversely affected.

We are subject to customs, international trade, export control, data privacy, antitrust, zoning and occupancy and labor and employment laws that could require us to modify our current business practices and incur increased costs.

We are subject to numerous regulations, including customs and international trade laws, export control, data privacy, antitrust laws and zoning and occupancy laws that regulate manufacturers generally and/or govern the importation, promotion and sale of our products, the operation of factories and warehouse facilities and our relationship with our customers, suppliers and competitors. Particularly, data privacy and protection laws in the U.S., Europe, including but not limited to the General Data Protection Regulation, and elsewhere are evolving and may be interpreted and applied inconsistently from jurisdiction to jurisdiction. In addition, we face risk associated with trade protection laws, policies and measures and other regulatory requirements affecting trade and investment, including loss or modification of exemptions for taxes and tariffs, imposition of new tariffs and duties and import and export licensing requirements, including the ongoing tariffs imposed by the U.S. on imports from China and Chinese tariffs on imports from the U.S.

If these laws or regulations were to change or were violated by our management, employees, suppliers, buying agents or trading companies, the costs of certain goods could increase, or we could experience delays in shipments of our goods, be subject to fines or penalties, or suffer reputational harm, which could reduce demand for our products and hurt our business and negatively impact our results of operations. In addition, changes in federal and state minimum wage laws and other laws relating to employee benefits could cause us to incur additional wage and benefits costs, which could negatively impact our profitability.

Legal requirements are frequently changed and subject to interpretation, and we are unable to predict the ultimate cost of compliance with these requirements or their effects on our operations. We may be required to make significant expenditures or modify our business practices to comply with existing or future laws and regulations, which may increase our costs and materially limit our ability to operate our business.

Risks Related to Stock Ownership

Delaware law and certain provisions of our organizational documents may make a takeover of our company more difficult.

Provisions of our charter and bylaws may have the effect of delaying, deferring or preventing a change in control of our company. A change of control could be proposed in the form of a tender offer or takeover proposal that might result in a premium over the market price for our common stock. In addition, these provisions could make it more difficult to bring about a change in the composition of our board of directors, which could result in the entrenchment of current management. For example, our charter and bylaws:

- establish a classified board of directors so that not all members of our board of directors are elected at one time;
- require that the number of directors be determined, and provide that any vacancy or new board seat may be filled only by the board;
- do not permit stockholders to act by written consent;
- do not permit stockholders to call a special meeting;
- permit the bylaws to be amended by a majority of the board without shareholder approval, and require that a bylaw amendment proposed by stockholders be approved by two-thirds of all outstanding shares;
- establish advance notice requirements for nominations for elections to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- authorize the issuance of undesignated preferred stock, or “blank check” preferred stock, by our board of directors without shareholder approval.

Our Kraton Corporation Executive Severance Program and the equity arrangements with our executive officers also contain change in control provisions. Under the terms of these arrangements, the executive officers are entitled to receive significant cash payments, immediate vesting of options, restricted shares and notional shares, and continued medical benefits in the event their employment is terminated under certain circumstances within twenty four months following a change in control, and with respect to certain equity awards, within two years following a change in control.

Any amounts accrued under the Kraton Polymers LLC Executive Deferred Compensation Plan are immediately payable upon a change of control. We disclose in proxy statements filed with the SEC potential payments to our named executive officers in connection with a change of control. Further, the terms of each of the indentures governing our Senior Notes require us, upon certain change of control transactions, to repurchase our outstanding Senior Notes at a price equal to 101.0% of their principal amount, plus any accrued and unpaid interest. Certain change of control transactions would also constitute an event of default under our Term Loan Facility and ABL Facility.

These arrangements and provisions of our organizational documents and Delaware law may have the effect of delaying, deferring or preventing changes of control or changes in management of our company, even if such transactions or changes would have significant benefits for our stockholders. As a result, these provisions could limit the price some investors might be willing to pay in the future for shares of our common stock.

We are a holding company with nominal net worth and will depend on dividends and distributions from our subsidiaries to pay any dividends.

Kraton Corporation is a holding company with nominal net worth. We do not have any assets or conduct any business operations other than our investments in our subsidiaries, including Kraton Polymers LLC. As a result, our ability to pay dividends, if any, will be dependent upon cash dividends and distributions or other transfers from our subsidiaries. Payments to us by our subsidiaries will be contingent upon their respective earnings and subject to any limitations on the ability of such entities to make payments or other distributions to us. In addition, our subsidiaries are separate and distinct legal entities and have no obligation to make any funds available to us.

Investor sentiment towards climate change and sustainability could adversely affect our business and our stock price.

Investor sentiment towards climate change and sustainability could adversely affect our business and our stock price. Members of the investment community are increasing their focus on sustainability practices, including practices related to

GHGs and climate change. As a result, we may face increasing pressure regarding our sustainability disclosures and practices. Additionally, members of the investment community may screen companies such as ours for sustainability performance before investing in our stock. If we are unable to meet the sustainability standards set by these investors, we may lose investors, our stock price may be negatively impacted, and our reputation may be negatively affected.

Risks Related to Technology and Intellectual Property

If we are not able to continue the technological innovation and successful commercial introduction of new products, our customers may turn to other producers to meet their requirements.

Our industry and the markets into which we sell our products experience periodic technological change and ongoing product improvements. In addition, our customers may introduce new generations of their own products or require new technological and increased performance specifications that would require us to develop customized products. Innovation or other changes in our customers' product performance requirements may also adversely affect the demand for our products. Our future growth and profitability will depend on our ability to gauge the direction of the commercial and technological progress in all key markets, and upon our ability to successfully develop, manufacture and sell products in such changing markets. In order to maintain our profit margins and our competitive position, we must continue to identify, develop and market innovative products on a timely basis to replace existing products. We may not be successful in developing new products and technology that successfully compete with newly introduced products and materials, and our customers may not accept, or may have lower demand for, any of our new products. Further, an important part of our strategy is the creation of demand for innovations that we develop and introduce to the markets. If we fail to keep pace with evolving technological innovations, fail to modify our products in response to our customers' needs or fail to develop innovations that generate additional demand, then our business, financial condition and results of operations could be adversely affected as a result of reduced sales of our products or diminished return on investment in innovations.

Our business relies on intellectual property and other proprietary information, and our failure to protect our rights could harm our competitive advantages with respect to the manufacturing of some of our products, which may have an adverse effect on our results of operations, financial condition, and cash flow.

Our success depends, to a significant degree, upon our ability to protect and preserve our intellectual property and other proprietary information relating to our business. However, we may be unable to prevent third parties from using our intellectual property and other proprietary information without our authorization or from independently developing intellectual property and other proprietary information that is similar to ours, particularly in those countries where the laws do not protect our proprietary rights to the same degree as in the U.S. The use of our intellectual property and other proprietary information by others could reduce or eliminate any competitive advantage we have developed, potentially causing us to lose sales or otherwise harming our business. If it becomes necessary for us to litigate to protect these rights, any proceedings could be burdensome and costly, and we may not prevail.

Our patent applications and issued patents may not provide us with any competitive advantage and may be challenged by third parties. Our competitors may also attempt to design around our patents or copy or otherwise obtain and use our intellectual property and other proprietary information. Moreover, our competitors may already hold or have applied for patents in the U.S. or abroad that, if enforced or issued, could possibly prevail over our patent rights or otherwise limit our ability to manufacture or sell one or more of our products in the U.S. or abroad. With respect to our pending patent applications, we may not be successful in securing patents for these claims. Our failure to secure these patents may limit our ability to protect inventions that these applications were intended to cover. In addition, the expiration of a patent can result in increased competition with consequent erosion of profit margins.

Our confidentiality agreements could be breached or may not provide meaningful protection for our trade secrets or proprietary manufacturing expertise. Adequate remedies may not be available in the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Violations by others of our confidentiality agreements and the loss of employees who have specialized knowledge and expertise could harm our competitive position and cause our sales and operating results to decline as a result of increased competition. In addition, others may obtain knowledge of our trade secrets through independent development or other access by legal means.

The applicable governmental authorities may not approve our pending service mark and trademark applications. A failure to obtain trademark registrations in the U.S. and in other countries could limit our ability to obtain and retain our trademarks and impede our marketing efforts in those jurisdictions. Moreover, third parties may seek to oppose our applications or otherwise challenge the resulting registrations. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands.

The failure of our patents, trademarks, or confidentiality agreements to protect our intellectual property and other proprietary information, including our processes, apparatuses, technology, trade secrets, trade names and proprietary manufacturing expertise, methods and compounds, could have a material adverse effect on our competitive advantages over other producers.

Our products may infringe on the intellectual property rights of others, which may cause us to incur unexpected costs or prevent us from selling our products.

Many of our competitors have a substantial amount of intellectual property. We cannot guarantee that our processes and products do not and will not infringe issued patents (whether present or future) or other intellectual property rights belonging to others, including, without limitation, situations in which our products, processes or technologies may be covered by patent applications filed by other parties in the U.S. or abroad.

From time to time, we oppose patent applications that we consider overbroad or otherwise invalid in order to maintain the necessary freedom to operate fully in our various business lines without the risk of being sued for patent infringement. If, however, patents are subsequently issued on any such applications by other parties, or if patents belonging to others already exist that cover our products, processes or technologies, we could be liable for infringement or have to take other remedial or curative actions to continue our manufacturing and sales activities with respect to one or more products.

We may also be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement of the patents, trademarks and other intellectual property rights of third parties by us or our licensees in connection with their use of our products. Intellectual property litigation is expensive and time-consuming, regardless of the merits of any claim, and could divert our management's attention from operating our business.

If we were to discover that our processes, technologies or products infringe the valid intellectual property rights of others, we might need to obtain licenses from these parties or substantially re-engineer our products in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer our products successfully. Moreover, if we are sued for infringement and lose, we could be required to pay substantial damages and/or be enjoined from using or selling the infringing products or technology. If we incur significant costs to litigate our intellectual property rights or to obtain licenses, or if our inability to obtain required licenses for our processes, technologies or products prevents us from selling our products, it could have a material adverse effect on our business and results of operations.

Increased information systems security threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks, products, and services.

We depend on integrated information systems to conduct our business. Increased global information systems security threats and more sophisticated, targeted computer crime pose a risk to the security of our systems and networks and the confidentiality, availability, and integrity of our data, operations, and communications. While we attempt to mitigate these risks by employing a number of measures, including security measures, upgrading our equipment or software, employee training, comprehensive monitoring of our networks and systems, and maintenance of backup and protective systems, if these measures prove inadequate, we could be adversely affected by, among other things, loss or damage of intellectual property, proprietary and confidential information, and communications or customer data, having our business operations interrupted, our supply chain interrupted, and increased costs to prevent, respond to, or mitigate these cyber security threats. Any significant disruption or slowdown of our systems could cause customers to cancel orders, resulting in us being unable to manufacture or deliver products (or create delays), harm our reputation, or cause standard business processes to become inefficient or ineffective, which could adversely affect our results of operations, financial position, or cash flows.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our principal executive offices are located at 15710 John F. Kennedy Boulevard, Suite 300, Houston, Texas 77032.

We believe that our properties and equipment are generally in good operating condition and are adequate for our present needs. Production capacity at our sites can vary greatly depending upon feedstock, product mix, and operating conditions. Approximate annual capacity amounts may fluctuate as a result of capital expenditures or lean process initiatives to increase capacity, a shutdown of certain equipment to reduce capacity or permanent changes in mix, which could increase or decrease capacity. The following table sets forth our approximate square footage of each of our manufacturing facilities.

Polymer Segment

Location	Principal Products	Approximate Square Footage	Owned/Leased	
Belpre, Ohio	Performance Products, Specialty Polymers, Cariflex	3,600,000	Owned	(1)
Wesseling, Germany	Performance Products	354,000	Owned	(2)
Berre, France	Performance Products, Specialty Polymers	392,000	Owned	(2)
Kashima, Japan	Performance Products	395,000	Owned	(3)
Mailiao, Taiwan	Specialty Polymers	1,800,000	Owned	(4)

Chemical Segment

Location	Principal Products (Upgrades)	Approximate Square Footage	Owned/Leased	
Panama City, Florida	Rosin Esters, Dispersions	217,626	Owned	
Pensacola, Florida	Terpene Resins	64,109	Owned	
Savannah, Georgia	Rosin Esters	186,125	Owned	(5)
Dover, Ohio	Dimer Acids, Polyamides	166,824	Owned	
Oulu, Finland	Rosin Esters and Soaps	167,681	Owned	(6)
Niort, France	AMS, Terpene Resins	187,405	Owned	
Sandarne, Sweden	Rosin Esters, Dispersions	378,892	Owned	
Gersthofen, Germany	Disprorosins	39,116	Owned	

(1) A portion of the HSBC capacity at the Belpre facility is owned by Infineum USA, a joint venture between Shell Chemicals and ExxonMobil that makes products for the lubricant additives business.

(2) Our Wesseling and Berre manufacturing facilities are located on LyondellBasell sites. We lease the land, but own the manufacturing facilities and production equipment. We have operating agreements with LyondellBasell for various site services, utilities, materials, and facilities.

(3) The Kashima manufacturing facility is owned and operated by a 50%-50% joint venture between us and JSR, named Kraton JSR Elastomers K.K. ("KJE"). We are generally entitled to 50% of this production pursuant to our joint venture agreement. JSR markets its portion of the production under its own trademarks, and we market our portion of the production under the Kraton® brand name, although this amount may vary from time to time.

(4) The Mailiao facility is our 50%-50% KFPC joint venture with FPCC, and the joint venture leases the land, but owns the manufacturing facility and production equipment.

(5) We own our black liquor soap acidulation manufacturing facility located in Savannah, Georgia. However, this manufacturing facility is located on land that we lease, and the lease expires on February 28, 2057.

(6) We own our manufacturing facility located in Oulu, Finland. However, this facility is located on land that we lease, and the lease expires on August 31, 2044, with an option to extend the term until August 31, 2095.

Item 3. Legal Proceedings.

For information regarding legal proceedings, including environmental matters, see Note 11 *Commitments and Contingencies* (subsections (b) and (c) of which are incorporated herein by reference) to the consolidated financial statements for further discussion.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

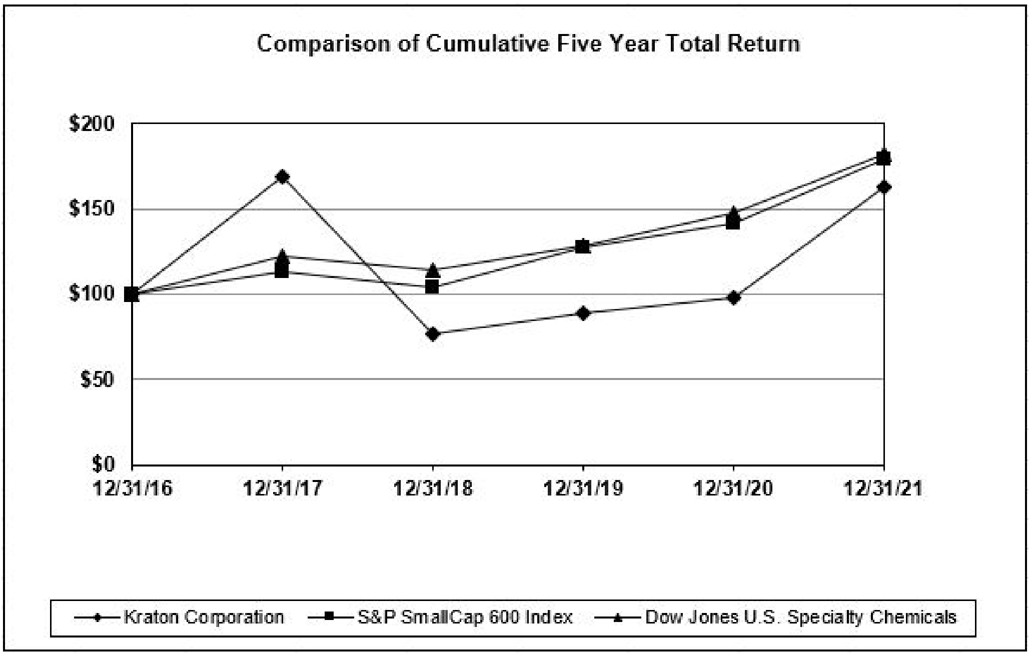
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Our common stock is listed on the NYSE under the symbol "KRA."

As of February 21, 2022, we had approximately 4 shareholders of record of our common stock.

Stock Performance Graph

The following graph reflects the comparative changes in the value from December 31, 2016 through December 31, 2021, assuming an initial investment of $100 and the reinvestment of dividends, if any, in (1) our common stock, (2) the S&P SmallCap 600 Index, and (3) the Dow Jones U.S. Specialty Chemicals Index. The information under this caption is not deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C under the Exchange Act, or to the liabilities of Section 18 of the Exchange Act, and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act, except to the extent we specifically incorporate it by reference into such a filing. Historical performance should not be considered indicative of future stockholder returns.



Total Return to Shareholders
(Includes reinvestment of dividends)

	Annual Return Percentage, Years Ending				
Company Name / Index	**12/31/2017**	**12/31/2018**	**12/31/2019**	**12/31/2020**	**12/31/2021**
Kraton Corporation	69.14 %	(54.66)%	15.93 %	9.76 %	66.68 %
S&P SmallCap 600 Index	13.23 %	(8.48)%	22.78 %	11.29 %	26.82 %
Dow Jones U.S. Specialty Chemicals	22.39 %	(6.84)%	12.25 %	15.20 %	23.79 %

	Cumulative Value of $100 Investment, through December 31, 2021					
Company Name / Index	**Base Period 12/31/16**	**12/31/2017**	**12/31/2018**	**12/31/2019**	**12/31/2020**	**12/31/2021**
Kraton Corporation	$ 100.00	$ 169.14	$ 76.69	$ 88.90	$ 97.58	$ 162.64
S&P SmallCap 600 Index	$ 100.00	$ 113.23	$ 103.63	$ 127.24	$ 141.60	$ 179.58
Dow Jones U.S. Specialty Chemicals	$ 100.00	$ 122.39	$ 114.02	$ 127.98	$ 147.44	$ 182.51

Dividends

We have not previously declared or paid any dividends or distributions on our common stock and have instead deployed earnings to fund the development of our business. We have no current intention to pay any dividends.

Share Repurchase Program. During the three months ended December 31, 2021, we did not repurchase any shares of our common stock. Under our previously authorized share repurchase program, which ended on February 7, 2021, we repurchased a total of $10.0 million of our common stock.

Additionally, the Company repurchases treasury stock that is withheld to satisfy the tax obligation of holders of restricted stock awards when they vest. Our equity incentive plans provide that the value of shares delivered to us to pay the withholding tax obligations is calculated based on the average of the high and low sales price per share of our common stock on the day of vest. During the three months ended December 31, 2021, we did not withhold any shares of our common stock in satisfaction of the tax withholding obligation of holders of restricted stock awards that vested. Pursuant to the terms of the Merger Agreement, we generally may not repurchase shares of our common stock, except the withholding of shares to satisfy tax obligations with respect to our equity awards.

Item 6. Selected Financial Data.

[RESERVED]

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

INTRODUCTION

Management’s Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with Item 8. Financial Statements and Supplementary Data. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to those described in Item 1A. Risk Factors and below under the caption “Factors Affecting Our Results of Operations.” Actual results may differ materially from those contained in any forward-looking statements. Our Annual Report on Form 10-K for the year ended December 31, 2020 includes a discussion and analysis of our financial condition and results of operations for the year ended December 31, 2019 in Item 7 of Part II, “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

OVERVIEW

We are a leading global sustainable specialty chemicals company that manufactures styrenic block copolymers (“SBCs”), specialty polymers, and high-value performance products primarily derived from pine wood pulping co-products. Our operations are managed through two operating segments: (i) Polymer segment and (ii) Chemical segment. On September 27, 2021, we entered into the Merger Agreement pursuant to which DL Chemical, a subsidiary of DL Holdings Co., Ltd. (formerly Daelim Industrial Co., Ltd.), agreed to acquire 100.0% of us in an all-cash transaction.

Polymer Segment

SBCs are highly-engineered synthetic elastomers, which we invented and commercialized over 50 years ago. We developed the first unhydrogenated styrenic block copolymers (“USBC”) in 1964 and the first hydrogenated styrenic block copolymers (“HSBC”) in the late 1960s. Our SBCs enhance the performance of numerous products by imparting greater flexibility, resilience, strength, durability, and processability, and are used in a wide range of applications, including adhesives, coatings, consumer and personal care products, sealants, lubricants, medical, packaging, automotive, paving, roofing, and footwear products.

Our polymers are typically formulated or compounded with other products to achieve improved, customer-specific performance characteristics in a variety of applications. We seek to maximize the value of our product portfolio by emphasizing complex or specialized polymers and innovations that yield higher margins than more commoditized products. We sometimes refer to these complex or specialized polymers or innovations as being more “differentiated.” We believe our SBC products offer many characteristics that help our customers drive towards their sustainability goals. Among others, our SBCs may offer features such as greater recyclability, increased durability that reduces the costly need for maintenance and replacement, and alternatives to less environmentally friendly materials, such as PVCs.

Our USBC paving and roofing applications provide a sustainable alternative by increasing durability, which extend road and roof life. Our products are also found in medical applications, personal care products such as disposable diapers, oil additives, gels, and various other consumer goods. Our products are also used to impart tack and shear properties in a wide variety of adhesive products and to impart characteristics such as flexibility and durability in sealants and corrosion resistance in coatings.

Our HSBC offerings are often the more sustainable choice when compared to alternatives. Among other features, our HSBCs can offer improved recyclability of polyethylene-terephthalate and polypropylene streams, and function as replacements for less sustainable alternatives such as PVC, mainly in medical applications.

Prior to the sale of our Cariflex business, we produced Cariflex IR and IRL. Our Cariflex products are based on synthetic polyisoprene polymer and do not contain natural rubber latex or other natural rubber products making them an ideal substitute for natural rubber latex, particularly in applications with high purity requirements such as medical, healthcare, personal care, and food contact. Cariflex is included in the results of operations through March 6, 2020.

On March 6, 2020, we completed the sale of our Cariflex business to Daelim Industrial Co, Ltd. (subsequently renamed “DL Holdings Co., Ltd.”). As part of the sale, we entered into a multi-year IRSA with DL Chemical. In accordance with the IRSA, we will supply IR to DL Chemical for a period of five years, with an optional extension for an additional five years. As the IRSA product sales are at cost, we deferred approximately $180.6 million of the aggregate purchase price for our Cariflex business. The deferred income will be amortized into revenue as a non-cash transaction when the products are sold. See Note 4 *Disposition and Exit of Business Activities* for further discussion of the IRSA.

Chemical Segment

We manufacture and sell high value sustainable products primarily derived from pine wood pulping co-products. We refine and further upgrade two primary feedstocks, crude tall oil (“CTO”) and crude sulfate turpentine (“CST”), both of which are co-products of the wood pulping process, into value-added biobased specialty chemicals. We refine CTO through a distillation process into four primary constituent fractions: tall oil fatty acids (“TOFA”); tall oil rosin (“TOR”); distilled tall oil

(“DTO”); and tall oil pitch. We further upgrade TOFA and TOR into derivatives such as dimer acids, polyamide resins, rosin resins, dispersions, and disproportionated resins. We refine CST into terpene fractions, which can be further upgraded into specialty terpene resins. The various fractions and derivatives resulting from our CTO and CST refining process provide for distinct functionalities and properties, determining their respective applications and end markets.

We focus our resources on three product groups: Adhesives, Performance Chemicals, and Tires. Within our product groups, our products are sold into a diverse range of submarkets, including packaging, tapes and labels, pavement marking, high performance tires, fuel additives, oilfield and mining, coatings, metalworking fluids and lubricants, inks, and flavor and fragrances, among others.

While this business is based predominantly on the refining and upgrading of CTO and CST, we have the capacity to use both hydrocarbon-based raw materials, such as alpha-methyl-styrene, rosins, and gum rosins where appropriate and, accordingly, are able to offer tailored solutions for our customers.

Recent Developments and Known Trends

Our business is subject to a number of known risks and uncertainties, some of which are a result of recent developments.

COVID-19 Pandemic. The continued global impact of COVID-19 has resulted in various emergency measures to combat the spread of the virus. With the development of variants and increased vaccination rates, the status of ongoing measures varies widely depending on the country and locality. We continue to monitor the progression of the COVID-19 pandemic on a daily basis, and we have a dedicated COVID-19 crisis management team that meets regularly. The safety and well-being of our employees, our stakeholders, and the communities in which we operate remain our primary concern. While our essential plant and laboratory personnel remain on-site, many of our other employees around the world are working remotely. We are continuing to follow the orders and guidance of federal, regional, and local governmental agencies, as we maintain our own stringent protocols in an effort to mitigate the spread of the virus and protect the health of our employees, customers, and suppliers as well as the communities in which we operate.

To date, our plants have continued to operate at normal capacities. Importantly, under the U.S. Department of Homeland Security guidance issued on April 17, 2020, and supplemented on August 18, 2020, as well as many related regional and local governmental orders, chemical manufacturing sites are considered essential critical infrastructure, and as such, are not currently subject to closure in the locations where we operate. While Europe, Asia, and South America issue critical infrastructure orders on a country-by-country basis, thus far they have taken a similar approach to the U.S. Department of Homeland Security guidance. We recently opened up some of our offices to flex schedule staffing for select employees, but have since reverted to remote work due to a spike in Omicron cases. We anticipate returning all employees when current infection rates subside.

Our supply chain has encountered significant constraints as described below, including the sourcing of key raw materials and logistical market constraints. Although there has been significant disruption in global supply chain and logistics environment, we have been able to continue to leverage available logistics sources to serve our customers without meaningful disruption.

In our Chemical segment, during the second half of 2020, we saw improvement in demand trends within the tires, automotive, oilfield, and lubricants/fuel additives applications, compared to the first half of 2020. While COVID-19 continues to be a risk, during the year ended December 31, 2021 we have seen demand growth and margin expansion in the majority of our product groups and end applications relative to the pre-COVID-19 environment.

In our Polymer segment, we continue to see improved global demand in most end market applications, compared to the first half of 2020. During the year ended December 31, 2021, the Polymer segment continues to see demand growth across most geographies and in various market applications such as consumer, automotive, adhesives, paving and roofing markets.

We are unable to accurately predict the impact that the pandemic will have on our business and results of operations for 2022 and beyond (including how the impact of the pandemic on our business and results of operations may change from quarter to quarter) due to numerous uncertainties, including the severity of the disease, the duration of the pandemic, additional actions that may be taken by governmental authorities, and other unintended consequences. Furthermore, the pandemic has adversely impacted, and may further adversely impact, the national and global economy, particularly in less essential end markets. There can also be no assurance that demand for our products will not be adversely affected by the continued impact of the COVID-19 pandemic on the national and global economy. Moreover, we are unable to predict actions that may be taken by our competitors that could negatively impact pricing or demand for our products.

In spite of the uncertainty of the potential future impact of the COVID-19 pandemic, we expect that our geographic and end market diversification, such as medical, adhesives, food packaging, automotive, and consumer durables may partially mitigate our financial exposure to the pandemic. We will continue to monitor the impacts of COVID-19 and implement operational efficiencies and cost initiatives as needed. We do not currently anticipate any material impairments, with respect to intangible assets, long-lived assets, or right of use assets, increases in allowances for credit losses from our customers, restructuring charges, other expenses, or changes in accounting judgments to have a material impact on our financial statements. However, we are continuing to assess the impact from the pandemic, if any.

Market Conditions. Certain fundamental market conditions that affected our business and financial results prior to 2020, coupled with the impacts of the COVID-19 pandemic, have improved, however, we remain cognizant of the continued risks associated with the COVID-19 pandemic.

Our Chemical segment has seen significant improvement mainly in North America and Europe and in various market applications such as adhesives, tires, and industrial markets. Additionally, we have seen a recovery in certain end uses such as fuel/energy and mining applications. Despite the continued excess availability of competitive hydrocarbon tackifiers and in all hydrocarbon resins, the current rosin market fundamentals continue to improve, especially as compared to fiscal year 2020. We expect the positive momentum in the adhesives, tires, and industrial markets to continue in the near term. Furthermore, prices for upgraded products within our CST chain continue to improve compared to the fiscal year 2020 pricing levels. We expect the Chemical segment's favorable performance to continue in the near term.

Global supply chain and logistics environment. The global supply chain and logistics environment has been constrained for the year ended December 31, 2021 as a result of the global congestion of supply chains and logistic equipment rebalance resulting from the COVID-19 pandemic and severe weather events. As a result, the Company experienced some supply-side constraints in our ability to source key raw materials, as well as constraints in shipping to our customers. Additionally, these constraints resulted in higher logistics cost per ton compared to historical trends. We implemented a number of mitigation measures, including cross-regional optimization, planning contingencies, and utilization of alternative carriers. Although we implemented mitigation measures, the global supply chain and logistics constraints resulted in earnings pressure during the year ended December 31, 2021. Given the current global supply chain and logistics environment outlook, we expect these trends to continue into fiscal year 2022.

BiaXam™ Granted Section 18 Emergency Exemption by the U.S. Environmental Protection Agency (the "EPA"). On April 21, 2021, the EPA approved a public health emergency exemption under Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA") submitted by the Georgia, Utah, and Minnesota Departments of Agriculture for the deployment of BiaXam™ in specific applications. The EPA exemption will allow Delta Air Lines to use BiaXam in specific applications in these states to protect against the SARS-CoV-2 virus. We do not expect the approval of this emergency exemption to have a material impact to the Company's near term results of operations. We continue efforts to obtain Section 3 approval from the EPA which we expect to allow for broader commercial application.

Agreement and Plan of Merger. On September 27, 2021, the Company entered into the Merger Agreement with DL Chemical, Intermediate Merger Subsidiary, and Merger Subsidiary. Parent is a subsidiary of DL Holdings Co., Ltd. (formerly Daelim Industrial Co., Ltd.). Pursuant to the Merger Agreement, and subject to the terms and conditions thereof, the Merger Subsidiary will merge with and into the Company, with the Company surviving the Merger as an indirect and wholly-owned subsidiary of Parent. Subject to the terms and conditions set forth in the Merger Agreement, at the Effective Time, each share of common stock of the Company then outstanding will be converted into the right to receive $46.50 in cash, without interest, other than (1) those shares owned by Parent or any subsidiary of Parent or the Company (which will be cancelled without any consideration) and (2) any shares as to which appraisal rights have been properly exercised, and not withdrawn, in accordance with the Delaware General Corporation Law.

On December 9, 2021, the Company held a special meeting of the stockholders of the Company, at which stockholders of Kraton overwhelmingly approved and adopted the Merger Agreement. The acquisition is subject to certain customary closing conditions, including the receipt of regulatory approvals, and is expected to close by the end of the first quarter of 2022.

For additional information related to the Merger Agreement and related transactions, please refer to our Current Report on Form 8-K filed with the SEC on September 27, 2021, our Proxy Statement filed with the SEC on November 4, 2021 and Note 1 *General*.

RESULTS OF OPERATIONS

Factors Affecting Our Results of Operations

Raw Materials. We use butadiene, styrene, and isoprene in our Polymer segment and CTO and CST in our Chemical segment as our primary raw materials. The cost of these raw materials has generally correlated with changes in energy prices and is generally influenced by supply and demand factors, and for our isoprene monomers, the prices for natural and synthetic rubber. Average purchase prices of our raw materials increased during 2021 compared to 2020 for the Polymer and Chemical segments.

In our Polymer segment, during the year ended December 31, 2021, butadiene increased 31.9%, isoprene increased 81.0%, and styrene increased 54.6% compared to the year ended December 31, 2020.

In our Chemical segment, during the year ended December 31, 2021, CTO increased 29.0% and CST increased 5.4% compared to the year ended December 31, 2020.

Additionally, as discussed within Results of Operations, we continue to experience inflationary pressures within our utilities and secondary costs, which have added to the increase in our conversion costs during the year ended December 31, 2021 compared to the year ended December 31, 2020.

We use the FIFO basis of accounting for inventory and cost of goods sold, and therefore gross profit. In periods of raw material price volatility, reported results under FIFO will differ from what the results would have been if cost of goods sold were based on estimated current replacement cost ("ECRC"). Specifically, in periods of rising raw material costs, reported gross profit will be higher under FIFO than under ECRC. Conversely, in periods of declining raw material costs, reported gross profit will be lower under FIFO than under ECRC. In recognition of the fact that the cost of raw materials affects our results of operations and the comparability of our results of operations, we provide the difference, or spread, between FIFO and ECRC to arrive at our Adjusted EBITDA.

International Operations and Currency Fluctuations. We operate a geographically diverse business, serving customers in numerous countries from thirteen manufacturing facilities on three continents. Our sales and production costs are mainly denominated in U.S. dollars, Brazilian Real, Euro, Japanese Yen, Swedish Krona, and NTD. From time to time, we use hedging strategies to reduce our exposure to currency fluctuations.

We generated our revenue from customers located in the following regions:

	Years Ended December 31,		
Revenue by Geography	**2021**	**2020**	**2019**
Americas	46.1 %	44.9 %	41.8 %
Europe, Middle East, and Africa	36.5 %	34.7 %	33.9 %
Asia Pacific	17.4 %	20.4 %	24.3 %

Seasonality. Seasonal changes and weather conditions typically affect our sales of products in our paving, pavement markings, roofing, and construction applications, which generally results in higher sales volumes in the second and third quarters of the calendar year compared to the first and fourth quarters of the calendar year. Sales for our other product applications tend to show relatively little seasonality.

KRATON CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Years Ended December 31,		
	2021	2020	2019
Revenue	$ 1,970,129	$ 1,563,150	$ 1,804,436
Cost of goods sold	1,381,373	1,165,279	1,390,007
Gross profit	588,756	397,871	414,429
Operating expenses:			
Research and development	40,406	40,743	41,073
Selling, general, and administrative	164,167	161,944	149,800
Depreciation and amortization	126,475	126,022	136,171
Gain on insurance proceeds	—	—	(32,850)
Loss on disposal of fixed assets	879	750	773
Impairment of goodwill	—	400,000	—
Operating income (loss)	256,829	(331,588)	119,462
Other income (expense)	(209)	995	3,339
Gain (loss) on disposition and exit of business activities	(149)	175,189	—
Loss on extinguishment of debt	—	(40,843)	(3,521)
Earnings of unconsolidated joint venture	461	457	506
Interest expense, net	(41,840)	(57,930)	(75,782)
Income (loss) before income taxes	215,092	(253,720)	44,004
Income tax benefit (expense)	(39,502)	32,034	11,813
Consolidated net income (loss)	175,590	(221,686)	55,817
Net income attributable to noncontrolling interest	(5,364)	(3,916)	(4,512)
Net income (loss) attributable to Kraton	$ 170,226	$ (225,602)	$ 51,305
Earnings (loss) per common share:			
Basic	$ 5.30	$ (7.08)	$ 1.61
Diluted	$ 5.21	$ (7.08)	$ 1.60
Weighted average common shares outstanding:			
Basic	32,098	31,746	31,581
Diluted	32,642	31,746	31,881

Consolidated Results

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue was $1,970.1 million for the year ended December 31, 2021 compared to $1,563.2 million for the year ended December 31, 2020, an increase of $407.0 million, or 26.0%. Revenue increased $241.2 million and $165.8 million for the Polymer and Chemical segments, respectively. For additional information regarding the changes in revenue, see our segment disclosures below.

Cost of goods sold was $1,381.4 million for the year ended December 31, 2021 compared to $1,165.3 million for the year ended December 31, 2020, an increase of $216.1 million, or 18.5%. Cost of goods sold increased $148.5 million and $67.6 million for the Polymer and Chemical segments, respectively. For additional information regarding the changes in cost of goods sold, see our segment disclosures below.

Selling, general, and administrative expenses were $164.2 million for the year ended December 31, 2021 compared to $161.9 million for the year ended December 31, 2020. The $2.2 million increase is primarily attributable to higher employee related costs, partially offset by lower transaction, acquisition, and restructuring costs and the benefit of cost reduction initiatives.

Depreciation and amortization was $126.5 million for the year ended December 31, 2021 compared to $126.0 million for the year ended December 31, 2020.

During the third quarter of 2020, we recorded a non-cash impairment charge of $400.0 million within the Chemical segment. For more information regarding the goodwill impairment charge, see Note 13 *Industry Segments and Foreign Operations*.

Other expense was $0.2 million for the year ended December 31, 2021 compared to other income of $1.0 million for the year ended December 31, 2020. The decrease of $1.2 million is due to the legal settlement of a supplier dispute in the second quarter of 2021, partially offset by the benefit to other income related to a reduction in net periodic pension expense.

Disposition and exit of business activities was a loss of $0.1 million and a gain of $175.2 million for the year ended December 31, 2021 and 2020, respectively, related to the sale of our Cariflex business. See Note 4 *Disposition and Exit of Business Activities* for further discussion on the sale of our Cariflex business.

We recorded a $40.8 million loss on extinguishment of debt during the year ended December 31, 2020. This includes $14.0 million in the first quarter of 2020 for the write off of previously capitalized deferred financing costs, the write off of original issue discount, and a loss on the settlement of the ineffective portion of interest rate swaps due to the repayment in full of our U.S. dollar denominated tranche (the "USD Tranche") and a partial repayment of our Euro Tranche with the net cash proceeds from the sale of our Cariflex business. During the fourth quarter of 2020, we called for redemption and satisfied and discharged our 7.0% Senior Notes due 2025 (the "7.0% Senior Notes") and issued our 4.25% Senior Notes, for which we incurred $25.7 million for the write off of previously capitalized deferred financing costs and the call premium on our 7.0% Senior Notes. See Note 8 *Long-Term Debt* for further discussion.

Interest expense, net, was $41.8 million for the year ended December 31, 2021 compared to $57.9 million for the year ended December 31, 2020, a decrease of $16.1 million. The decrease is due to the refinancing activities discussed above and lower overall indebtedness and an improvement in borrowing rates.

Our income tax provision was a $39.5 million expense and a $32.0 million benefit for the years ended December 31, 2021 and 2020, respectively. Our effective tax rates for the years ended December 31, 2021 and 2020 were a 18.4% expense and 12.6% benefit, respectively. During the year ended December 31, 2021, our effective tax rate differed from the U.S. corporate statutory tax rate of 21%, primarily related to reassessment of prior year tax accruals and minimum tax of foreign entities offset by the mix of our pre-tax income or loss generated in various foreign jurisdictions. During the year ended December 31, 2020, our effective tax rate differed from the U.S. corporate statutory tax rate of 21.0%, primarily due to the non-deductible goodwill impairment loss and reorganization income, offset by a tax benefit related to Dutch intellectual property rights and the tax impact of the sale of our Cariflex business.

As of December 31, 2021 and December 31, 2020, a valuation allowance of $33.9 million and $39.5 million, respectively, has been provided for NOL carryforwards and other deferred tax assets. We decreased our valuation allowance by $5.6 million during the year ended December 31, 2021, which includes a $3.8 million decrease due to changes in the deferred tax asset related to employee benefits and $1.8 million primarily related to deferred tax rate changes and the utilization of NOL carryforwards in France and the United Kingdom. We consider the reversal of deferred tax liabilities within the NOL carryforward period, projected future taxable income, and tax planning strategies in making this assessment.

Net income attributable to Kraton was $170.2 million, or $5.21 per diluted share, for the year ended December 31, 2021, an increase of $395.8 million compared to a net loss of $225.6 million, or $7.08 per diluted share, for the year ended December 31, 2020. Adjusted Diluted Earnings per Share (non-GAAP) was $2.87 for the year ended December 31, 2021 compared to $1.29 for the year ended December 31, 2020. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for a reconciliation of U.S. generally accepted accounting principles ("U.S. GAAP") diluted earnings (loss) per share to Adjusted Diluted Earnings per Share.

EBITDA, Adjusted EBITDA, and Adjusted Diluted Earnings Per Share

We consider EBITDA, Adjusted EBITDA, and Adjusted Diluted Earnings Per Share to be important supplemental measures of our performance and believe they are frequently used by investors, securities analysts, and other interested parties in the evaluation of our performance and/or that of other companies in our industry, including period-to-period comparisons. In addition, management uses these measures, as well as ECRC of our inventory and cost of goods sold to evaluate operating performance, and our incentive compensation plan bases incentive compensation payments on our Adjusted EBITDA performance, along with other factors. EBITDA, Adjusted EBITDA, and Adjusted Diluted Earnings Per Share have limitations as analytical tools and in some cases can vary substantially from other measures of our performance. You should not consider any of them in isolation, or as substitutes for analysis of our results under U.S. GAAP.

	Years Ended December 31,		
	2021	2020	2019
	(In thousands, except per share data)		
EBITDA (1)(4)	$ 383,407	$ (69,768)	$ 255,957
Adjusted EBITDA (2)(3)(4)	$ 294,727	$ 262,097	$ 320,592
Adjusted Diluted Earnings Per Share (2)(4)	$ 2.87	$ 1.29	$ 2.94

(1) On a consolidated basis, EBITDA represents net income before interest, taxes, depreciation and amortization. On a reporting segment basis, EBITDA represents segment operating income before depreciation and amortization, other income (expense), loss on extinguishment of debt, and earnings of unconsolidated joint venture. Limitations for EBITDA as an analytical tool include the following:

- EBITDA does not reflect the significant interest expense on our debt;
- EBITDA does not reflect the significant depreciation and amortization expense associated with our long-lived assets;
- EBITDA included herein should not be used for purposes of assessing compliance or non-compliance with financial covenants under our debt agreements. The calculation of EBITDA in the debt agreements includes adjustments, such as extraordinary, non-recurring or one-time charges, proforma cost savings, certain non-cash items, turnaround costs, and other items included in the definition of EBITDA in the debt agreements; and
- other companies in our industry may calculate EBITDA differently than we do, limiting its usefulness as a comparative measure.

(2) The majority of our consolidated inventory is measured using the FIFO basis of accounting. As part of our pricing strategy, we measure our business performance using the ECRC of our inventory and cost of goods sold. Our ECRC is based on our current expectation of the current cost of our significant raw material inputs. ECRC is developed monthly based on actual market-based contracted rates and spot market purchase rates that are expected to occur in the period. We then adjust the value of the significant raw material inputs and their associated impact to finished goods to the current replacement cost to arrive at an ECRC value for inventory and cost of goods sold. The result of this revaluation from the U.S. GAAP carrying value creates the spread between U.S. GAAP and ECRC. We maintain our perpetual inventory in our global enterprise resource planning system, where the carrying value of our inventory is determined. With inventory valued under U.S. GAAP and ECRC, we then have the ability to report cost of goods sold and therefore Adjusted EBITDA and Adjusted Diluted Earnings Per Share under both our U.S. GAAP convention and ECRC.

(3) Adjusted EBITDA is EBITDA net of the impact of the spread between the FIFO basis of accounting and ECRC and net of the impact of items we do not consider indicative of our ongoing operating performance. We explain how each adjustment is derived and why we believe it is helpful and appropriate in the reconciliation below. You are encouraged to evaluate each adjustment and the reasons we consider it appropriate for supplemental analysis. As an analytical tool, Adjusted EBITDA is subject to the limitations applicable to EBITDA described above, as well as the following limitations:

- due to volatility in raw material prices, Adjusted EBITDA may, and often does, vary substantially from EBITDA, net income and other performance measures, including net income calculated in accordance with U.S. GAAP; and
- Adjusted EBITDA may, and often will, vary significantly from EBITDA calculations under the terms of our debt agreements and should not be used for assessing compliance or non-compliance with financial covenants under our debt agreements.

(4) Included in EBITDA, Adjusted EBITDA, and Adjusted Diluted Earnings Per Share:

- $32.9 million, which was recognized as a gain on insurance proceeds, reimbursing us for the lost margin, direct costs, and capital expenditures known to date for the year ended December 31, 2019;
- $10.3 million and $54.6 million for the years ended December 31, 2020 and 2019, respectively, related to divestiture of our Cariflex business in March 2020; and
- IR sales to Daelim under the IRSA. Sales under the IRSA are transacted at cost. The IRSA sales include amortization of non-cash deferred income of $25.7 million and $18.5 million for the year ended December 31, 2021 and 2020, respectively, which represents revenue deferred until the products are sold under the IRSA.

Because of these and other limitations, EBITDA and Adjusted EBITDA should not be considered as measures of discretionary cash available to us to invest in the growth of our business.

Our presentation of non-GAAP financial measures and the adjustments made therein should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items, and in the future we may incur expenses or charges similar to the adjustments made in the presentation of our non-GAAP financial measures.

We compensate for the above limitations by relying primarily on our U.S. GAAP results and using EBITDA, Adjusted EBITDA, and Adjusted Diluted Earnings Per Share only as supplemental measures. See our financial statements included under Item 8 of this Form 10-K.

We reconcile each of consolidated net income (loss) and reporting segment operating income to EBITDA, and then to Adjusted EBITDA as follows:

	Year Ended December 31, 2021			Year Ended December 31, 2020			Year Ended December 31, 2019		
	Polymer	**Chemical**	**Total**	**Polymer**	**Chemical**	**Total**	**Polymer**	**Chemical**	**Total**
					(In thousands)				
Net income (loss) attributable to Kraton			$ 170,226			$ (225,602)			$ 51,305
Net income attributable to noncontrolling interest			5,364			3,916			4,512
Consolidated net income (loss)			175,590			(221,686)			55,817
Add (deduct):									
Income tax (benefit) expense			39,502			(32,034)			(11,813)
Interest expense, net			41,840			57,930			75,782
Earnings of unconsolidated joint venture			(461)			(457)			(506)
Loss on extinguishment of debt			—			40,843			3,521
Other (income) expense			209			(995)			(3,339)
(Gain) loss on disposition and exit of business activities			149			(175,189)			—
Operating income (loss)	$ 150,418	$ 106,411	256,829	$ 56,802	$ (388,390)	(331,588)	$ 57,343	$ 62,119	119,462
Add (deduct):									
Depreciation and amortization	51,042	75,433	126,475	52,910	73,112	126,022	59,151	77,020	136,171
Gain (loss) on disposition and exit of business activities	(149)	—	(149)	175,189	—	175,189	—	—	—
Other income (expense)	(2,291)	2,082	(209)	(87)	1,082	995	(1,923)	5,262	3,339
Loss on extinguishment of debt	—	—	—	(40,843)	—	(40,843)	(3,521)	—	(3,521)
Earnings of unconsolidated joint venture	461	—	461	457	—	457	506	—	506
EBITDA (non-GAAP) (a)	199,481	183,926	383,407	244,428	(314,196)	(69,768)	111,556	144,401	255,957
Add (deduct):									
Transaction, acquisition related costs, restructuring, and other costs (b)	10,743	2,817	13,560	13,656	1,392	15,048	10,475	946	11,421
(Gain) loss on disposition and exit of business activities	149	—	149	(175,189)	—	(175,189)	—	—	—
(Gain) loss on disposal of fixed assets	—	—	—	—	(1,316)	(1,316)	535	—	535
Loss on extinguishment of debt	—	—	—	40,843	—	40,843	3,521	—	3,521
Impairment of goodwill	—	—	—	—	400,000	400,000	—	—	—
Hurricane related costs (c)	—	—	—	—	—	—	—	15,025	15,025
Hurricane reimbursements (d)	—	—	—	—	—	—	—	(26,561)	(26,561)
KFPC startup costs (e)	—	—	—	—	—	—	3,019	—	3,019
Gain on contractual settlement (f)	—	(4,668)	(4,668)	—	—	—	—	—	—
(Sale) loss of emissions credits (g)	647	—	647	—	—	—	—	(4,601)	(4,601)
Non-cash compensation expense	11,342	—	11,342	11,361	—	11,361	9,493	—	9,493
Spread between FIFO and ECRC	(84,230)	(25,480)	(109,710)	32,384	8,734	41,118	49,565	3,218	52,783
Adjusted EBITDA (non-GAAP)	$ 138,132	$ 156,595	$ 294,727	$ 167,483	$ 94,614	$ 262,097	$ 188,164	$ 132,428	$ 320,592

(a) Included in EBITDA is a $32.9 million gain on insurance, fully offsetting the lost margin in the first quarter of 2019, and reimbursement for a portion of the direct costs we have incurred to date related to Hurricane Michael.

Also included in EBITDA are IR sales to Daelim under the IRSA. Sales under the IRSA are transacted at cost. Included in Adjusted EBITDA is the amortization of non-cash deferred income of $25.7 million and $18.5 million for the year ended December 31, 2021 and 2020, respectively, which represents revenue deferred until the products are sold under the IRSA.

(b) Charges related to the evaluation of acquisition and disposition transactions, severance expenses, and other restructuring related charges, which are recorded primarily in selling, general, and administrative expenses.
(c) Incremental costs related to Hurricane Michael and Hurricane Dorian, which are recorded in cost of goods sold.
(d) Reimbursement of incremental costs related to Hurricane Michael, which is recorded in gain on insurance proceeds.
(e) Startup costs related to the joint venture company, KFPC, which are recorded in cost of goods sold.
(f) Relates to the historical period gain of a settlement of a raw material supply agreement in the fourth quarter of 2021.
(g) We recorded a gain of $4.6 million in other income (expense) related to the sale of emissions credits accumulated by our Swedish Chemical legal entity in 2019. We recorded a loss of $0.6 million related to historical third party emission credit adjustments in 2021.

We reconcile U.S. GAAP Diluted Earnings Per Share to Adjusted Diluted Earnings Per Share as follows:

	Years Ended December 31,		
	2021	2020	2019
Diluted Earnings (Loss) Per Share	$ 5.21	$ (7.08)	$ 1.60
Transaction, acquisition related costs, restructuring, and other costs (a)	0.32	0.36	0.27
(Gain) loss on disposition and exit of business activities	0.01	(4.77)	—
(Gain) loss on disposal of fixed assets	—	(0.03)	0.01
Loss on extinguishment of debt	—	0.99	0.08
Impairment of goodwill	—	12.39	—
Tax restructuring	—	(1.56)	—
Hurricane related costs (b)	—	—	0.55
Hurricane reimbursements (c)	—	—	(0.83)
Gain on contractual settlement (d)	(0.11)	—	—
KFPC startup costs (e)	—	—	0.04
(Sale) loss of emissions credits (f)	0.01	—	(0.11)
Spread between FIFO and ECRC	(2.57)	0.99	1.33
Adjusted Diluted Earnings Per Share (non-GAAP)	$ 2.87	$ 1.29	$ 2.94

(a) Charges related to the evaluation of acquisition and disposition transactions, severance expenses, and other restructuring related charges, which are recorded primarily in selling, general, and administrative expenses.
(b) Incremental costs related to Hurricane Michael and Hurricane Dorian, which are recorded in cost of goods sold.
(c) Reimbursement of incremental costs related to Hurricane Michael, which is recorded in gain on insurance proceeds.
(d) Relates to the historical period gain of a settlement of a raw material supply agreement in the fourth quarter of 2021.
(e) Startup costs related to the joint venture company, KFPC, which are recorded in cost of goods sold.
(f) We recorded a gain of $4.6 million in other income (expense) related to the sale of emissions credits accumulated by our Swedish Chemical legal entity in 2019. We recorded a loss of $0.6 million related to historical third party emission credit adjustments in 2021.

Segment Results

- *Polymer Segment*. Our Polymer segment is comprised of our SBCs and other engineered polymers business.
- *Chemical Segment*. Our Chemical segment is comprised of our pine-based specialty products business.

Polymer Segment

	Years Ended December 31,					
	2021		2020		2019	
Revenue	($ In thousands)					
Performance Products	$ 627,618	57.1 %	$ 459,906	53.6 %	$ 531,437	50.5 %
Specialty Polymers	409,736	37.3 %	316,206	36.9 %	334,726	31.7 %
Cariflex (1)	—	— %	36,930	4.3 %	186,266	17.7 %
Isoprene Rubber (1)	59,899	5.5 %	42,986	5.0 %	—	— %
Other	1,532	0.1 %	1,530	0.2 %	539	0.1 %
	$ 1,098,785		$ 857,558		$ 1,052,968	
Operating income	$ 150,418		$ 56,802		$ 57,343	
Adjusted EBITDA (non-GAAP) (2)(4)	$ 138,132		$ 167,483		$ 188,164	
Adjusted EBITDA margin (non-GAAP) (3)	12.6 %		19.5 %		17.9 %	

(1) Our Cariflex revenue includes sales through March 6, 2020. We continue to sell IR to DL Chemical under the IRSA. Sales under the IRSA are transacted at cost. Included in Adjusted EBITDA is the amortization of non-cash deferred income of $25.7 million and $18.5 million for the year ended December 31, 2021 and 2020, respectively, which represents revenue deferred until the products are sold under the IRSA.
(2) See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for a reconciliation of U.S. GAAP operating income to non-GAAP Adjusted EBITDA.
(3) Defined as Adjusted EBITDA as a percentage of revenue.
(4) Included are $10.3 million and $54.6 million for the years ended December 31, 2020 and 2019, respectively, related to divestiture of our Cariflex business in March 2020.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue for the Polymer segment was $1,098.8 million for the year ended December 31, 2021 compared to $857.6 million for the year ended December 31, 2020. The increase was driven by demand improvements driving higher sales volumes in our Specialty Polymers and Performance Products product lines, as well as higher average sales prices implemented in response to significantly higher raw material, logistics, utilities, and secondary costs as part of our Price Right strategy. These increases were partially offset by the divestiture of our Cariflex business in March 2020, which contributed $36.9 million of revenue in the first quarter of 2020. The positive effect from changes in currency exchange rates between the periods was $24.4 million.

Polymer Segment Sales Volume % Change	**Year Ended December 31, 2021**
Performance Products	5.9 %
Specialty Polymers	12.3 %
Isoprene Rubber	16.5 %
Subtotal	7.8 %
Cariflex	(100.0)%
Total	6.0 %

Sales volumes were 309.4 kilotons for the year ended December 31, 2021, an increase of 17.6 kilotons, or 6.0%, compared to the year ended December 31, 2020. Volume for our Specialty Polymers volumes increased 12.3% driven by strong demand across all regions, particularly in automotive applications, and consumer durable applications. The 5.9% increase in Performance Products sales volumes was primarily driven by improved sales into paving and roofing applications and higher sales into adhesive applications associated with continued demand strength across all regions. IR sales volumes are 16.5% higher due to a full year of sales under the IRSA.

Cost of goods sold was $775.8 million for the year ended December 31, 2021 compared to $627.3 million for the year ended December 31, 2020, an increase of $148.5 million, or 23.7%. The increase in cost of goods sold reflects the impact of higher sales volumes, approximately $20.0 million of costs related to the significant statutory turnaround at our Berre, France, location, and inflationary pressures resulting in higher raw material, logistics, utilities, and secondary costs, which we continue to address through increases in selling prices consistent with our Price Right strategy. These higher costs were partially offset by lower cost of consumed raw materials, which has lower average costs on a FIFO measurement basis of accounting, and the divestiture of our Cariflex business. Additionally, changes in currency exchange rates between the periods resulted in a negative impact of $20.6 million.

For the year ended December 31, 2021, the Polymer segment operating income was $150.4 million compared to $56.8 million for the year ended December 31, 2020. The $93.6 million increase is largely related to lower cost of consumed raw materials, which has lower average costs on a FIFO measurement basis of accounting, partially offset by the divestiture of our Cariflex business.

For the year ended December 31, 2021, the Polymer segment generated Adjusted EBITDA (non-GAAP) of $138.1 million compared to $167.5 million for the year ended December 31, 2020. The decrease in Adjusted EBITDA (non-GAAP) is partially due to the divestiture of our Cariflex business in March 2020. Excluding the net impact of $10.3 million attributable to the disposition of our Cariflex business, Adjusted EBITDA excluding Cariflex (non-GAAP) would have been down $19.0 million driven largely by approximately $20.0 million of costs associated with a significant statutory turnaround at our Berre, France, location. Additionally, the contribution from higher sales volumes is largely offset by inflation in raw material, logistics, utilities, and secondary costs, which we continue to address through increases in selling prices, consistent with our Price Right strategy. The positive effect from changes in currency exchange rates between the periods was $0.8 million. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for a reconciliation of U.S. GAAP operating income to Adjusted EBITDA (non-GAAP).

Chemical Segment

	Years Ended December 31,					
	2021		2020		2019	
Revenue	($ In thousands)					
Adhesives	$ 306,662	35.2 %	$ 257,855	36.5 %	$ 262,941	35.0 %
Performance Chemicals	503,135	57.7 %	406,152	57.6 %	438,146	58.3 %
Tires	61,547	7.1 %	41,585	5.9 %	50,381	6.7 %
	$ 871,344		$ 705,592		$ 751,468	
Operating income (loss) [(1)]	$ 106,411		$ (388,390)		$ 62,119	
Adjusted EBITDA (non-GAAP) [(2)]	$ 156,595		$ 94,614		$ 132,428	
Adjusted EBITDA margin (non-GAAP) [(3)]	18.0 %		13.4 %		17.6 %	

(1) For the year ended December 31, 2020, includes the $400.0 million non-cash goodwill impairment charge in the Chemical segment.
(2) See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for a reconciliation of U.S. GAAP operating income to non-GAAP Adjusted EBITDA.
(3) Defined as Adjusted EBITDA as a percentage of revenue.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue for the Chemical segment was $871.3 million for the year ended December 31, 2021 compared to $705.6 million for the year ended December 31, 2020. The increase was primarily attributable to successful price increase implementations globally and across all product chains driven by favorable market fundamentals and inflationary pressures. The increase was also due to stronger sales volumes of TOFA and TOR chains associated with demand recovery post COVID-19. The positive effect from changes in currency exchange rates between the periods was $14.4 million.

Chemical Segment Sales Volume % Change	**Year Ended December 31, 2021**
Adhesives	7.2 %
Performance Chemicals	1.0 %
Tires [(1)]	26.4 %
Total	3.8 %

(1) Tires volumes are less than 5% of total Chemical segment volumes.

Sales volumes were 441.7 kilotons for the year ended December 31, 2021, an increase of 16.1 kilotons, or 3.8%, related to higher TOFA and TOR and related derivatives sales, due to a significant recovery of demand across most end use markets compared to the year ended December 31, 2020. This increase was partially offset by lower sales of CST upgrades from supply chain challenges and the impact of Winter Storm Uri.

Cost of goods sold was $605.6 million for the year ended December 31, 2021 compared to $538.0 million for the year ended December 31, 2020, an increase of $67.6 million, or 12.6%. The increase was driven by higher average raw material, logistics, utilities, and secondary costs and higher sales volumes. Additionally, the changes in currency exchange rates between the periods resulted in a negative impact of $10.5 million.

For the year ended December 31, 2021, the Chemical segment operating income was $106.4 million compared to operating loss of $388.4 million for the year ended December 31, 2020, an increase of $494.8 million, largely due to a non-cash impairment charge of $400.0 million during the year ended December 31, 2020.

For the year ended December 31, 2021, the Chemical segment generated $156.6 million of Adjusted EBITDA (non-GAAP) compared to $94.6 million for the year ended December 31, 2020. The 65.5% increase in Adjusted EBITDA (non-GAAP) was primarily driven by the significant demand recovery, favorable market fundamentals, and portfolio diversification resulting in higher sales volumes and expanded unit margins across all product groups, including continued favorability in the rosin chain. These increases were partially offset by higher average raw material, logistics, utilities, and secondary costs. The positive effect from changes in currency exchange rates between the periods was $2.2 million. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for a reconciliation of U.S. GAAP operating income to non-GAAP Adjusted EBITDA.

Critical Accounting Policies and Estimates

The preparation of these financial statements in conformity with U.S. GAAP requires management to make assumptions and estimates that directly affect the amounts reported in the consolidated financial statements. Certain critical accounting policies and estimates requiring significant judgments, estimates, and assumptions are described in this section. We consider an accounting estimate to be critical if it requires assumptions to be made that are uncertain at the time the estimate is made and changes to the estimate or different estimates that could have reasonably been used would materially change our consolidated financial statements.

We believe the current assumptions and other considerations used to estimate amounts reflected in our consolidated financial statements are appropriate. However, should our actual experience differ from these assumptions and other considerations used in estimating these amounts, the impact of these differences could have a material impact on our consolidated financial statements.

Inventories. Inventory values include all costs directly associated with manufacturing products and are stated at the lower of cost or net realizable value, primarily determined on a first-in, first-out basis. We evaluate the carrying cost of our inventory on a quarterly basis for this purpose. If the cost of the inventories exceeds their net realizable value, provisions are made for the difference between the cost and the net realizable value.

Impairment of Long-Lived Assets. In accordance with the Impairment or Disposal of Long-Lived Assets Subsections of Financial Accounting Standards Board ("FASB") ASC Subtopic 360-10, *Property, Plant, and Equipment—Overall*, long-lived assets, such as property, plant, and equipment, and purchased intangible assets subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, we first compare undiscounted cash flows expected to be generated by that asset or asset group to its carrying value. If the carrying value of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values, and third-party independent appraisals, as considered necessary.

Goodwill. We record goodwill when the purchase price of an acquired business exceeds the fair value of the net identifiable assets acquired. Goodwill is allocated to the reporting unit level based on the estimated fair value at the date of acquisition. Goodwill was recorded as a result of the Arizona Chemical Acquisition and is recorded in the Chemical operating segment.

Goodwill is tested for impairment at the reporting unit level annually or more frequently as deemed necessary. Our annual measurement date for testing impairment is October 1st. First, we have the option to assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If it is more likely than not that an impairment indicator exists utilizing the qualitative method, we then test for impairment via estimating the fair value of our reporting units utilizing a combination of market and income approaches. This provides a fair value to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value, including goodwill. The estimated fair value of our reporting units are subject to a number of estimates which include, but are not limited to, discount rates, revenue growth rates, cash flow assumptions, and market information. If the carrying amount of the reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. For further discussion on goodwill, see Note 13 *Industry Segment and Foreign Operations*.

Share-Based Compensation. Share-based compensation cost is measured at the grant date based on the fair value of the award. We recognize these costs using the straight-line method over the requisite service period. We recognize actual forfeitures by reducing the employee share-based compensation expense in the same period as the forfeitures occur.

We estimate the fair value of performance-based restricted share units using a combination of Monte Carlo simulations and internal metrics. The expected term represents the period of time that performance share units granted are expected to be outstanding. Our expected volatilities are based on historical volatilities for Kraton and the members of the peer group. The risk free interest rate for the periods within the contractual life of the performance-based restricted share units is equal to the yield, as of the valuation date, of the zero coupon U.S. Treasury STRIPS that have a remaining term equal to the length of the remaining performance period. The expected dividend yield is assumed to be zero, which is the equivalent of reinvesting dividends in the underlying company's stock. Forfeitures are recognized when they occur. See Note 5 *Share-Based Compensation* to the consolidated financial statements.

Income Taxes. We conduct operations in separate legal entities in different jurisdictions. As a result, income tax amounts are reflected in our consolidated financial statements for each of those jurisdictions.

Income taxes are recorded utilizing an asset and liability approach. This method gives consideration to the future tax consequences associated with the differences between the financial accounting and tax basis of the assets and liabilities as well as the ultimate realization of any deferred tax asset resulting from such differences.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized.

In assessing the realizability of deferred tax assets, we consider all available evidence both positive and negative, to determine whether a valuation allowance is necessary relative to net deferred tax assets. In making this determination, we consider the current year and two preceding years for potential cumulative losses, and sources of income for sufficient taxable income. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are deductible, we believe it is more likely than not that we will realize the benefits of these deductible differences, net of the existing valuation allowances.

Benefit Plans Valuations. We sponsor defined benefit pension plans in both the U.S. and non-U.S. entities ("Pension Plans"), as well as a post-retirement benefit plan in the U.S. ("Retiree Medical Plan"). We annually evaluate significant assumptions related to the benefits and obligations of these plans. Our estimation of the projected benefit obligations and related benefit expense requires that certain assumptions be made regarding such variables such as expected return on plan assets, discount rates, rates of future compensation increases, estimated future employee turnover rates and retirement dates, distribution election rates, mortality rates, retiree utilization rates for health care services, and health care cost trend rates. The determination of the appropriate assumptions requires considerable judgment concerning future events and has a significant impact on the amount of the obligations and expense recorded. We rely in part on actuarial studies when determining the appropriateness of certain of the assumptions used in determining the benefit obligations and the annual expenses for these plans.

The discount rates are determined annually and are based on rates of return of high-quality long-term fixed income securities currently available with maturities consistent with the projected benefit payout period. The expected long-term rate of return on assets is derived from a review of anticipated future long-term performance of individual asset classes and consideration of an appropriate asset allocation strategy, given the anticipated requirements of the Pension Plans, to determine the average rate of earnings expected on the funds invested to provide for the pension plan benefits. We also consider recent fund performance and historical returns in establishing the expected rate of return. We estimated a range of returns on the plan assets using a historical stochastic simulation model that determines the compound average annual return (assuming these asset classes—stocks, bonds and cash) over a 20-year historical period (the approximate duration of our liabilities under the Pension Plans). The distribution of results from these simulations is then used to determine a median expected asset return.

Movements in the capital markets impact the market value of the investment assets used to fund our Pension Plans. Future changes in plan asset returns, assumed discount rates, and various other factors related to our pension and post-retirement plans will impact future pension expenses and liabilities.

The information below summarizes the results of sensitivities to significant estimates in our Pension Plans and Retiree Medical Plan, which would result in additional expense for fiscal year 2022. For additional information about our benefit plans, see Note 12 *Employee Benefits* to the consolidated financial statements.

	Change from Baseline (In thousands)	
U.S. Pension Plans		
Discount rate		
1% Increase	$	140
Expected return on assets		
1% Decrease	$	1,490
Non-U.S. Pension Plans		
Discount rate		
1% Decrease	$	627
Expected return on assets		
1% Decrease	$	742
Expected salary rate		
1% Increase	$	268
Retiree Medical Plan		
Discount rate		
1% Decrease	$	210
Health care trend		
1% Increase	$	—

Revenue Recognition. Revenue is recognized in accordance with the provisions of ASC 606, *Revenue from Contracts with Customers*, when obligations under the terms of a contract with our customer are satisfied. Generally, this occurs at a point in time when the transfer of risk and title to the product transfers to the customer. Our products are generally sold free on board shipping point or, with respect to countries other than the U.S., an equivalent basis. Our standard terms of delivery are included in our contracts of sale, order confirmation documents, and invoices. As such, all revenue is considered revenue recognized from contracts with customers and we do not have other sources of revenue. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Revenue is recognized net of sales tax, value-added taxes, and other taxes. Shipping and other transportation costs charged to customers are recorded in both revenue and cost of goods sold. We do not have any material significant payment terms as payment is received at or shortly after the point of sale. Certain customers may receive cash-based incentives (including rebates and price supports), which are accounted for as variable consideration. We estimate rebates and price supports based on the expected amount to be provided to customers and reduce revenues recognized once the performance obligation has been met. Sales commissions are recorded as an increase in cost of goods sold once the performance obligation with the associated sale has been met. We do not expect to have significant changes in our estimates for variable considerations.

LIQUIDITY AND CAPITAL RESOURCES

Kraton Corporation is a holding company without any operations or assets other than the operations of its subsidiaries. Cash flows from operations of our subsidiaries, cash on hand, and available borrowings under the ABL Facility, and other debt offerings we may conduct from time to time, are our principal sources of liquidity.

COVID-19 Pandemic Governmental Liquidity Programs

We also continue to monitor government economic stabilization efforts in response to the COVID-19 pandemic and are participating, and may in the future participate, in certain legislative provisions to enhance our liquidity, including certain provisions of the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), the American Rescue Plan Act of 2021 (the "ARP Act"), and similar federal or foreign governmental programs. For example, we elected certain cash deferral options under the CARES Act and ARP Act.

Elections made under the CARES Act and ARP Act did not have a material impact on our cash flows and results of operations. We will continue to evaluate our options under the CARES Act, ARP Act, and similar federal or foreign programs as legislative provisions occur.

Changes in Debt and Net Debt

We reduced our consolidated debt by $52.8 million and our consolidated net debt by $97.4 million, including the effect of foreign currency of $31.8 million, for the year ended December 31, 2021. The decrease in our consolidated net debt was driven primarily by favorable operating income, partially offset by increases in working capital, including the impacts of higher raw material costs due to the current inflationary environment and associated increases in accounts receivable as a result of higher sales prices. Further, we had approximately $389.7 million of available liquidity, comprised of $130.5 million of cash on hand and a borrowing base of $259.2 million on our ABL Facility as of December 31, 2021. As of the date of this filing, our available borrowing capacity under the ABL Facility was $262.7 million, with no outstanding borrowings and $3.6 million of letters of credit outstanding under the facility.

Management uses consolidated net debt to determine our outstanding debt obligations that would not readily be satisfied by its cash and cash equivalents on hand. Management believes that using consolidated net debt is useful to investors in determining our leverage because we could choose to use cash and cash equivalents to retire debt. We also present consolidated net debt as adjusted for foreign exchange impact accounts for the foreign exchange effect on our foreign currency denominated debt agreements.

Summary of principal amounts for indebtedness and a reconciliation of Kraton debt to consolidated net debt (non-GAAP) and consolidated net debt excluding the effect of foreign currency (non-GAAP):

	December 31, 2021	December 31, 2020
	(In thousands)	
Kraton debt	$ 829,614	$ 860,360
KFPC loans [1]	67,726	89,733
Consolidated debt	897,340	950,093
Kraton cash	120,629	82,804
KFPC cash [2]	9,890	3,097
Consolidated cash	130,519	85,901
Consolidated net debt	$ 766,821	$ 864,192
Effect of foreign currency on consolidated net debt	31,815	
Consolidated net debt excluding effect of foreign currency	$ 798,636	

(1) KFPC executed the KFPC Revolving Facilities to provide funding for working capital requirements and/or general corporate purposes. These are in addition to the KFPC Loan Agreement.
(2) Cash at our KFPC joint venture, located in Mailiao, Taiwan, which we own a 50% stake in and consolidate within our financial statements.

Principal Balances of Debt and Liquidity Considerations

As of December 31, 2021, our outstanding borrowings included (i) €85.0 million, or approximately $96.7 million, under the Euro Tranche of the Term Loan Facility, (ii) $400.0 million and €290.0 million, or approximately $329.8 million, under the 4.25% Senior Notes and 5.25% Senior Notes, respectively, and (iii) $3.2 million in finance lease obligations. As of December 31, 2021, we had no outstanding borrowings under our ABL Facility.

In addition, as of December 31, 2021, KFPC had NTD 494.0 million, or approximately $17.9 million, and NTD 1.4 billion, or approximately $49.9 million, of borrowings under the KFPC Loan Agreement and KFPC Revolving Facilities, respectively. The KFPC Loan Agreement matured and was paid off on January 17, 2022.

Based upon current and anticipated levels of operations, we believe that cash flows from operations of our subsidiaries, cash on hand, and borrowings available to us will be sufficient to fund operations and meet our short-term and long-term cash requirements, including our expected financial obligations, planned capital expenditures, anticipated liquidity requirements, working capital requirements, our investment in the KFPC joint venture, debt payments, interest payments, benefit plan contributions, and income tax obligations.

Our cash flows are subject to a number of risks and uncertainties, including, but not limited to, earnings, sensitivities to the cost of raw materials, seasonality, market conditions (including the impact of COVID-19), and fluctuations in foreign currency exchange rates. Because feedstock costs generally represent a substantial portion of our cost of goods sold, in periods of rising feedstock costs, we generally consume cash in operating activities due to increases in accounts receivable and inventory costs, partially offset by increased value of accounts payable. Conversely, during periods in which feedstock costs are declining, we generate cash flow from decreases in working capital.

Excluding the impact of the proposed Merger with DL Chemical, going forward there can be no assurance that our business will generate sufficient cash flow from operations or that future borrowings will be available under the Term Loan Facility and the ABL Facility or any new credit facilities or financing arrangements to fund liquidity needs and enable us to service our indebtedness. As of the date of this filing, we had no outstanding borrowings under the ABL Facility with a remaining available borrowing capacity of $262.7 million. Subject to compliance with certain covenants and other conditions, we have the option to borrow up to $350.0 million of incremental term loans plus an additional amount subject to a senior secured net leverage ratio. Our available cash and cash equivalents are held in accounts managed by third-party financial institutions and consist of cash invested in interest bearing funds and operating accounts. To date, we have not experienced any losses or lack of access to our invested cash or cash equivalents; however, we cannot provide any assurance that adverse conditions in the financial markets will not impact access to our invested cash and cash equivalents.

Pension and Other Retirement Benefit Plan Contributions

We made contributions of $17.1 million to our Pension Plans and Retiree Medical Plan for the year ended December 31, 2021 and $10.3 million for the year ended December 31, 2020. We expect our total Pension Plans and Retiree Medical Plan contributions for the year ended December 31, 2022 to be approximately $6.2 million. Our Pension Plans and Retiree Medical Plan obligations are predicated on a number of factors, the primary ones being the return on our Pension Plans' assets and the discount rates used in deriving our Pension Plans and Retiree Medical Plan obligations. If the investment returns on our Pension Plans' assets do not meet or exceed expectations during 2022, and the discount rates decrease on our Pension Plans and Retiree Medical Plan from the prior year, higher levels of contributions could be required in 2023 and beyond.

Additional Liquidity Considerations

As of December 31, 2021, we had $65.3 million of cash and short-term investments related to foreign operations that management asserts are permanently reinvested.

In December 2017, the Tax Act was enacted and resulted in a one-time transition tax on accumulated foreign subsidiary earnings. After 2017, our foreign earnings held by foreign subsidiaries are no longer subject to U.S. tax upon repatriation to the U.S. As of December 31, 2021, the remaining long-term tax payable related to the Tax Act of $9.4 million is presented within income tax payable, non-current on our Consolidated Balance Sheets. As permitted by the Tax Act, we will pay the transition tax in annual interest-free installments through 2025.

Turbulence in U.S. and international markets and economies (including the impact of COVID-19) may adversely affect our liquidity and financial condition, the liquidity and financial condition of our customers, and our ability to timely replace maturing liabilities and access the capital markets to meet liquidity needs, resulting in adverse effects on our financial condition and results of operations. However, to date we have been able to access borrowings available to us in amounts sufficient to fund liquidity needs.

Our ability to pay principal and interest on our indebtedness, fund working capital, to make anticipated capital expenditures, and to fund our investment in the KFPC joint venture depends on our future performance, which is subject to general economic conditions and other factors, some of which are beyond our control. See *Part I, Item 1A. Risk Factors* for further discussion.

Operating Cash Flows

Net cash provided by operating activities totaled $171.2 million for the year ended December 31, 2021 and $151.3 million for the year ended December 31, 2020. This represents a net increase of $19.9 million, which was primarily driven by increases in operating income, partially offset by increases in working capital. The period-over-period changes in working capital are as follows:

- $151.7 million decrease in cash flows associated with inventories of products, materials, and supplies due to higher raw material costs, partially offset by lower inventory volumes;
- $57.2 million decrease in cash flows for accounts receivable due to higher average selling prices;
- $13.3 million decrease in cash flows associated with other long term liabilities due to higher pension contributions;
- $8.9 million decrease in cash flows associated with timing of other items, including, value added taxes and related party transactions; and
- $4.4 million decrease in cash flows for other payables and accruals due to timing of employee related and income tax accruals and payments; partially offset by
- $76.4 million increase in cash flows associated with trade accounts payable due to higher raw material costs and timing of payments.

Net cash provided by operating activities totaled $151.3 million for the year ended December 31, 2020 and $234.9 million for the year ended December 31, 2019. This represents a net decrease of $83.6 million, which was primarily driven by decreases in operating income, partially offset by decreases in working capital. The period-over-period changes in working capital are as follows:

- $28.3 million decrease in cash flows associated with inventories of products, materials, and supplies due to higher inventory volumes;
- $6.4 million decrease in cash flows for accounts receivable, primarily related to lower selling prices; and
- $7.9 million decrease in cash flows due to the timing of payments of other items, including, pension costs, value added taxes, and related party transactions; partially offset by
- $25.6 million increase in cash flows for other payables and accruals due to employee related and income taxes;
- $10.5 million increase in cash flows associated with other long term liabilities due to lower pension contributions; and
- $3.8 million increase in cash flows associated with trade accounts payable due to timing of payments.

Investing Cash Flows

On March 6, 2020, we completed the sale of our Cariflex business to Daelim for gross proceeds of $530.0 million and net proceeds of $510.5 million. During the year ended December 31, 2021, we completed final customary post-closing working capital adjustments, reducing cash proceeds received to date by an additional $5.8 million.

Net cash used in investing activities totaled $107.0 million for December 31, 2021 compared to net cash provided by investing activities totaling $424.5 million and used in investing activities totaling $108.7 million for the years ended December 31, 2020 and 2019, respectively.

Capital projects in 2021 included the following:

- $63.0 million related to infrastructure and maintenance, and health, safety, environmental, and security projects to improve operating reliability and safety performance;
- $21.0 million related to projects to optimize the production capabilities of our manufacturing assets, including projects to deliver strategic cost savings or additional capacity; and
- $14.0 million of capital expenditures related to information technology and research and development.

Capital projects in 2020 included the following:

- $53.8 million related to infrastructure and maintenance, and health, safety, environmental, and security projects to improve operating reliability and safety performance;
- $15.9 million related to projects to optimize the production capabilities of our manufacturing assets, including projects to deliver strategic cost savings or additional capacity; and
- $7.8 million of capital expenditures related to information technology and research and development.

Expected Capital Expenditures

We currently expect 2022 capital expenditures, excluding expenditures by the KFPC joint venture, will be approximately $100.0 million, which includes approximately $4.0 million of capitalized interest. Also included is approximately $75.0 million for infrastructure and maintenance, and health, safety, environmental, and security projects. The remaining anticipated 2022 capital expenditures are primarily associated with projects to optimize the production capabilities of our manufacturing assets, to support our innovation platform, and to upgrade our information technology systems.

Financing Cash Flows and Liquidity

Our consolidated capital structure as of December 31, 2021 was approximately 45.7% equity, 51.4% debt, and 2.9% noncontrolling interest, compared to approximately 37.8% equity, 59.4% debt, and 2.8% noncontrolling interest as of December 31, 2020.

Net cash used in financing activities totaled $22.9 million for the year ended December 31, 2021 compared to $520.9 million and $176.1 million for the years ended December 31, 2020 and 2019, respectively.

During the year ended December 31, 2021, we decreased indebtedness, excluding impacts on foreign currency, by $20.9 million. In addition, cash on hand increased by approximately $44.6 million due to cash from operations, partially offset by our reinvestment in the business for capital expenditures and increased working capital.

We evaluate ongoing opportunities to refinance our debt, if available, on terms, rates, or time periods more favorable to us. As a result of the divestiture of our Cariflex business, we fully repaid $290.0 million of outstanding borrowings under the USD Tranche and repaid €160.0 million (or approximately $184.8 million) of outstanding borrowings under the Euro Tranche of our Term Loan Facility. Additionally, in an effort to improve our debt portfolio, during the fourth quarter of 2020, we called for redemption and satisfied and discharged our 7.0% Senior Notes and issued our 4.25% Senior Notes.

In connection with the debt reductions associated with the divestiture of our Cariflex business and our fourth quarter of 2020 refinancing, we recorded a $40.8 million loss on extinguishment of debt during the year ended December 31, 2020. This includes a write off of $20.7 million related to the call premium on the redemption of our outstanding 7.0% Senior Notes, a write off of $13.9 million related to previously capitalized deferred financing costs on our Term Loan Facility and 7.0% Senior Notes, a write off of $4.9 million related to original issue discount on our USD Tranche, and a $1.3 million loss on the settlement of the ineffective portion of interest rate swaps. See Note 8 *Long-Term Debt* for further discussion.

Share Repurchase Program

In February 2019, we announced a repurchase program for up to $50.0 million of the Company’s common stock. Repurchases were made at management’s discretion from time to time through privately-negotiated transactions, in the open market, or through broker-negotiated purchases in compliance with applicable securities law, including through a 10b5-1 Plan. From inception of the program, we repurchased 311,152 shares of our common stock at an average price of $32.14 per share and a total cost of $10.0 million. The program ended on February 7, 2021.

On December 6, 2018, we commenced a repurchase program for up to $20.0 million of our 7.0% Senior Notes. During the year ended December 31, 2019, we repurchased $4.3 million of our 7.0% Senior Notes.

Other Contingencies

As a chemicals manufacturer, our operations in the U.S. and abroad are subject to a wide range of environmental laws and regulations at the international, national, state, and local levels. These laws and regulations govern, among other things, air emissions, wastewater discharges, the use, handling, and disposal of hazardous materials and wastes, occupational health and safety, including dust and noise control, site remediation programs, and chemical registration, use, and management.

Pursuant to these laws and regulations, our facilities are required to obtain and comply with a wide variety of environmental permits and authorizations for different aspects of their operations. Generally, many of these environmental laws and regulations are becoming increasingly stringent, and the cost of compliance with these various requirements can be expected to increase over time.

In connection with our separation from Shell Chemicals in February 2001, Shell Chemicals agreed to indemnify us for specific categories of environmental claims brought with respect to matters occurring before the separation. However, the indemnity from Shell Chemicals is subject to dollar and time limitations. Coverage under the indemnity also varies depending upon the nature of the environmental claim, the location giving rise to the claim and the manner in which the claim is triggered. Therefore, if claims arise in the future related to past operations, we cannot give assurances that those claims will be covered by the Shell Chemicals' indemnity and also cannot be certain that any amounts recoverable will be sufficient to satisfy claims against us.

In connection with International Paper's divestiture of Arizona Chemical in February 2007, International Paper provided an indemnity to the buyer for specific known environmental liabilities and other environmental liabilities pertaining to former properties. At the closing of the Arizona Chemical Acquisition, Kraton was assigned the right to International Paper's indemnity for such environmental liabilities and assumed certain related obligations. Certain liabilities may fall outside the scope of the indemnity and therefore we cannot be certain that the indemnity will be sufficient to satisfy all environmental liabilities of Arizona Chemical.

In addition, we may in the future be subject to claims that arise solely from events or circumstances occurring after February 2001 for legacy Kraton manufacturing sites or after February 2007 for legacy Arizona Chemical manufacturing sites, which would not, in any event, be covered by the Shell Chemicals or International Paper indemnities, respectively. While we recognize that we may in the future be held liable for remediation activities beyond those identified to date, at present we are not aware of any circumstances that are reasonably expected to give rise to remediation claims that would have a material adverse effect on our results of operations or cause us to exceed our projected level of anticipated capital expenditures.

Except for the foregoing, we currently estimate that any expenses incurred in maintaining compliance with environmental laws and regulations will not materially affect our results of operations or cause us to exceed our level of anticipated capital expenditures. However, we cannot give assurances that unknown contingencies may not arise or that regulatory requirements or permit conditions will not change, and we cannot predict the aggregate costs of additional measures that may be required to maintain compliance as a result of such changes or expenses.

We had no material operating expenditures for environmental fines, penalties, government imposed remedial, or corrective actions during the years ended December 31, 2021, 2020, or 2019.

Contractual Obligations

Our principal outstanding contractual obligations relate to the Term Loan Facility, Senior Notes, KFPC Loan Agreement, interest payments, the operating leases of some of our facilities, the minimum purchase obligations required under our KFPC joint venture agreement and other agreements, and the feedstock contracts with LyondellBasell and others to provide us with raw materials. The following table summarizes our contractual cash obligations as of December 31, 2021 for the periods indicated.

	Payments Due by Period						
	Total	2022	2023	2024	2025	2026	2027 and thereafter
	(In millions)						
Long-term debt obligations [1]	$ 897.3	$ 68.7	$ 1.1	$ 1.1	$ 496.7	$ 329.8	$ —
Estimated interest payments on debt	155.3	38.2	37.8	37.8	35.0	6.5	—
Operating lease obligations	111.1	23.4	20.5	15.9	13.6	12.1	25.6
Purchase obligations [2][3]	2,738.8	544.1	334.3	267.9	166.7	148.7	1,277.1
Uncertain tax positions, including interest and penalties [4]	8.8	—	—	—	—	—	8.8
Estimated pension obligations	6.2	6.2	—	—	—	—	—
Total contractual cash obligations	$ 3,917.5	$ 680.6	$ 393.7	$ 322.7	$ 712.0	$ 497.1	$ 1,311.5

(1) Includes finance lease obligations.

(2) Included in this line are our estimated minimum purchases required under our KFPC joint venture agreement. Due to the indefinite term of this joint venture, we have based our minimum purchases on an assumed 20 year useful life of the facility.

(3) Pursuant to operating agreements with LyondellBasell, we are currently paying the costs incurred by them in connection with the operation and maintenance of, and other services related to, our Berre, France, and Wesseling, Germany, facilities. These obligations are not included in this table.

(4) Due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities, we are unable to determine the timing of payments related to uncertain tax positions, including interest and penalties. Amounts beyond the current year are therefore reflected in “2027 and thereafter.”

Impact of Inflation. Our results of operations and financial condition are presented based on historical cost. In the fiscal year 2021, we continued to experience inflationary pressures with increasing raw material, logistics, utilities and secondary costs in both segments. While it is difficult to accurately measure the impact of inflation due to the imprecise nature of the estimates required, including our actions to pass these costs onto our customers through higher sales prices, consistent with our price-right strategy. We did experience these inflationary impacts, in particular within our Polymer segment, as we experienced margin compression versus fiscal year 2020. Within our Chemical segment, due to favorable market dynamics, we were able to expand margins in excess of the aforementioned inflationary pressures.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

We are exposed to certain market risks, including risks from changes in interest rates, foreign currency exchange rates, and commodity prices that could impact our financial condition, results of operations, and cash flows. We selectively manage our exposure to these and other market risks through regular operating and financing activities as well as through the use of market risk sensitive instruments. We use such financial instruments as risk management tools and not for trading purposes. The market risk sensitive instruments that we have entered into as of December 31, 2021 consist of a series of non-deliverable forward contracts.

Interest rate risk. Borrowings under the Term Loan Facility, the ABL Facility, KFPC Loan Agreement, and KFPC Revolving Facilities, and additional borrowings in the future may, bear interest at variable rates, thereby exposing us to interest rate risk. At December 31, 2021, approximately $164.4 million of our debt was variable rate debt.

We performed a hypothetical analysis to determine the impact to our financial position if the interest rates increased or decreased by 10%, from the rates as of December 31, 2021 for the life of the variable rate debt, which would result in a change of less than $0.1 million as of December 31, 2021.

As a result of our variable interest rate floors, a hypothetical 10% change in interest rates would not materially impact our interest expense. However, we may incur additional interest expense in the future if the variable interest rates increase higher than our applicable interest rate floors.

Foreign currency exchange risk. We conduct operations in many countries around the world. Our results of operations are subject to both currency transaction and currency translation risk. We incur currency transaction risk when we enter into either a purchase or sale transaction using a currency other than the local currency of the transacting entity. We are subject to currency translation risk because our financial condition and results of operations are measured and recorded in the relevant domestic currency and then translated into U.S. dollars for inclusion in our historical consolidated financial statements. We attempt to selectively manage significant exposures to potential foreign currency exchange losses based on current market conditions, future operating activities, and the associated cost in relation to the perceived risk of loss. The purpose of our foreign currency risk management activities is to minimize the risk that our cash flows from the sale and/or purchase of services and products in foreign currencies will be adversely affected by changes in exchange rates.

Periodically, we enter into foreign currency agreements to hedge or otherwise protect against fluctuations in foreign currency exchange rates. These agreements typically do not qualify for hedge accounting and gains/losses resulting from both the up-front premiums and/or settlement of the hedges at expiration of the agreements are recognized in the period in which they are incurred. In 2021 and 2020, we entered into a series of foreign currency forward contracts to reduce our exposure to exchange rate volatility. These contracts were structured such that the underlying foreign currency exchange gains/losses would be offset by the mark-to-market impact of the hedging instruments and reduce the impact of foreign currency exchange movements throughout the year. The notional amounts of open foreign currency forward contracts were $55.0 million at December 31, 2021 and $70.8 million at December 31, 2020. The notional amounts of our forward contracts do not generally represent amounts exchanged by the parties, and thus are not a measure of our exposure or of the cash requirements related to these contracts. As such, cash flows related to these contracts are typically not material. The amounts exchanged are calculated by reference to the notional amounts and by other terms of the contracts, such as exchange rates.

We use sensitivity analysis models to measure the impact of a hypothetical 10% adverse movement of foreign currency exchange rates against the U.S. dollar. For our foreign currency transaction risk, a hypothetical 10% adverse change in the foreign currency exchange rates for all our foreign currency positions would result in a $1.5 million pre-tax loss for our net monetary assets denominated in currencies other than the respective entity's functional currency at December 31, 2021. For our foreign currency translation risk, a hypothetical 10% adverse change in the applicable average foreign currency exchange rates relative to the U.S. dollar in 2022 would negatively impact our pre-tax income by $3.9 million.

There are certain limitations inherent in the sensitivity analyses presented, primarily due to the assumption that interest rates and exchange rates change instantaneously in an equally adverse fashion. In addition, the analyses are unable to reflect the complex market reactions that normally would arise from the market shifts modeled. While this is our best estimate of the impact of the various scenarios, these estimates should not be viewed as forecasts.

Commodity price risk. We are exposed to commodity price risk due to our forward contractual purchase commitments for raw materials. Our raw materials are primarily supplied by a portfolio of suppliers under long-term supply contracts and arrangements with various expiration dates. We are subject to future purchase commitments for these raw materials under minimum purchase contracts. Based on pricing as of December 31, 2021, a hypothetical 10.0% change in the market price for these raw materials would change our 2022 cost of goods sold by $57.2 million.

Item 8. Financial Statements and Supplementary Data.

The financial statements are set forth herein commencing on page F-6 of this report.

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

An evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15 under the Exchange Act) was carried out under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer. As of December 31, 2021, based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective.

Management's Annual Report on Internal Control over Financial Reporting

See Management's Annual Report on Internal Control over Financial Reporting on page F-2 of the audited consolidated financial statements provided under Item 8 of this Form 10-K.

Attestation Report of the Registered Public Accounting Firm

See Report of Independent Registered Public Accounting Firm on page F-3 of the audited consolidated financial statements provided under Item 8 of this Form 10-K.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during the three months ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

Item 11. Executive Compensation.

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

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

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

Item 14. Principal Accountant Fees and Services.

We have omitted this section pursuant to General Instruction G(3) of Form 10-K.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) 1. Financial Statements

The following financial statements are included in Item 8:

Kraton Corporation

(i) The reports of KPMG LLP, Independent Registered Public Accounting Firm

(ii) Consolidated Balance Sheets as of December 31, 2021 and 2020

(iii) Consolidated Statements of Operations—years ended December 31, 2021, 2020, and 2019

(iv) Consolidated Statements of Comprehensive Income (Loss)—years ended December 31, 2021, 2020, and 2019

(v) Consolidated Statements of Changes in Equity—years ended December 31, 2021, 2020, and 2019

(vi) Consolidated Statements of Cash Flows—years ended December 31, 2021, 2020, and 2019

(vii) Notes to consolidated financial statements

2. Exhibits

The exhibits listed under Item 15(b) below are filed as part of, or incorporated by reference into, this report and are on file with us.

(b) Exhibits

Item 15 (b). Exhibits

The following is a list of all exhibits filed as a part of this Annual Report on Form 10-K, including those incorporated by reference.

Exhibit No	Description of Exhibits
2.1	Agreement and Plan of Merger dated September 27, 2021, among Kraton Corporation, DL Chemical Co., Ltd., DLC US Holdings, Inc. and DLC US, Inc. (incorporated by reference to Exhibit 2.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 27, 2021)
3.1	Certificate of Incorporation of Kraton Performance Polymers, Inc.** (incorporated by reference to Exhibit 3.1 to Kraton Corporation's Registration Statement on Form S-3 filed with the SEC on August 25, 2015)
3.2	Certificate of Amendment to the Certificate of Incorporation of Kraton Performance Polymers, Inc.** (incorporated by reference to Exhibit 3.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 14, 2016)
3.3	Second Amended and Restated Bylaws of Kraton Corporation (incorporated by reference to Exhibit 3.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on February 12, 2020)
3.4	Amendment to the Second Amended and Restated Bylaws of Kraton Corporation (incorporated by reference to Exhibit 3.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 27, 2021)
4.1	Specimen Stock Certificate of Kraton Corporation's Common Stock, par value $0.01 per share (incorporated by reference to Exhibit 4.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 14, 2016)
4.2	Indenture, dated as of December 21, 2020, among Kraton Polymers LLC and Kraton Polymers Capital Corporation, as Issuers, Kraton Corporation and certain of its wholly-owned domestic subsidiaries, as Guarantors and Wells Fargo Bank, National Association, as Trustee, relating to the 4.25% Senior Notes due 2025 (incorporated by reference to Exhibit 4.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on December 21, 2020)
4.3	Form of Global Note for the 4.25% Senior Notes due 2025 (incorporated by reference to, and included in, Exhibit 4.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on December 21, 2020)

Exhibit No	Description of Exhibits
4.4	Indenture, dated as of May 24, 2018, among Kraton Polymers LLC and Kraton Polymers Capital Corporation, as Issuers, Kraton Corporation and certain of its wholly-owned domestic subsidiaries, as Guarantors and Wells Fargo Bank, National Association, as Trustee, Deutsche Bank AG, London Branch, as Principal Paying Agent, and Deutsche Bank Luxembourg S.A., as Authenticating Agent, Registrar and Transfer Agent relating to the 5.25% Senior Notes due 2026 (incorporated by reference to Exhibit 4.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on May 29, 2018)
4.5	Form of Global Note for the 5.25% Senior Notes due 2026 (incorporated by reference to, and included in, Exhibit 4.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on May 29, 2018)
4.6	Description of the Kraton Corporation Securities Registered under Section 12 of the Exchange Act (incorporated by reference to Exhibit 4.6 to Kraton Corporation’s Annual Report on Form 10-K filed with the SEC on February 27, 2020)
10.1	Guarantee Agreement by and between Kraton Polymers LLC and Taiwan Cooperative Bank, Ltd., dated as of July 17, 2014 (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Quarterly Report on Form 10-Q filed with the SEC on July 31, 2014)
10.2	Credit and Guarantee Agreement, dated as of January 6, 2016, among Kraton Polymers LLC, as Borrower, Kraton Performance Polymers, Inc., as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time, Credit Suisse AG, Cayman Islands Branch, as Administrative Agent and as Collateral Agent and Nomura Securities International, Inc. and Deutsche Bank Securities Inc., as Syndication Agents (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on January 7, 2016)
10.3	First Amendment to Credit and Guarantee Agreement, dated as of July 6, 2016, relating to the Credit and Guarantee Agreement, dated as of January 6, 2016, among Kraton Polymers LLC, as Borrower, and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.3 to Kraton Corporation’s Annual Report on Form 10-K filed with the SEC on February 28, 2017)
10.4	Second Amendment to Credit and Guarantee Agreement, dated as of January 9, 2017, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as Borrower, Kraton Performance Polymers, Inc., as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent and as Collateral Agent (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on January 10, 2017)
10.5	Third Amendment to Credit and Guarantee Agreement, dated as of June 13, 2017, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as Borrower, and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on July 27, 2017)
10.6	Fourth Amendment to Credit and Guarantee Agreement, dated as of August 16, 2017, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as U.S. Borrower and guarantor, Kraton Polymers Holdings B.V., as Euro Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on August 17, 2017)
10.7	Fifth Amendment to Credit and Guarantee Agreement, dated as of March 8, 2018, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as U.S. Borrower and guarantor, Kraton Polymers Holdings B.V., as Euro Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on March 12, 2018)
10.8	Sixth Amendment to Credit and Guarantee Agreement, dated as of May 24, 2018, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as U.S. Borrower and guarantor, Kraton Polymers Holdings B.V., as Euro Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.1 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on May 29, 2018)
10.9	Seventh Amendment to Credit and Guarantee Agreement, dated as of May 24, 2018, relating to the Credit and Guarantee Agreement dated as of January 6, 2016, among Kraton Polymers LLC, as U.S. Borrower and guarantor, Kraton Polymers Holdings B.V., as Euro Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as guarantors, the Lenders party thereto from time to time and Credit Suisse AG, Cayman Islands Branch, as Administrative Agent (incorporated by reference to Exhibit 10.2 to Kraton Corporation’s Current Report on Form 8-K filed with the SEC on May 29, 2018)

Exhibit No	Description of Exhibits
10.10	Pledge and Security Agreement, dated as of January 6, 2016, among Kraton Polymers LLC, Kraton Performance Polymers, Inc., Kraton Polymers U.S. LLC, Elastomers Holdings LLC, Kraton Polymers Capital Corporation, Arizona Chemical Holdings Corporation, AZ Chem Intermediate Inc., AZ Chem US Holdings Inc., AZ Chem US Inc. and Arizona Chemical Company, LLC, as Grantors, and Credit Suisse AG, Cayman Islands Branch, as Collateral Agent (incorporated by reference to Exhibit 10.2 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on January 7, 2016)
10.11	Second Amended and Restated Loan, Security and Guarantee Agreement, dated as of April 15, 2020, among Kraton Polymers U.S. LLC and Kraton Chemical, LLC, as U.S. Borrowers and Guarantors, Kraton Polymers Nederland B.V., as Initial Dutch Kraton Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as Guarantors, the financial institutions listed from time to time party thereto, as Lenders, and Bank of America, N.A., in its capacity as Administrative Agent, Collateral Agent and Security Trustee (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on April 15, 2020)
10.12	First Amendment to Second Amended and Restated Loan, Security and Guarantee Agreement, dated as of December 3, 2020, by and among Kraton Polymers U.S. LLC and Kraton Chemical, LLC, as U.S. Borrowers and Guarantors, Kraton Polymers Nederland B.V., as Initial Dutch Kraton Borrower, Kraton Corporation, as Parent, certain subsidiaries of Parent, as Guarantors, the financial institutions from time to time party thereto, as Lenders, and Bank of America, N.A., in its capacity as Administrative Agent, Collateral Agent and Security Trustee (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on December 4, 2020)
10.13	Shareholder Agreement of Kraton Formosa Polymers Corporation, dated as of February 27, 2013, by and between KP Investment BV and Formosa Petrochemical Corporation (incorporated by reference to Exhibit 10.3 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on May 2, 2013)
10.14	Ground Lease, dated as of February 27, 2013, by and between Formosa Petrochemical Corporation and Kraton Formosa Polymers Corporation (Mailiao) (incorporated by reference to Exhibit 10.4 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on May 2, 2013)
10.15	Contribution Agreement, dated as of February 28, 2001, between Shell Oil Company and Shell Elastomers (portions of this exhibit have been omitted pursuant to a request for confidential treatment) (incorporated by reference to Exhibit 10.44 to Amendment No. 1 to Kraton Corporation's Annual Report on Form 10-K/A filed with the SEC on October 28, 2011)
10.16	Contribution Agreement, dated as of February 28, 2001, between Shell Internationale Research Maatschappij B.V. and Kraton Polymers Research B.V. (portions of this exhibit have been omitted pursuant to a request for confidential treatment) (incorporated by reference to Exhibit 10.45 to Amendment No. 3 to Kraton Corporation's Annual Report on Form 10-K/A filed with the SEC on March 8, 2012)
10.17	Amended and Restated Belpre Facility Sharing and Operating Agreement, dated as of July 1, 1999, among Infineum USA LP, Shell Oil Company and Shell Elastomers LLC (portions of this exhibit have been omitted pursuant to a request for confidential treatment) (incorporated by reference to Exhibit 10.31 to Amendment No. 1 to Kraton Corporation's Annual Report on Form 10-K/A filed with the SEC on October 28, 2011)
10.18	Amendment No. 1 to Amended and Restated Belpre Facility Sharing and Operating Agreement, dated as of January 23, 2007 (incorporated by reference to Exhibit 10.69 to Amendment No. 2 to Kraton Corporation's Registration Statement on Form S-1/A filed with the SEC on November 20, 2009)
10.19	Amendment No. 2 to Amended and Restated Belpre Facility Sharing and Operating Agreement, dated as of January 1, 2009 (incorporated by reference to Exhibit 10.70 to Amendment No. 2 to Kraton Corporation's Registration Statement on Form S-1/A filed with the SEC on November 20, 2009)
10.20	Manufacturing Facility Lease, dated as of August 24, 2000, between Shell Chimie and Kravis (Berre-Kraton D) (incorporated by reference to Exhibit 10.47 to Kraton Polymers LLC's Registration Statement on Form S-4 filed with the SEC on April 1, 2005)
10.21	Manufacturing Facility Lease, dated as of August 24, 2000, between Shell Chimie and Kraton Polymers France SAS (Berre-Kraton G) (incorporated by reference to Exhibit 10.48 to Kraton Polymers LLC's Registration Statement on Form S-4 filed with the SEC on April 1, 2005)
10.22	Business Lease, dated as of March 31, 2000, between Elenac GmbH and Kraton Polymers GmbH (Wesseling) (portions of this exhibit have been omitted pursuant to a request for confidential treatment) (incorporated by reference to Exhibit 10.49 to Kraton Polymers LLC's Registration Statement on Form S-4 filed with the SEC on April 1, 2005)
10.23	Amendment to the Business Lease dated March 31, 2000 between Bassell Polyolefine GmbH (previously Elenac GmbH) and Kraton Polymers GmbH (Wesseling) (incorporated by reference to Exhibit 10.49(a) to Kraton Polymers LLC's Registration Statement on Form S-4 filed with the SEC on April 1, 2005)

Exhibit No	Description of Exhibits
10.24	Lease Agreement dated as of February 28, 2007 between International Paper Company and Arizona Chemical Company (Savannah) (incorporated by reference to Exhibit 10.17 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 24, 2016)
10.25	Oulu Land Lease Agreement dated effective as of 30 August 1996 between Enso Oy and Forchem Oy (Oulu)(incorporated by reference to Exhibit 10.18 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 24, 2016)
10.26	Amendment for Land Lease Contract dated 15 February 2013 between Stora Enso Oyj and Arizona Chemical Oy (Oulu) (incorporated by reference to Exhibit 10.19 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 24, 2016)
10.27+	Kraton Polymers U.S. LLC Benefits Restoration Plan, as amended and restated effective as of January 1, 2013 (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on November 1, 2012)
10.28+	Form of Letter to Participants in the Benefits Restoration Plan with respect to Death Benefit (incorporated by reference to Exhibit 10.21 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 28, 2013)
10.29+	Kraton Polymers U.S. LLC Pension Benefit Restoration Plan as amended and restated December 10, 2013 (incorporated by reference to Exhibit 10.24 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 27, 2014)
10.30+	Polymer Holdings LLC Executive Deferred Compensation Plan dated November 30, 2009 (incorporated by reference to Exhibit 10.52 to Amendment No. 3 to Kraton Corporation's Form S-1/A filed with the SEC on December 2, 2009)
10.31+	Kraton Performance Polymers, Inc. 2009 Equity Incentive Plan (as amended and restated February 16, 2012) (incorporated by reference to Exhibit 10.24 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 29, 2012)
10.32+	Kraton Corporation 2016 Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.2 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on April 27, 2017)
10.33+	First Amendment to Kraton Corporation 2016 Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on May 25, 2018)
10.34+	Kraton Corporation 2016 Amended and Restated Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on May 26, 2020)
10.35+	First Amendment to the Kraton Corporation Amended and Restated 2016 Equity and Cash Incentive Plan (incorporated by reference to Annex A to the Company's definitive proxy statement filed with the U.S. Securities and Exchange Commission on April 8, 2021)
10.36+	Kraton Corporation 2019 Equity Inducement Plan (incorporated by reference to Exhibit 4.2 to Kraton Corporation's Form S-8 filed with the SEC on April 17, 2019)
10.37+	Form of Kraton Corporation Restricted Stock Unit Inducement Award Agreement under the Kraton Corporation 2019 Equity Inducement Plan (incorporated by reference to Exhibit 4.3 to Kraton Corporation's Form S-8 filed with the SEC on April 17, 2019)
10.38+	Form of Kraton Corporation Restricted Stock Performance Unit Inducement Award Agreement under the Kraton Corporation 2019 Equity Inducement Plan (incorporated by reference to Exhibit 4.4 to Kraton Corporation's Form S-8 filed with the SEC on April 17, 2019)
10.39+	Form of Kraton Corporation Restricted Stock Unit Inducement Award Agreement (1 year vest) under the Kraton Corporation 2019 Equity Inducement Plan (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Form 10-Q filed with the SEC on July 25, 2019)
10.40+	Form of Kraton Corporation Restricted Stock Unit Award Agreement under the Kraton Corporation 2016 Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.34 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 28, 2019)
10.41+	Form of Kraton Corporation Restricted Stock Performance Unit Award Agreement under the Kraton Corporation 2016 Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.35 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 28, 2019)

Exhibit No	Description of Exhibits
10.42+	Form of Kraton Corporation Restricted Stock Performance Unit Award Agreement (2020) under the Kraton Corporation Amended and Restated 2016 Equity and Cash Incentive Plan (incorporated by reference to Exhibit 10.41 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 26, 2021)
10.43+*	Form of Kraton Corporation Restricted Stock Unit Award Agreement under the Kraton Corporation Amended and Restated 2016 Equity and Cash Incentive Plan
10.44+	Form of Kraton Performance Polymers, Inc. Stock Option Award Agreement under the Kraton Performance Polymers, Inc. 2009 Equity Incentive Plan (incorporated by reference to Exhibit 10.30 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 28, 2013)
10.45+	Form of Kraton Performance Polymers, Inc. Nonqualified Stock Option Award Agreement under the Kraton Performance Polymers, Inc. 2009 Equity Incentive Plan (incorporated by reference to Exhibit 10.32 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 27, 2014)
10.46+	Summary of Terms of Kraton Corporation Cash Incentive Plan for 2021 (incorporated by reference to Kraton Corporation's Current Reports on Form 8-K filed with the SEC on February 8, 2021)
10.47+	Kraton Corporation Executive Severance Program (as amended and restated September 11, 2020) (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on October 29, 2020)
10.48+	Form of Executive Severance Agreement under the Kraton Corporation Executive Severance Program (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 27, 2021)
10.49+	Form of Employee Confidentiality and Non-Competition Agreement entered into by executives participating in the Executive Severance Program (incorporated by reference to Exhibit 10.31 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 29, 2012)
10.50+	Form of Employee Confidentiality and Non-Competition Agreement entered into by executives participating in the Executive Severance Program (subsequent to May 2018) (incorporated by reference to Exhibit 10.48 to Kraton Corporation's Annual Report on Form 10-K filed with the SEC on February 26, 2021)
10.51+	Form of Indemnity Agreement (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on December 16, 2011)
10.52+	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.3 to Kraton Corporation's Quarterly Report on Form 10-Q filed with the SEC on July 31, 2020)
10.53+	Executive Compensation Recoupment Policy (adopted September 11, 2013) (incorporated by reference to Exhibit 10.1 to Kraton Corporation's Current Report on Form 8-K filed with the SEC on September 16, 2013)
21.1*	List of Significant Subsidiaries
23.1*	Consent of Independent Registered Public Accounting Firm
31.1*	Certification by CEO pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification by CFO pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification by CEO and CFO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101*	The following materials from Kraton Corporation's Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Inline XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2021 and 2020, (ii) Consolidated Statements of Operations for the years ended December 31, 2021, 2020, and 2019, (iii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2021, 2020, and 2019, (iv) Consolidated Statements of Changes in Equity for the years ended December 31, 2021, 2020, and 2019, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020, and 2019, and (vi) Notes to Consolidated Financial Statements.
104*	The cover page from Kraton Corporation Annual Report on Form 10-K for the period ended December 31, 2021, formatted in Inline XBRL (eXtensible Business Reporting Language)

+ Denotes management contract or compensatory plan or arrangement.

* Filed herewith.

** On September 14, 2016, Kraton Performance Polymers, Inc. changed its corporate name to Kraton Corporation. Accordingly, filings made prior to such date were made under the name Kraton Performance Polymers, Inc.

(c). Financial Statement Schedule

See Schedule II.

Item 16. Form 10-K Summary

None.

SIGNATURES

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

Date: February 24, 2022

Kraton Corporation

/s/ Kevin M. Fogarty

Kevin M. Fogarty
President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints James L. Simmons, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirement of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated and on February 24, 2022.

Signature	Title
/s/ Kevin M. Fogarty **Kevin M. Fogarty**	President, Chief Executive Officer, and a Director (Principal Executive Officer)
/s/ Atanas H. Atanasov **Atanas H. Atanasov**	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer)
/s/ Christopher B. Gingrich **Christopher B. Gingrich**	Chief Accounting Officer (Principal Accounting Officer)
/s/ Shelley J. Bausch **Shelley J. Bausch**	Director
/s/ Anna C. Catalano **Anna C. Catalano**	Director
/s/ Dominique Fournier **Dominique Fournier**	Director
/s/ John J. Gallagher, III **John J. Gallagher, III**	Director
/s/ Dan F. Smith **Dan F. Smith**	Director and Chairman
/s/ Karen A. Twitchell **Karen A. Twitchell**	Director
/s/ Billie I. Williamson **Billie I. Williamson**	Director

KRATON CORPORATION
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Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, as amended. Internal control over financial reporting, no matter how well designed, has inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Further, because of changes in conditions, the effectiveness of internal control over financial reporting may vary over time.

Under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, we conducted an evaluation to assess the effectiveness of our internal control over financial reporting as of December 31, 2021 based upon criteria set forth in the *Internal Control —Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our assessment, we believe that, as of December 31, 2021, our internal control over financial reporting is effective.

The effectiveness of our internal control over financial reporting as of December 31, 2021 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report that is included herein.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Kraton Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited Kraton Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes and financial statement schedule II - Valuation and Qualifying Accounts and Reserves (collectively, the consolidated financial statements), and our report dated February 24, 2022 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

(signed) KPMG LLP

Houston, Texas
February 24, 2022

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Kraton Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Kraton Corporation and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes and financial statement schedule II - Valuation and Qualifying Accounts and Reserves (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 24, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill impairment analysis

As discussed in Notes 1 and 13 to the consolidated financial statements, the Company performs goodwill impairment testing at the reporting unit level on an annual basis and whenever events or circumstances indicate that the carrying value of a reporting unit likely exceeds its fair value. In the current year, the Company performed a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The Company's goodwill balance as of December 31, 2021 was $372.9 million, all of which related to the Chemical reporting unit resulting from the Arizona Chemical acquisition in 2016.

We identified the evaluation of the goodwill impairment assessment as a critical audit matter. A higher degree of subjective auditor judgment was required the evaluate the assumptions utilized by management in the identification of potential triggering events, including industry and market conditions, and overall financial performance of the reporting unit. Changes in these factor could have a significant impact on the Company's qualitative assessment and the determination of whether further quantitative analysis of goodwill impairment was required.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of an internal control related to the Company's goodwill impairment assessment, including the process to identify and evaluate triggering events that indicate that the carrying value of a reporting unit, including goodwill, might exceed the fair value of the reporting unit. We evaluated the appropriateness of the industry and market conditions by assessing the relevance and reliability of underlying data used by the Company. We compared actual financial performance with forecasts used in previous impairment assessments to evaluate the overall financial performance of the reporting unit.

(signed) KPMG LLP

We have served as the Company’s auditor since 2002.

Houston, Texas
February 24, 2022

KRATON CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands, except par value)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 130,519	$ 85,901
Receivables, net of allowances of $684 and $598	230,939	180,258
Inventories of products	443,025	318,885
Inventories of materials and supplies	34,315	34,164
Prepaid expense	8,631	11,844
Other current assets	28,935	15,338
Total current assets	876,364	646,390
Property, plant, and equipment, less accumulated depreciation of $791,835 and $732,279	934,843	942,703
Goodwill	372,917	375,061
Intangible assets, less accumulated amortization of $366,001 and $330,070	260,965	294,734
Investment in unconsolidated joint venture	12,023	12,723
Deferred income taxes	79,627	83,534
Long-term operating lease assets, net	97,051	84,042
Other long-term assets	20,818	21,770
Total assets	$ 2,654,608	$ 2,460,957
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 68,694	$ 72,347
Accounts payable-trade	251,992	176,229
Other payables and accruals	195,927	167,364
Due to related party	17,170	17,147
Total current liabilities	533,783	433,087
Long-term debt, net of current portion	818,572	865,516
Deferred income taxes	128,910	125,559
Long-term operating lease liabilities	78,617	67,898
Deferred income	120,646	151,329
Other long-term liabilities	126,076	168,566
Total liabilities	1,806,604	1,811,955
Commitments and contingencies (note 11)		
Equity:		
Kraton stockholders' equity:		
Preferred stock, $0.01 par value; 100,000 shares authorized; none issued	—	—
Common stock, $0.01 par value; 500,000 shares authorized; 32,230 shares issued and outstanding at December 31, 2021; 31,873 shares issued and outstanding at December 31, 2020	322	319
Additional paid in capital	415,310	401,445
Retained earnings	409,617	240,464
Accumulated other comprehensive loss	(27,921)	(37,865)
Total Kraton stockholders' equity	797,328	604,363
Noncontrolling interest	50,676	44,639
Total equity	848,004	649,002
Total liabilities and equity	$ 2,654,608	$ 2,460,957

See Notes to Consolidated Financial Statements

KRATON CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Years Ended December 31,		
	2021	2020	2019
Revenue	$ 1,970,129	$ 1,563,150	$ 1,804,436
Cost of goods sold	1,381,373	1,165,279	1,390,007
Gross profit	588,756	397,871	414,429
Operating expenses:			
Research and development	40,406	40,743	41,073
Selling, general, and administrative	164,167	161,944	149,800
Depreciation and amortization	126,475	126,022	136,171
Impairment of goodwill	—	400,000	—
Gain on insurance proceeds	—	—	(32,850)
Loss on disposal of fixed assets	879	750	773
Operating income (loss)	256,829	(331,588)	119,462
Other income (expense)	(209)	995	3,339
Gain (loss) on disposition and exit of business activities	(149)	175,189	—
Loss on extinguishment of debt	—	(40,843)	(3,521)
Earnings of unconsolidated joint venture	461	457	506
Interest expense, net	(41,840)	(57,930)	(75,782)
Income (loss) before income taxes	215,092	(253,720)	44,004
Income tax benefit (expense)	(39,502)	32,034	11,813
Consolidated net income (loss)	175,590	(221,686)	55,817
Net income attributable to noncontrolling interest	(5,364)	(3,916)	(4,512)
Net income (loss) attributable to Kraton	$ 170,226	$ (225,602)	$ 51,305
Earnings (loss) per common share:			
Basic	$ 5.30	$ (7.08)	$ 1.61
Diluted	$ 5.21	$ (7.08)	$ 1.60
Weighted average common shares outstanding:			
Basic	32,098	31,746	31,581
Diluted	32,642	31,746	31,881

See Notes to Consolidated Financial Statements

KRATON CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2021	2020	2019
Net income (loss) attributable to Kraton	$ 170,226	$ (225,602)	$ 51,305
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of tax of $0	(28,875)	36,431	(5,296)
Reclassification of foreign currency translation adjustments from disposition and exit of business activities, net of tax of $0	—	66,533	—
Unrealized gain (loss) on cash flow hedges, net of tax expense of $458 and benefit of $1,165, respectively	—	1,387	(6,311)
Reclassification of loss on cash flow hedge, net of tax benefit of $293	—	1,002	—
Unrealized gain (loss) on net investment hedge, net of tax expense of $5,785, benefit of $6,865 and expense of $1,379, respectively	19,792	(25,881)	7,471
Reclassification of gain on net investment hedge, net of tax expense of $0	—	(899)	—
(Increase) decrease in benefit plans liability, net of tax expense of $2,731 and benefit of $3,702 and $2,117, respectively	19,027	(10,643)	(9,960)
Other comprehensive income (loss), net of tax	9,944	67,930	(14,096)
Comprehensive income (loss) attributable to Kraton	180,170	(157,672)	37,209
Comprehensive income attributable to noncontrolling interest	6,139	6,654	5,524
Consolidated comprehensive income (loss)	$ 186,309	$ (151,018)	$ 42,733

See Notes to Consolidated Financial Statements

KRATON CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In thousands)

	Common Stock	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Kraton Equity	Noncontrolling Interest	Total Equity
Balance at January 1, 2019	$ 319	$ 385,921	$ 420,597	$ (91,699)	$ 715,138	$ 32,461	$ 747,599
Net income	—	—	51,305	—	51,305	4,512	55,817
Other comprehensive income (loss)	—	—	—	(14,096)	(14,096)	1,012	(13,084)
Retired treasury stock from employee tax withholdings	—	(1,431)	(1,390)	—	(2,821)	—	(2,821)
Canceled stock from share repurchases	(3)	(4,197)	(5,800)	—	(10,000)	—	(10,000)
Exercise of stock options	1	2,423	—	—	2,424	—	2,424
Non-cash compensation related to equity awards	1	9,492	—	—	9,493	—	9,493
Balance at December 31, 2019	$ 318	$ 392,208	$ 464,712	$ (105,795)	$ 751,443	$ 37,985	$ 789,428
Net income	—	—	(225,602)	—	(225,602)	3,916	(221,686)
Other comprehensive income (loss)	—	—	—	67,930	67,930	2,738	70,668
Retired treasury stock from employee tax withholdings	—	(2,201)	1,354	—	(847)	—	(847)
Exercise of stock options	—	78	—	—	78	—	78
Non-cash compensation related to equity awards	1	11,360	—	—	11,361	—	11,361
Balance at December 31, 2020	$ 319	$ 401,445	$ 240,464	$ (37,865)	$ 604,363	$ 44,639	$ 649,002
Net income (loss)	—	—	170,226	—	170,226	5,364	175,590
Other comprehensive income	—	—	—	9,944	9,944	775	10,719
Distribution to noncontrolling interest	—	—	—	—	—	(102)	(102)
Retired treasury stock from employee tax withholdings	(1)	(3,872)	(1,073)	—	(4,946)	—	(4,946)
Exercise of stock options	1	6,398	—	—	6,399	—	6,399
Non-cash compensation related to equity awards	3	11,339	—	—	11,342	—	11,342
Balance at December 31, 2021	$ 322	$ 415,310	$ 409,617	$ (27,921)	$ 797,328	$ 50,676	$ 848,004

See Notes to Consolidated Financial Statements

KRATON CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2021	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES			
Consolidated net income (loss)	$ 175,590	$ (221,686)	$ 55,817
Adjustments to reconcile consolidated net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	126,475	126,022	136,171
Lease amortization	24,208	24,488	23,093
Amortization of debt premium and original issue discount	—	148	1,064
Amortization of debt issuance costs	2,535	3,045	4,654
Amortization of deferred income	(27,474)	(20,054)	—
Loss on disposal of property, plant, and equipment	879	750	773
Disposition and exit of business activities	149	(175,189)	—
Loss on extinguishment of debt	—	40,843	3,521
Impairment of goodwill	—	400,000	—
(Earnings) loss from unconsolidated joint venture, net of dividends received	6	50	(62)
Deferred income tax benefit	(3,553)	(56,114)	(159)
Release of uncertain tax positions	—	(2,445)	(18,309)
Gain on insurance proceeds for capital expenditures	—	—	(3,948)
Share-based compensation	11,342	11,361	9,493
Decrease (increase) in:			
Accounts receivable	(57,762)	(563)	5,848
Inventories of products, materials, and supplies	(133,463)	18,234	46,533
Other assets	(10,931)	483	10,986
Increase (decrease) in:			
Accounts payable-trade	76,782	352	(3,472)
Other payables and accruals	1,187	5,595	(20,018)
Other long-term liabilities	(16,196)	(2,900)	(13,401)
Due to related party	1,451	(1,089)	(3,644)
Net cash provided by operating activities	171,225	151,331	234,940
CASH FLOWS FROM INVESTING ACTIVITIES			
Kraton purchase of property, plant, and equipment	(90,454)	(73,893)	(103,688)
KFPC purchase of property, plant, and equipment	(365)	(4,132)	(965)
Purchase of software and other intangibles	(10,395)	(7,943)	(8,019)
Insurance proceeds for capital expenditures	—	—	3,948
Cash proceeds (payments) from disposition and exit of business activities	(5,802)	510,500	—
Net cash provided by (used in) investing activities	(107,016)	424,532	(108,724)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from debt	107,500	477,000	57,941
Repayments of debt	(107,500)	(967,967)	(198,053)
KFPC proceeds from debt	62,407	71,949	34,240
KFPC repayments of debt	(85,633)	(90,577)	(59,700)
Finance lease payments	(1,029)	(179)	(169)
Purchase of treasury stock	(4,946)	(847)	(12,821)
Proceeds from the exercise of stock options	6,399	78	2,424
Settlement of interest rate swap	—	(1,295)	—
Distribution to non-controlling interest	(102)	—	—
Debt issuance costs	—	(9,095)	—
Net cash used in financing activities	(22,904)	(520,933)	(176,138)
Effect of exchange rate differences on cash	3,313	(4,062)	(936)
Net increase (decrease) in cash and cash equivalents	44,618	50,868	(50,858)
Cash and cash equivalents, beginning of period	85,901	35,033	85,891
Cash and cash equivalents, end of period	$ 130,519	$ 85,901	$ 35,033
Supplemental disclosures during the period:			
Cash paid for income taxes, net of refunds received	$ 26,326	$ 6,917	$ 7,804
Cash paid for interest, net of capitalized interest	$ 36,948	$ 66,757	$ 56,407
Capitalized interest	$ 3,429	$ 3,099	$ 3,625
Supplemental non-cash disclosures increase (decrease) during the period:			
Property, plant, and equipment accruals	$ 3,551	$ (9,785)	$ 2,277
Operating leases	$ 34,141	$ 19,928	$ 105,308

See Notes to Consolidated Financial Statements

KRATON CORPORATION

Notes to Consolidated Financial Statements
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1. Description of Business, Basis of Presentation and Significant Accounting Policies

Description of Business. We are a leading global specialty chemicals company that manufactures styrenic block copolymers ("SBCs"), specialty polymers, and high-value performance products primarily derived from pine wood pulping co-products. Our operations are managed through two operating segments: (i) Polymer segment and (ii) Chemical segment. Operating results for Arizona Chemical are included in the accompanying consolidated financial statements since the date of acquisition.

Basis of Presentation. The accompanying consolidated financial statements are for us and our consolidated subsidiaries, each of which is a wholly-owned subsidiary, except our 50% investment in our joint venture, Kraton Formosa Polymers Corporation ("KFPC"), located in Mailiao, Taiwan. KFPC is a variable interest entity for which we have determined that we are the primary beneficiary and, therefore, have consolidated into our financial statements. Our 50% investment in our joint venture located in Kashima, Japan, is accounted for under the equity method of accounting. All significant intercompany transactions have been eliminated.

Significant Accounting Policies. These financial statements reflect all normal recurring adjustments that are, in the opinion of management, necessary to fairly present our results of operations and financial position.

Use of Estimates. The preparation of these consolidated financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Significant items subject to such estimates and assumptions include:

- the useful lives of long-lived assets;
- allowances for doubtful accounts and sales returns;
- valuation of goodwill;
- the valuation of derivatives, deferred taxes, property, plant and equipment, inventory, share-based compensation, and deferred income; and
- liabilities for employee benefit obligations, environmental matters, asset retirement obligations, income tax uncertainties, and other contingencies.

Cash and Cash Equivalents. It is our policy to invest our excess cash in investment instruments whose value is not subject to market fluctuations, such as bank deposits or certificates of deposit. Other permitted investments include commercial paper of major U.S. corporations with ratings of A1 by Standard & Poor's Ratings Group or P1 by Moody's Investor Services, Inc., loan participations of major U.S. corporations with a short term credit rating of A1/P1 and direct obligations of the U.S. government or its agencies. We consider all investments having a remaining maturity, at the time of purchase, of three months or less to be cash equivalents.

Receivables. Receivables are recorded at the invoiced amount once the performance obligation has been met and do not bear interest. The allowance for doubtful accounts represents our best estimate of the amount of probable credit losses in our existing receivables and is determined based on our assessment of the credit worthiness of individual customers, historical write-off experience, and global economic data. We review the allowance for doubtful accounts quarterly. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. We do not have significant off-balance sheet credit exposure related to our customers. See Note 3 *Revenue Recognition* to the consolidated financial statements.

Inventories of Products. Inventory values include all costs directly associated with manufacturing products and are stated at the lower of cost or net realizable value, primarily determined on a first-in, first-out basis. We evaluate the carrying cost of our inventory on a quarterly basis for this purpose. If the cost of the inventories exceeds their net realizable value, provisions are made for the difference between the cost and the net realizable value. See Note 6 *Detail of Certain Balance Sheet Accounts* to the consolidated financial statements.

Derivative Instruments and Hedging Activities. We account for derivatives and hedging activities in accordance with ASC 815, *Derivatives and Hedging*, which requires entities to recognize all derivative instruments as either assets or liabilities in the balance sheet at their respective fair values. For all hedging relationships that qualify as derivatives under ASC 815, we formally document the hedging relationship and our risk-management objective and strategy for undertaking the hedge, the hedging instrument, the hedged transaction, the nature of the risk being hedged, how the hedging instrument's effectiveness in offsetting the hedged risk will be assessed prospectively and retrospectively, and a description of the method used to measure ineffectiveness.

For derivative instruments that are designated and qualify as part of a cash flow hedging relationship, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings.

We designate net investment hedges as economic hedges of the certain net investment in foreign subsidiaries. The gain or loss on such hedging derivative instruments (or the foreign currency transaction gain or loss on the nonderivative hedging instrument) that is designated as, and is effective as, an economic hedge of the net investment in a foreign subsidiary is reported in the same manner as a translation adjustment to the extent it is effective. Any hedge ineffectiveness is recognized in earnings during the period incurred.

We discontinue hedge accounting prospectively when we determine that the derivative is no longer effective, the derivative expires or is sold, terminated, or exercised, or the hedge is de-designated. In all situations in which hedge accounting is discontinued and the derivative remains outstanding, we continue to carry the derivative at its fair value on the balance sheet and recognize any subsequent changes in its fair value in earnings. When it is probable that a forecasted transaction will not occur, we discontinue hedge accounting and recognize immediately in earnings gains and losses that were accumulated in other comprehensive income (loss) related to the hedging relationship. See Note 9 *Fair Value Measurements, Financial Instruments, and Credit Risk* to the consolidated financial statements.

Property, Plant, and Equipment. Property, plant, and equipment are stated at cost, net of accumulated depreciation. Major renewals and improvements which extend the useful lives of equipment are capitalized. Repair and maintenance costs are expensed as incurred. Disposals are removed at carrying cost less accumulated depreciation with any resulting gain or loss reflected in earnings. We capitalize interest costs which are incurred as part of the cost of constructing major facilities and equipment. See Note 13 *Industry Segment and Foreign Operations* to the consolidated financial statements. Depreciation is recognized using the straight-line method over the following estimated useful lives:

Machinery and equipment	20 years
Building and land improvements	20 years
Manufacturing control equipment	10 years
Office equipment	5 years
Research equipment and facilities	5 years
Vehicles	5 years
Computer hardware and information systems	3 years

Major Maintenance Activities. Major maintenance is expensed as incurred.

Goodwill. We record goodwill when the purchase price of an acquired business exceeds the fair value of the net identifiable assets acquired. Goodwill is allocated to the reporting unit level based on the estimated fair value at the date of acquisition. Goodwill was recorded as a result of the Arizona Chemical Acquisition and is recorded in the Chemical operating segment.

Goodwill is tested for impairment at the reporting unit level annually or more frequently as deemed necessary. Our annual measurement date for testing impairment is October 1st. First, we have the option to assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If it is more likely than not that an impairment indicator exists utilizing the qualitative method, we then test for impairment via estimating the fair value of our reporting units utilizing a combination of market and income approaches. This provides a fair value to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value, including goodwill. The estimated fair value of our reporting units are subject to a number of estimates which include, but are not limited to discount rates, revenue growth rates, cash flow assumptions, and market information. If the carrying amount of the reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit.

As of October 1, 2021, we assessed qualitative factors and determined that it was not more likely than not that the fair values of our reporting units were less than their carrying values as of the testing date. Our qualitative analysis considered: (i) macroeconomic conditions such as deterioration in general economic conditions, limitations on accessing capital, or other developments in equity and credit markets; (ii) industry and market considerations such as deterioration in the environment in which we operate, an increased competitive environment, a change in the market for our products or services, or a regulatory or political development; (iii) cost factors such as increases in labor or other costs that have a negative effect on earnings and cash flows; (iv) overall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods; (v) other relevant entity-specific events such as changes in management, key personnel, strategy, or customers, bankruptcy, or litigation; (vi) events affecting a reporting unit such as a change in the composition or carrying amount of our net assets; and (vii) a sustained decrease in our share price. Subsequent to the annual impairment test conducted during the fourth quarter of 2021, we continued to monitor these factors listed above. As a result of our assessment, no goodwill impairment charge was recorded during the year ended December 31, 2021.

During the third quarter of 2020, we performed an interim impairment test of goodwill as of September 30, 2020. As a result, we recorded a non-cash impairment charge of $400.0 million within the Chemical segment. The Company updated this assessment as of October 1, 2020 (our annual impairment date) utilizing a qualitative approach as outlined in ASC 350-20-35-38, and noted no impairment indicators during the fourth quarter of 2020. Therefore, the company's annual assessment concluded that the fair value of the reporting unit exceeded the book value of the reporting unit, including goodwill, and thus there was no impairment recognized in the fourth quarter of 2020. For further discussion on the Company's goodwill impairment see Note 13 *Industry Segment and Foreign Operations*.

Asset Retirement Obligations ("ARO"). We have determined that we have contractual or regulatory requirements to decommission and perform other remediation for many of our manufacturing and research facilities upon retirement. We account for ARO's pursuant to the provisions of ASC 410-20, *Asset Retirement Obligations.* ASC 410-20 requires us to record the fair value of an ARO as a liability in the period in which we have a legal obligation associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development, and/or normal use of the assets. The ARO is also capitalized as part of the carrying cost of the asset and is depreciated over the life of the asset. The recognition of an ARO requires us to make numerous estimates, assumptions, and judgments regarding such factors as the existence of a legal obligation for an ARO; estimated probabilities; amounts and timing of settlements; the credit-adjusted risk-free rate to be used; discount rate and inflation rates. Subsequent to the initial measurement of the ARO, the obligation is adjusted at the end of each period to reflect accretion of the liability to its non-discounted amount and changes in either the timing or the amount of the original estimated future cash flows underlying the obligation. Revisions also result in increases or decreases in the carrying cost of these assets. Increases in the ARO liability due to accretion is charged to depreciation and amortization expense. The related capitalized cost, including revisions thereto, is charged to depreciation and amortization expense. See Note 11 *Commitments and Contingencies* to the consolidated financial statements.

Long-Lived Assets. In accordance with the Impairment or Disposal of Long-Lived Assets Subsections of ASC 360-10, *Property, Plant, and Equipment—Overall*, long-lived assets, such as property, plant, and equipment, and purchased intangible assets subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, we first compare undiscounted cash flows expected to be generated by that asset or asset group to its carrying value. If the carrying value of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values, and third-party independent appraisals, as considered necessary. See Note 9 *Fair Value Measurements, Financial Instruments, and Credit Risk* to the consolidated financial statements.

Intangible Assets. Intangible assets are stated at cost, net of accumulated amortization. We have intangible assets related to technology, customer relationships, tradenames/trademarks, and software as detailed in Note 6 *Detail of Certain Balance Sheet Accounts* to the consolidated financial statements. See Note 6 *Detail of Certain Balance Sheet Accounts* to the consolidated financial statements. Intangible assets are amortized using the straight-line method over the asset's estimated useful life as follows:

Technology	15 years
Customer relationships	15 years
Tradenames/trademarks	15 years
Software	3 - 10 years

Pension and Other Postretirement Plans. We sponsor noncontributory defined benefit pension plans ("Pension Plans") and a post-retirement benefit plan ("Retiree Medical Plan"). We annually evaluate significant assumptions related to the benefits and obligations of these plans. Our estimation of the projected benefit obligations and related benefit expense requires that certain assumptions be made regarding such variables as expected return on plan assets, discount rates, rates of future compensation increases, estimated future employee turnover rates and retirement dates, distribution election rates, mortality rates, retiree utilization rates for health care services, and health care cost trend rates. The determination of the appropriate assumptions requires considerable judgment concerning future events and has a significant impact on the amount of the obligations and expense recorded. We rely in part on actuarial studies when determining the appropriateness of certain of the assumptions used in determining the benefit obligations and the annual expenses for these plans. See Note 12 *Employee Benefits* to the consolidated financial statements.

Investment in Unconsolidated Joint Venture. Our 50.0% equity investment in a manufacturing joint venture at our Kashima site is accounted for under the equity method with our share of the operating results of the joint venture classified within earnings of unconsolidated joint venture.

We evaluate our equity method investment for impairment when events or changes in circumstances indicate, in our judgment, that the carrying value of such investment may have experienced an other-than-temporary decline in value. When evidence of loss in value has occurred, we compare the estimated fair value of the investment to the carrying value of the investment to determine whether impairment has occurred. We assess the fair value of our equity method investment using commonly accepted techniques, and may use more than one method, including, but not limited to, recent third party comparable sales, internally developed analysis and analysis from outside advisors. If the estimated fair value is less than the carrying value and we consider the decline in value to be other than temporary, the excess of the carrying value over the estimated fair value is recognized in the financial statements as an impairment. See Note 14 *Related Party Transactions* to the consolidated financial statements.

Debt Issuance Costs. We capitalize financing fees and other costs related to issuing long-term debt. We amortize these costs using the effective interest method, except for costs related to revolving debt, which are amortized using the straight-line method. The amortization of debt issuance costs is recorded in interest expense. See Note 8 *Long-Term Debt* to the consolidated financial statements.

Contingencies. We are routinely involved in litigation, claims, and disputes incidental to our business. Professional judgment is required to classify the likelihood of these contingencies occurring. All relevant information that can be acquired concerning the uncertain set of circumstances needs to be obtained and used to determine the probability classification. A contingency is categorized as probable, reasonably possible, or remote. A contingency is classified as probable if the future event or events are likely to occur. For the probable contingencies, a loss is accrued and disclosed as of the date of the financial statements if it is both probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and the amount of loss can be reasonably estimated. A reasonably possible contingency occurs if the chance of the future event or events happening is more than remote but less than likely (reasonably possible but not probable). We disclose the loss contingencies in the footnotes to the financial statements but do not recognize any liability. A remote contingency is one where the chance of the future event or events occurring is slight. We neither accrue for nor disclose the liability in the notes to the financial statements. For loss contingencies, our accounting policy is to expense legal costs as incurred. See Note 11 *Commitments and Contingencies* to the consolidated financial statements.

Environmental Costs. Environmental costs are expensed as incurred unless the expenditures extend the economic useful life of the relevant assets. Costs that extend the economic useful life of assets are capitalized and depreciated over the remaining life of those assets. Liabilities are recorded when environmental assessments, or remedial efforts are probable, and the cost can be reasonably estimated. See Note 11 *Commitments and Contingencies* to the consolidated financial statements.

Disclosures about Fair Value of Financial Instruments. For cash and cash equivalents, receivables, accounts payable, and certain accrued expenses, the carrying amount approximates fair value due to the short maturities of these instruments. For long-term debt instruments and interest rate swap agreements, fair value is estimated based upon market values (if applicable) or on the current interest rates available to us for debt with similar terms and remaining maturities. See Note 9 *Fair Value Measurements, Financial Instruments, and Credit Risk* to the consolidated financial statements.

Revenue Recognition. Revenue is recognized in accordance with the provisions of ASC 606, *Revenue from Contracts with Customers*, when obligations under the terms of a contract with our customer are satisfied. Generally, this occurs at a point in time when the transfer of risk and title to the product transfers to the customer. Our products are generally sold free on board shipping point or, with respect to countries other than the U.S., an equivalent basis. Our standard terms of delivery are included in our contracts of sale, order confirmation documents, and invoices. As such, all revenue is considered revenue recognized from contracts with customers and we do not have other sources of revenue. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Revenue is recognized net of sales tax, value-added taxes, and other taxes. Shipping and other transportation costs charged to customers are recorded in both revenue and cost of goods sold. We do not have any material significant payment terms as payment is received at or shortly after the point of sale. Certain customers may receive cash-based incentives (including rebates and price supports), which are accounted for as variable consideration. We estimate rebates and price supports based on the expected amount to be provided to customers and reduce revenues recognized once the performance obligation has been met. Sales commissions are recorded as an increase in cost of goods sold once the performance obligation with the associated sale has been met. We do not expect to have significant changes in our estimates for variable considerations. See Note 3 *Revenue Recognition* to the consolidated financial statements.

Research and Development Expenses. Research and development costs are expensed as incurred.

Share-Based Compensation. Share-based compensation cost is measured at the grant date based on the fair value of the award. We recognize these costs using the straight-line method over the requisite service period, generally three years. We recognize actual forfeitures by reducing the employee share-based compensation expense in the same period as the forfeitures occur.

We estimate the fair value of performance-based restricted share units using a combination of Monte Carlo simulations and internal metrics. The expected term represents the period of time that performance share units granted are expected to be outstanding. Our expected volatilities are based on historical volatilities for Kraton and the members of the peer group. The risk free interest rate for the periods within the contractual life of the performance-based restricted share units is equal to the yield, as of the valuation date, of the zero coupon U.S. Treasury STRIPS that have a remaining term equal to the length of the remaining performance period. The expected dividend yield is assumed to be zero, which is the equivalent of reinvesting dividends in the underlying company's stock. Forfeitures are recognized when they occur. See Note 5 *Share-Based Compensation* to the consolidated financial statements.

Leases. Our leases, with a term greater than one year, are classified as either operating or finance and carried at fair value on the balance sheet as lease assets acquired and liabilities assumed.

Our contracts, with a term greater than one year, are classified as leases if 1) there is an identified asset and contract term, 2) we have the right to substantially all the economic benefit of the asset, and 3) we have the right to direct how and for what purpose the identified asset is used or we have the right to operate the asset throughout the period of use without changing operations of the asset.

We classify leases as finance under any of the following circumstances:
- ownership of the underlying asset is transferred to us by the end of the lease term;
- the lease grants us an option to purchase the underlying asset that it is reasonably certain to be exercised;
- the lease term is for the major part of the remaining economic life of the underlying asset;
- the present value of the lease payments and residual value guarantee equals or exceeds substantially all of the fair value of the underlying asset; or
- the underlying asset is so specialized that it is expected to have no use to the lessor at the end of the lease term.

Our lease policy follows ASC 842, *Leases*, practical expedients election whereby: 1) we do not reassess under the new standard our prior conclusions about lease identification, lease classification, and initial direct costs; 2) we elected the short-term lease recognition exemption for all leases that qualify, and 3) we do not separate lease and non-lease components for all of our leases. See Note 11 *Commitments and Contingencies* to the consolidated financial statements.

Income Taxes. We conduct operations in separate legal entities in different jurisdictions. As a result, income tax amounts are reflected in these consolidated financial statements for each of those jurisdictions.

Income taxes are recorded utilizing an asset and liability approach. This method gives consideration to the future tax consequences associated with the differences between the financial accounting and tax basis of the assets and liabilities as well as the ultimate realization of any deferred tax asset resulting from such differences.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized.

In assessing the realizability of deferred tax assets, we consider all available evidence both positive and negative, to determine whether a valuation allowance is necessary relative to net deferred tax assets. In making this determination, we consider the current year and two preceding years for potential cumulative losses, and sources of income for sufficient taxable income. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are deductible, we believe it is more likely than not that we will realize the benefits of these deductible differences, net of the existing valuation allowances.

We have established valuation allowances against a variety of deferred tax assets, including net operating loss carryforwards, foreign tax credits and other income tax credits. Our ability to realize these deferred tax assets is dependent on achieving our forecast of future taxable operating income over an extended period of time. We review our forecast in relation to actual results and expected trends on a quarterly basis. If we fail to achieve our operating income targets, we may change our assessment regarding the recoverability of our net deferred tax assets and such change could result in a valuation allowance being recorded against some or all of our net deferred tax assets. A change in our valuation allowance would impact our income tax benefit (expense) and our stockholders’ equity and could have a significant impact on our results of operations or financial condition in future periods. See Note 10 *Income Taxes* to the consolidated financial statements.

Foreign Currency Translation and Foreign Currency Exchange Rates. Financial statements of our operations outside the U.S. where the local currency is considered to be the functional currency are translated into U.S. dollars using the exchange rate at each balance sheet date for assets and liabilities and the average exchange rate for each period for revenue, expenses, gains, losses, and cash flows. The effects of translating such operations into U.S. dollars are included as a component of accumulated other comprehensive income (loss).

2. New Accounting Pronouncements

Adoption of Accounting Standards

We have implemented all new accounting pronouncements that are in effect and that management believes would materially impact our financial statements.

In December 2019, the Financial Accounting Standards Board ("FASB") issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. This standard is effective for fiscal years beginning after December 15, 2020. Adoption of this standard did not materially impact our financial position, results of operations, and cash flows. We adopted ASU 2019-12 effective January 1, 2021.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. This standard provides practical expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. This standard is applicable to our contracts and hedging relationships that reference LIBOR. The amendments may be applied through December 31, 2022. We will apply this guidance to transactions and modifications of these arrangements as appropriate.

In January 2021, the FASB issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope*. This standard is effective beginning on January 7, 2021. Our analysis of ASU 2021-01 was completed during 2021, and there is no material change to our financial position, results of operations, and cash flows. We adopted ASU 2021-01 effective January 7, 2021.

New Accounting Standards to be Adopted in Future Periods

In August 2020, the FASB issued ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)*. This standard is effective for fiscal years beginning after December 15, 2021. Early adoption is permitted for any interim period after issuance of the ASU. Our evaluation of this standard is currently ongoing, and we expect to adopt ASU 2020-06 effective on January 1, 2022.

3. Revenue Recognition

Revenue is recognized when performance obligations under the terms of a contract with our customer are satisfied. Generally, this occurs at a point in time when the transfer of risk and title of the product transfers to the customer. Our standard terms of delivery are included in our contracts of sale, order confirmation documents, and invoices. As such, all revenue is considered revenue recognized from contracts with customers and we do not have other sources of revenue. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Revenue is recognized net of sales tax, value-added taxes, and other taxes. Shipping and other transportation costs charged to customers are recorded in both revenue and cost of goods sold. We do not have any material significant payment terms as payment is received at or shortly after the point of sale. Certain customers may receive cash-based incentives (including rebates, price supports, and sales commission), which are accounted for as variable consideration. We estimate rebates and price supports based on the expected amount to be provided to customers and reduce revenues recognized once the performance obligation has been met. Sales commissions are recorded as an increase in cost of goods sold once the performance obligation with the associated sale has been met. We do not expect to have significant changes in our estimates for variable considerations.

We have deferred revenue of $147.4 million, of which $26.7 million is in other payables and accruals, related to contractual commitments with customers for which the performance obligation will be satisfied over time, which will range from one to nine years. During the year ended December 31, 2020, we deferred $180.6 million within deferred income and other payables and accruals related to the Isoprene Rubber Supply Agreement ("IRSA") with DL Chemical associated with the sale of our Cariflex business. The revenue associated with these performance obligations is recognized as the obligation is satisfied, which occurs as a volume based metric over time with the transfer of risk and title of finished products to the customer. See Note 4 *Disposition and Exit of Business Activities* for further discussion of the IRSA.

Occasionally, we enter into bill-and-hold contracts, where we invoice the customer for products even though we retain possession of the products until a point in time in the future when the products will be shipped to the customer. In these contracts, the primary performance obligation is satisfied at a point in time when the product is segregated from our general inventory, it is ready for shipment to customer, and we do not have the ability to use the product or direct it to another customer. Additionally, we have a secondary performance obligation related to custodial costs, including storage and freight, which is satisfied over time once the product has been delivered to the customer. During the years ended December 31, 2021, 2020, and 2019, we recognized $1.5 million, $4.1 million, and $5.6 million, respectively, of revenue related to these arrangements.

We disaggregate our revenue by segment product lines, which is how we market our products and review results of operations. The following tables disaggregate our segment revenue by major product lines:

	Years Ended December 31,		
	2021	2020	2019
Revenue	(In thousands)		
Performance Products	$ 627,618	$ 459,906	$ 531,437
Specialty Polymers	409,736	316,206	334,726
Cariflex	—	36,930	186,266
Isoprene Rubber	59,899	42,986	—
Other	1,532	1,530	539
Polymer Product Line Revenue	$ 1,098,785	$ 857,558	$ 1,052,968

(1) Cariflex is included in the results of operations through March 6, 2020. See Note 4 *Disposition and Exit of Business Activities* for further information on the divestiture of our Cariflex business.

	Years Ended December 31,		
	2021	2020	2019
Revenue	(In thousands)		
Adhesives	$ 306,662	$ 257,855	$ 26
Performance Chemicals	503,135	406,152	43
Tires	61,547	41,585	5
Chemical Product Line Revenue	$ 871,344	$ 705,592	$ 75

	December 31, 2021	December 31, 2020
	(In thousands)	
Contract receivables[1]	$ 229,267	$ 179,805
Contract liabilities[2]	$ 147,383	$ 175,511

(1) Contract receivables are recorded within receivables, net of allowances on our Consolidated Balance Sheets.
(2) Our contract liability consists of $136.4 million of non-cash deferred income related to the IRSA and $9.3 million of non-cash deferred income related to a supply agreement with a significant lubricant additive customer. The impact from currency exchange rates is $1.7 million.

4. Disposition and Exit of Business Activities

On March 6, 2020, we completed the sale of our Cariflex business to Daelim Industrial Co., Ltd. (subsequently renamed "DL Holdings Co., Ltd.") for gross proceeds of $530.0 million and net proceeds of $510.5 million. During the year ended December 31, 2021, we completed final customary post-closing working capital adjustments, reducing cash proceeds received to date by an additional $5.8 million. In addition, during the fourth quarter of 2021, we recognized a loss on disposition and exit of business activities of $0.1 million related to these final customary post-closing working capital adjustments. We expect to make a final payment of $2.9 million in the first quarter of 2022 related to final contractual capital expenditure costs.

Upon closing, we recognized a gain of $175.2 million, and as part of the consideration received, entered into a multi-year IRSA with DL Chemical. As the IRSA product sales are at cost, we deferred approximately $180.6 million, of which $158.2 million and $22.4 million were recorded within deferred income and other payables and accruals, respectively, on the Consolidated Balance Sheet as of the transaction date. The deferred income will be amortized into revenue as a non-cash transaction when the products are sold. In accordance with the IRSA, we will supply Isoprene Rubber to DL Chemical for a period of five years from the sale closing date, with an optional extension for an additional five years.

We used the $504.7 million net proceeds from the sale of our Cariflex business principally for repayment of the full outstanding balance of $290.0 million under the U.S. dollar denominated tranche (the "USD Tranche") of the Company's senior secured term loan facility (the "Term Loan Facility") and repayment in the amount of €160.0 million (or approximately $184.8 million) of borrowings under the Euro dollar denominated tranche (the "Euro Tranche") of the Term Loan Facility. We used the remaining proceeds in accordance with the terms of the Term Loan Facility to make additional repayments of debt and invest in strategic assets in the Company.

5. Share-Based Compensation

We account for share-based awards under the provisions of ASC 718, *Compensation—Stock Compensation*, which established the accounting for share-based awards exchanged for employee services. Accordingly, share-based compensation cost is measured at the grant date based on the fair value of the award and we expense these costs using the straight-line method over the requisite service period, generally three years. We recognize actual forfeitures by reducing the employee share-based compensation expense in the same period as the forfeitures occur. Share-based compensation expense was approximately $11.3 million, $11.4 million, and $9.5 million, tax effected by $2.6 million, $2.5 million, and $2.2 million for the years ended December 31, 2021, 2020, and 2019, respectively. Our unrecognized compensation expense related to our share-based awards was as follows as of December 31, 2021:

	Unrecognized Compensation Expense	Weighted Average Remaining Recognition Period
	(In thousands)	
Restricted stock awards	$ —	0
Restricted stock units	$ 6,911	1.49
Performance stock units	$ 4,332	1.09

2016 Equity and Cash Incentive Plan. On May 18, 2016, our stockholders approved the Kraton Corporation 2016 Equity and Cash Incentive Plan, as amended or as restated, (the "2016 Plan"). Under the 2016 Plan, there are a total of 2,975,296 shares of our common stock reserved for issuance. As of December 31, 2021 and 2020 there were 2,007,236 and 1,804,184 shares of our common stock available for issuance under the 2016 Plan, respectively.

2019 Equity Inducement Plan. On April 17, 2019, our board of directors approved the Kraton Corporation 2019 Equity Inducement Plan (the "Inducement Plan"). Under the Inducement Plan, there are a total of 150,000 shares of our common stock reserved for issuance. As of December 31, 2021, there were 97,039 shares of our common stock available for issuance under the Inducement Plan.

Non-qualified Stock Option Activity

Non-qualified option activities for the year ended December 31, 2021 are as follows:

	Options	Weighted Average Exercise Price	Aggregate Intrinsic Value[(1)]	Weighted Average Remaining Contractual Term
	(In thousands)		(In thousands)	
Outstanding at December 31, 2020	348	$ 30.49		
Granted	—	—		
Exercised	(192)	33.26		
Forfeited	—	—		
Expired	(15)	36.49		
Outstanding and exercisable at December 31, 2021	141	$ 26.09	$ 2,870	1.66

(1) The intrinsic value of a stock option is the amount by which the market value of the underlying stock exceeds the exercise price of the option as of December 31, 2021.

These options have a ten year term. During the year ended December 31, 2021, net proceeds of $6.4 million were received from the exercise of stock options.

	Years Ended December 31, 2021	2020	2019
		(In thousands)	
Options exercised	192	3	116
Total intrinsic value of options exercised	$ 2,518	$ —	$ 623

Restricted Stock Awards and Restricted Stock Units

We may grant to certain employees time-vested restricted stock awards and time-vested restricted stock units. Holders of restricted stock units do not have any beneficial ownership in the common stock underlying the restricted stock units and the grant represents an unsecured promise to deliver common stock on a future date. Actual shares of common stock underlying the restricted stock units will not be issued until the earlier of the passage of the vesting period, a change in control that also results in the termination of the grantee's employment, or the death/disability of the participant. We issued 20,096, 78,336, and 23,447 restricted stock awards to members of the board of directors during the years ended December 31, 2021, 2020, and 2019, respectively, which vested on the grant date. We granted 184,843, 360,153, and 192,214 restricted stock units to our employees during the years ended December 31, 2021, 2020, and 2019, respectively, which are subject to a three-year cliff vesting.

The following table represents the non-vested restricted stock awards and restricted stock units granted, vested, and forfeited during 2021.

	Restricted Stock Awards		Restricted Stock Units	
	Shares (In thousands)	Weighted-average Grant-date Fair Value	Shares (In thousands)	Weighted-average Grant-date Fair Value
Non-vested shares at December 31, 2020	73	$ 45.13	445	$ 17.34
Granted	20	39.82	185	39.77
Vested	(93)	43.98	(180)	21.68
Forfeited	—	—	(4)	36.05
Non-vested shares at December 31, 2021	—	$ —	446	$ 24.28

The aggregate intrinsic value was $21.9 million and the weighted average remaining contractual term was 0.83 for restricted stock units. The intrinsic value of a restricted stock unit is the amount by which the market value of the underlying restricted stock unit exceeds the grant date value of the restricted stock unit as of December 31, 2021.

The total fair value of shares vested during the years ended December 31, 2021, 2020, and 2019 pursuant to restricted stock awards and restricted stock units was $10.9 million, $3.6 million, and $6.7 million, respectively.

Performance Share Units

We may grant to certain employees performance share units, which vest after the achievement of performance criteria and time vesting established at grant or a change in control that also results in the termination of the grantee's employment, whichever is earlier. Holders of performance share units do not have any beneficial ownership in the shares of our common stock underlying the performance share units, and the grant represents an unsecured promise to deliver shares of our common stock on a future date. The performance share units vest at the end of a three-year period assuming continued employment and assuming the Company's achievement of the performance measures established by our compensation committee when the performance share units were initially granted. When performance share units vest, a number of shares of our common stock from 0% to 200% of the initial grant amount will be issued, depending on the level of achievement of such performance measures. We granted 132,150, 358,316, and 137,508 performance share units to our employees during the years ended December 31, 2021, 2020, and 2019, respectively. During the year ended December 31, 2020, we modified certain performance measures for the 2018 and 2019 performance share units as a result of the Cariflex divestiture. The impacts of these modifications resulted in a $2.9 million increased compensation cost for the year ended December 31, 2020.

The following table represents the non-vested performance share units granted, vested, and forfeited during 2021.

	Shares (In thousands)	Weighted-average Grant-date Fair Value	Aggregate Intrinsic Value[(1)] (In thousands)	Weighted Average Remaining Contractual Term
Non-vested shares at December 31, 2020	548	$ 23.25		
Granted[(2)]	132	45.34		
Vested	(87)	28.94		
Forfeited	(43)	61.30		
Non-vested shares at December 31, 2021	550	$ 24.66	$ 25,494	1.09

(1) The intrinsic value of a performance share unit is the amount by which the market value of the underlying performance share unit exceeds the grant date value of the performance share unit as of December 31, 2021.
(2) Shares granted during fiscal 2021 include 43,358 additional shares awarded for the final 200% achievement of the 2018 Performance Share Program, which was certified in the first quarter of fiscal 2021. The remaining 88,792 granted shares were for the 2021 Performance Share Program.

The total fair value of shares vested during the year ended December 31, 2021 and 2019 pursuant to performance share units was $3.7 million and $2.4 million, respectively.

Weighted-Average Assumptions for Performance Share Unit Grant Date Fair Value

For the performance share units granted in 2021, a component of the performance targets was based on relative total shareholder return over the three-year performance cycle compared to an industry peer group. The weighted average fair value using a Monte Carlo simulation model and the corresponding weighted average assumptions for the performance share units granted were as follows:

	2021	2020	2019
Risk-free interest rate	0.25 %	0.84 %	2.51 %
Expected dividend yield	— %	— %	— %
Expected volatility	82.6 %	50.9 %	32.2 %
Fair value per performance share award	$ 66.87	$ 6.46	$ 60.68

6. Detail of Certain Balance Sheet Accounts

	December 31, 2021	December 31, 2020
	(In thousands)	
Inventories of products:		
Finished products	$ 324,482	$ 240,021
Work in progress	3,698	3,074
Raw materials	121,227	84,039
Inventories of products, gross	449,407	327,134
Inventory reserves	(6,382)	(8,249)
Inventories of products, net	$ 443,025	$ 318,885
Property, plant, and equipment:		
Land	$ 47,348	$ 46,936
Buildings	202,813	199,720
Plant and equipment (1)	1,379,997	1,358,990
Construction in progress	93,689	69,336
Finance leases	2,831	—
Property, plant, and equipment	1,726,678	1,674,982
Less accumulated depreciation	791,835	732,279
Property, plant, and equipment, net of accumulated depreciation	$ 934,843	$ 942,703
Intangible assets:		
Contractual agreements	$ 262,430	$ 265,375
Technology	145,862	147,011
Customer relationships	60,340	60,623
Tradenames/trademarks	84,512	83,519
Software	73,822	68,276
Intangible assets	626,966	624,804
Less accumulated amortization:		
Contractual agreements	131,417	110,811
Technology	80,586	74,693
Customer relationships	41,544	40,205
Tradenames/trademarks	59,274	53,951
Software	53,180	50,410
Accumulated amortization	366,001	330,070
Intangible assets, net of accumulated amortization	$ 260,965	$ 294,734

(1) Plant and equipment, net of depreciation, includes $2.0 million and $2.7 million of assets related to finance leases as of December 31, 2021 and December 31, 2020, respectively.

	December 31, 2021	December 31, 2020
	(In thousands)	
Other payables and accruals:		
Employee related	$ 59,478	$ 52,145
Short-term operating lease liabilities	20,123	18,299
Interest payable	4,379	3,873
Capital project accruals	3,825	1,149
Customer related	12,935	10,484
Short-term deferred income	26,737	24,182
Income tax payable	40,657	26,367
Utilities payable	4,081	2,886
Property and other taxes	1,648	1,303
Other	22,064	26,676
Total other payables and accruals	$ 195,927	$ 167,364
Other long-term liabilities:		
Pension and other postretirement benefits	$ 92,151	$ 133,634
Long-term tax liability	18,246	19,530
Other	15,679	15,402
Total other long-term liabilities	$ 126,076	$ 168,566

Depreciation expense for property, plant, and equipment was approximately $85.0 million, $82.7 million, and $89.9 million for the years ended December 31, 2021, 2020, and 2019, respectively.

Amortization expense for intangible assets was approximately $41.1 million, $43.0 million, and $46.0 million for the years ended December 31, 2021, 2020, and 2019, respectively. Estimated amortization expense for each of the next five years is as follows:

December 31:	Amortization Expense
	(In thousands)
2022	$ 39,367
2023	$ 37,399
2024	$ 36,621
2025	$ 36,338
2026	$ 31,258

Changes in accumulated other comprehensive income (loss) by component were as follows:

	Cumulative Foreign Currency Translation	Cash Flow Hedges, Net of Tax		Net Investment Hedges, Net of Tax	Benefit Plans Liability, Net of Tax		Total
				(In thousands)			
Balance at December 31, 2019	$ (29,389)	$ (2,389)		$ 13,624	$ (87,641)		$ (105,795)
Other comprehensive income (loss) before reclassifications	36,431	1,387		(25,881)	(11,370)		567
Amounts reclassified to (income) expense from accumulated other comprehensive income (loss)	66,533	1,002	(2)	(899)	727	(1)	67,363
Net other comprehensive income (loss) for the year	102,964	2,389		(26,780)	(10,643)		67,930
Balance at December 31, 2020	73,575	—		(13,156)	(98,284)		(37,865)
Other comprehensive income (loss) before reclassifications	(28,875)	—		19,792	22,069		12,986
Amounts reclassified to (income) expense from accumulated other comprehensive income (loss)	—	—		—	(3,042)	(1)	(3,042)
Net other comprehensive income (loss) for the year	(28,875)	—		19,792	19,027		9,944
Balance at December 31, 2021	$ 44,700	$ —		$ 6,636	$ (79,257)		$ (27,921)

(1) The reclassifications from accumulated other comprehensive income (loss) is for the change in benefit plans liability related to amortization of net actuarial losses and prior service costs. These costs are allocated between cost of goods sold, selling, general, and administrative and research and development expenses in the Consolidated Statement of Operations. See Note 12 *Employee Benefits* for further information related to net periodic benefit cost for pension and other post-retirement benefit plans.

(2) The reclassifications from accumulated other comprehensive income (loss) is related to the exit of interest rate swaps related to prepayments under our U.S. dollar denominated tranche (the “USD Tranche”). These costs are recorded in loss on extinguishment of debt in the Consolidated Statement of Operations.

7. Earnings per Share (“EPS”)

Basic EPS is computed by dividing net income attributable to Kraton by the weighted-average number of shares outstanding, excluding non-vested restricted stock awards during the period. Diluted EPS is computed by dividing net income attributable to Kraton by the diluted weighted-average number of shares outstanding during the period and, accordingly, reflects the potential dilution that could occur if securities or other agreements to issue common stock, such as stock options, were exercised, settled, or converted into common stock and were dilutive. The diluted weighted-average number of shares used in our diluted EPS calculation is determined using the treasury stock method.

Unvested awards of share-based payments with rights to receive dividends or dividend equivalents, such as our restricted stock awards are considered to be participating securities and therefore the two-class method is used for purposes of calculating EPS. Under the two-class method, a portion of net income is allocated to these participating securities and therefore is excluded from the calculation of EPS allocated to common stock. These shares are subject to forfeiture and restrictions on transfer until vested and have identical voting, income, and distribution rights to the unrestricted common shares outstanding.

We withheld 22,658, 33,927, and 82,721 shares of restricted stock upon vesting to satisfy employee payroll tax withholding requirements for the years ended December 31, 2021, 2020, and 2019, respectively. We immediately retired all shares withheld and the transactions were reflected in additional paid in capital and retained earnings in the Consolidated Statements of Changes in Equity and as a purchase of treasury stock in the Consolidated Statements of Cash Flows.

The computation of diluted EPS excludes weighted average restricted share units of 460,014 for the year ended December 31, 2020, as they are anti-dilutive due to a net loss attributable to Kraton.

The computation of diluted EPS excludes the effect of performance share units for which the performance contingencies had not been met as of the reporting date, amounting to 549,997, 547,912, and 378,084 units at December 31, 2021, 2020, and 2019, respectively.

The computation of diluted earnings per share excludes the effect of the potential exercise of stock options that are anti-dilutive, amounting to 309,476 options for the years ended December 31, 2019. We did not exclude any options for the year ended December 31, 2021 and 2020.

The calculations of basic and diluted EPS are as follows:

	Year Ended December 31, 2021			
	Net Income Attributable to Kraton	Weighted Average Shares Outstanding	Earnings Per Share	
	(In thousands, except per share data)			
Basic:				
As reported	$ 170,226	32,108		
Amounts allocated to unvested restricted shares	(56)	(10)		
Amounts available to common stockholders	170,170	32,098	$ 5.30	
Diluted:				
Amounts allocated to unvested restricted shares	56	10		
Non participating share units		474		
Stock options added under the treasury stock method		70		
Amounts reallocated to unvested restricted shares	(55)	(10)		
Amounts available to stockholders and assumed conversions	$ 170,171	32,642	$ 5.21	

	Year Ended December 31, 2020		
	Net Loss Attributable to Kraton	Weighted Average Shares Outstanding	Earnings Per Share
	(In thousands, except per share data)		
Basic:			
As reported	$ (225,602)	31,845	
Amounts allocated to unvested restricted shares	701	(99)	
Amounts available to common stockholders	(224,901)	31,746	$ (7.08)
Diluted:			
Amounts allocated to unvested restricted shares	(701)	99	
Non participating share units		—	
Stock options added under the treasury stock method		—	
Amounts reallocated to unvested restricted shares	701	(99)	
Amounts available to stockholders and assumed conversions	$ (224,901)	31,746	$ (7.08)

	Year Ended December 31, 2019		
	Net Income Attributable to Kraton	Weighted Average Shares Outstanding	Earnings Per Share
	(In thousands, except per share data)		
Basic:			
As reported	$ 51,305	31,828	
Amounts allocated to unvested restricted shares	(399)	(247)	
Amounts available to common stockholders	50,906	31,581	$ 1.61
Diluted:			
Amounts allocated to unvested restricted shares	399	247	
Non participating share units		259	
Stock options added under the treasury stock method		41	
Amounts reallocated to unvested restricted shares	(395)	(247)	
Amounts available to stockholders and assumed conversions	$ 50,910	31,881	$ 1.60

Share Repurchase Program. In February 2019, we announced a repurchase program for up to $50.0 million of the Company’s common stock. Repurchases were made at management's discretion from time to time through privately-negotiated transactions, in the open market, or through broker-negotiated purchases in compliance with applicable securities law, including through a 10b5-1 Plan. During the year ended December 31, 2021, we did not repurchase any shares of our common stock under this program. From inception of the program through December 31, 2020, we repurchased 311,152 shares of our common stock at an average price of $32.14 per share and a total cost of $10.0 million. The program ended on February 7, 2021.

8. Long-Term Debt

Long-term debt consists of the following:

	December 31, 2021			December 31, 2020		
	Principal	Debt Issuance Cost	Total	Principal	Debt Issuance Cost	Total
	(In thousands)					
Euro Tranche	$ 96,662	$ (713)	$ 95,949	$ 104,159	$ (996)	$ 103,163
4.25% Senior Notes	400,000	(5,835)	394,165	400,000	(6,995)	393,005
5.25% Senior Notes	329,789	(3,526)	326,263	355,366	(4,221)	351,145
ABL Facility	—	—	—	—	—	—
KFPC Loan Agreement	17,853	—	17,853	52,730	(18)	52,712
KFPC Revolving Facilities	49,873	—	49,873	37,003	—	37,003
Finance lease obligations	3,163	—	3,163	835	—	835
Total debt	897,340	(10,074)	887,266	950,093	(12,230)	937,863
Less current portion of total debt	68,694	—	68,694	72,347	—	72,347
Long-term debt	$ 828,646	$ (10,074)	$ 818,572	$ 877,746	$ (12,230)	$ 865,516

Senior Secured Term Loan Facility. The Euro Tranche interest rate applicable margin is 2.0%. Our Term Loan Facility will mature on March 8, 2025. As of the date of this filing, the effective interest rate for the Euro Tranche is 2.8%. The Term Loan Facility contains a number of customary affirmative and negative covenants, and we were in compliance with those covenants as of the date of this filing.

4.25% Senior Notes due 2025. Kraton Polymers LLC and its wholly-owned financing subsidiary Kraton Polymers Capital Corporation issued $400.0 million aggregate principal amount of 4.25% Senior Notes due 2025 (the “4.25% Senior Notes”) in December 2020, which mature on December 15, 2025. The 4.25% Senior Notes are general unsecured, senior obligations, and are unconditionally guaranteed on a senior unsecured basis by each of Kraton Corporation and certain of our wholly-owned domestic subsidiaries. We pay interest on the Senior Notes at 4.25% per annum, semi-annually in arrears on June 15 and December 15 of each year.

5.25% Senior Notes due 2026. Kraton Polymers LLC and its wholly-owned financing subsidiary Kraton Polymers Capital Corporation issued €290.0 million, or approximately $329.8 million, aggregate principal amount of 5.25% Senior Notes due 2026 (the “5.25% Senior Notes”) in May 2018, which mature on May 15, 2026. The 5.25% Senior Notes are general unsecured, senior obligations, and are unconditionally guaranteed on a senior unsecured basis by each of Kraton Corporation and certain of our wholly-owned domestic subsidiaries. We pay interest on the Senior Notes at 5.25% per annum, semi-annually in arrears on May 15 and November 15 of each year.

ABL Facility. Our asset-based revolving credit facility provides financing of up to $300.0 million (the “ABL Facility”). The ABL Facility also provides that we have the right at any time to request up to $100.0 million of additional commitments, provided that we satisfy certain additional conditions. We had no outstanding borrowings under the ABL Facility as of December 31, 2021. The termination date of the ABL Facility is December 3, 2025 (subject to earlier termination if certain outstanding indebtedness under the Term Loan Facility or our senior unsecured notes is not previously refinanced).

Borrowing availability under the ABL Facility is subject to borrowing base limitations based on the level of receivables and inventory available for security. Revolver commitments under the ABL Facility consist of U.S. and Dutch revolving credit facility commitments, which may be reallocated subject to certain conditions, provided the Dutch revolver commitments may not exceed $100.0 million. The ABL Facility contains a number of customary affirmative and negative covenants, and we were in compliance with those covenants as of the date of this filing.

KFPC Loan Agreement. As of December 31, 2021, 494.0 million new Taiwanese dollars (“NTD”), or approximately $17.9 million, was drawn on KFPC's syndicated loan agreement (the “KFPC Loan Agreement”). For the year ended December 31, 2021, the effective interest rate for borrowings on the KFPC Loan Agreement was 1.8%. The KFPC Loan Agreement contains certain financial covenants that change during the term of the KFPC Loan Agreement. KFPC was in compliance with those covenants as of the date of this filing. Additionally, due to a waiver received from the majority of lenders, we are no longer subject to the remaining 2021 financial covenants. In each case, these covenants are calculated and tested on an annual basis at December 31st each year. The KFPC Loan Agreement matured and was paid off on January 17, 2022.

KFPC Revolving Facilities. KFPC also has four revolving credit facilities (the "KFPC Revolving Facilities") to provide funding for working capital requirements and/or general corporate purposes, which allow for total borrowings of up to NTD 2.5 billion (or approximately $90.4 million). All of the KFPC Revolving Facilities are subject to variable interest rates. As of December 31, 2021, NTD 1.4 billion (or approximately $49.9 million) was drawn on the KFPC Revolving Facilities.

Debt Issuance Costs. We capitalize debt issuance costs related to issuing long-term debt and amortize these costs using the effective interest method, except for costs related to revolving debt, which are amortized using the straight-line method. Amortization is recorded as a component of interest expense and the accelerated write-off of debt issuance costs in connection with refinancing activities are recorded as a component of loss on extinguishment of debt.

We recorded a $40.8 million loss on extinguishment of debt during the year ended December 31, 2020, which includes a write off of $20.7 million related to the call premium on the redemption of our outstanding 7.0% Senior Notes, a write off of $13.9 million related to previously capitalized deferred financing costs on our Term Loan Facility and 7.0% Senior Notes, a write off of $4.9 million related to original issue discount on our USD Tranche, and a $1.3 million loss on the settlement of the ineffective portion of interest rate swaps.

We recorded a $3.5 million loss on extinguishment of debt during the year ended December 31, 2019, which includes a write off of $2.5 million related to previously capitalized deferred financing costs on our Term Loan Facility and 7.0% Senior Notes and a write off of $1.3 million related to original issue discount on our Term Loan Facility. These write offs were partially offset by a $0.3 million gain resulting from our repurchase of 7.0% Senior Notes.

We had net debt issuance cost of $14.0 million as of December 31, 2021, of which $3.9 million related to our ABL Facility, which is recorded as an asset (of which $0.5 million was included in other current assets) and $10.1 million is recorded as a reduction to long-term debt. We had net debt issuance cost of $14.4 million as of December 31, 2020, of which $2.2 million related to our ABL Facility, which is recorded as an asset (of which $0.4 million was included in other current assets) and $12.2 million is recorded as a reduction to long-term debt. We amortized $2.5 million, $3.0 million, and $4.7 million during the years ended December 31, 2021, 2020, and 2019, respectively.

Debt Maturities. The principal payments on our outstanding total debt as of December 31, 2021, are as follows:

December 31,	Principal Payments (In thousands)
2022	$ 68,694
2023	1,056
2024	1,112
2025	496,683
2026	329,795
Thereafter	—
Total debt	$ 897,340

See Note 9 *Fair Value Measurements, Financial Instruments, and Credit Risk* to the consolidated financial statements for fair value information related to our long-term debt.

9. Fair Value Measurements, Financial Instruments, and Credit Risk

ASC 820, *"Fair Value Measurements and Disclosures"* defines fair value, establishes a consistent framework for measuring fair value and expands disclosure requirements about fair value measurements. ASC 820 requires entities to, among other things, maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

ASC 820 specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect our market assumptions.

In accordance with ASC 820, these two types of inputs have created the following fair value hierarchy:

- Level 1—Inputs that are quoted prices (unadjusted) for identical assets or liabilities in active markets;
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability, including:
  - Quoted prices for similar assets or liabilities in active markets;
  - Quoted prices for identical or similar assets or liabilities in markets that are not active;
  - Inputs other than quoted prices that are observable for the asset or liability; and
  - Inputs that are derived principally from or corroborated by observable market data by correlation or other means; and
- Level 3—Inputs that are unobservable and reflect our assumptions used in pricing the asset or liability based on the best information available under the circumstances (e.g., internally derived assumptions surrounding the timing and amount of expected cash flows).

Recurring Fair Value Measurements. The following tables set forth by level within the fair value hierarchy our financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2021 and December 31, 2020, respectively. These financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement requires judgment, which judgment may affect the valuation of their fair value and placement within the fair value hierarchy levels. As of December 31, 2021 and 2020, the Company has no assets or liabilities utilizing significant unobservable inputs (or Level 3) to derive its estimated fair values.

			Fair Value Measurements at Reporting Date Using	
	Balance Sheet Location	December 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
			(In thousands)	
Retirement plan asset—noncurrent	Other long-term assets	$ 2,986	$ 2,986	$ —
Derivative liability – current	Other payables and accruals	(48)	—	(48)
Total		$ 2,938	$ 2,986	$ (48)

			Fair Value Measurements at Reporting Date Using	
	Balance Sheet Location	December 31, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
			(In thousands)	
Retirement plan asset—noncurrent	Other long-term assets	$ 2,454	$ 2,454	$ —
Derivative liability – current	Other payables and accruals	(219)	—	(219)
Total		$ 2,235	$ 2,454	$ (219)

The use of derivatives creates exposure to credit risk relating to potential losses that could be recognized in the event that the counterparties to these instruments fail to perform their obligations under the contracts. We seek to minimize this risk by limiting our counterparties to major financial institutions with acceptable credit ratings and monitoring the total value of positions with individual counterparties. In the event of a default by one of our counterparties, we may not receive payments provided for under the terms of our derivatives.

Nonrecurring Fair Value Measurements. Our long-lived assets, such as property, plant, and equipment, and purchased intangible assets subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable. When impairment has occurred, such long-lived assets are written down to fair value. These evaluations are performed using Level 3 inputs to derive its estimated fair values.

The following table presents the carrying values and approximate fair values of our debt.

	December 31, 2021		December 31, 2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	(In thousands)			
Euro Tranche (significant other observable inputs – Level 2)	$ 96,662	$ 96,541	$ 104,159	$ 103,574
4.25% Senior Notes (quoted prices in active market for identical assets – Level 1)	$ 400,000	$ 414,152	$ 400,000	$ 409,880
5.25% Senior Notes (quoted prices in active market for identical assets – Level 1)	$ 329,789	$ 339,228	$ 355,366	$ 367,886
ABL Facility	$ —	$ —	$ —	$ —
Finance lease obligations	$ 3,163	$ 3,163	$ 835	$ 835
KFPC Loan Agreement	$ 17,853	$ 17,853	$ 52,730	$ 52,730
KFPC Revolving Facilities	$ 49,873	$ 49,873	$ 37,003	$ 37,003

The ABL Facility, Finance lease obligations, KFPC Loan Agreement, and KFPC Revolving Facilities are variable rate instruments, and as such, the fair value approximates the carrying value.

Financial Instruments

Interest Rate Swap Agreements. Periodically, we enter into interest rate swap agreements to hedge or otherwise protect against interest rate fluctuations on a portion of our variable rate debt. These interest rate swap agreements are designated as cash flow hedges on our exposure to the variability of future cash flows.

In an effort to convert a substantial portion of our future interest payments pursuant to the USD Tranche to a fixed interest rate, in February and March 2016 we entered into a series of interest rate swap agreements with an aggregate notional value of $925.4 million, effective dates of January 3, 2017 and maturity dates of December 31, 2020. Based on debt repayments, we have exited all of the interest rate swap agreements originally entered into in 2017. We reclassified out of other comprehensive income (loss) the settlement of our interest rate swaps that amounted to a $1.3 million loss on extinguishment of debt for the year ended December 31, 2020. We recorded an unrealized gain $1.8 million for the year ended December 31, 2020 in accumulated other comprehensive income (loss) in the Consolidated Balance Sheets related to the effective portion of these interest rate swap agreements.

Foreign Currency Hedges. Periodically, we enter into foreign currency agreements to hedge or otherwise protect against fluctuations in foreign currency exchange rates. These agreements do not qualify for hedge accounting and gains/losses resulting from both the up-front premiums and/or settlement of the hedges at expiration of the agreements are recognized in the period in which they are incurred. We settled these hedges and recorded a loss of $3.3 million and a gain of $0.9 million and $4.0 million for the years ended December 31, 2021, 2020, and 2019, respectively, which are recorded in cost of goods sold in the Consolidated Statement of Operations. These contracts are structured such that these gains/losses from the mark-to-market impact of the hedging instruments materially offset the underlying foreign currency exchange gains/losses to reduce the overall impact of foreign currency exchange movements throughout the period.

Net Investment Hedge. During the year ended December 31, 2021, we designated €290.0 million of euro-denominated borrowing as a hedge against a portion of our net investment in the Company's European operations. The mark to market of this instrument was a gain of $25.6 million and a loss of $30.0 million for the year ended December 31, 2021 and 2020, respectively, which is recorded within accumulated other comprehensive income (loss) in the Consolidated Balance Sheets.

Credit Risk

The use of derivatives creates exposure to credit risk in the event that the counterparties to these instruments fail to perform their obligations under the contracts, which we seek to minimize by limiting our counterparties to major financial institutions with acceptable credit ratings and by monitoring the total value of positions with individual counterparties.

We analyze our counterparties' financial condition prior to extending credit and we establish credit limits and monitor the appropriateness of those limits on an ongoing basis. We also obtain cash, letters of credit, or other acceptable forms of security from customers to provide credit support, where appropriate, based on our financial analysis of the customer and the contractual terms and conditions applicable to each transaction.

10. Income Taxes

Kraton Corporation, the parent company, is domiciled in the U.S. and is subject to U.S. statutory rate of 21.0% from January 1, 2019 through December 31, 2021.

The provision for income taxes is comprised of the following:

	Years Ended December 31,		
	2021	2020	2019
		(In thousands)	
Current tax benefit (expense):			
U.S.	$ (37,169)	$ (9,579)	$ 13,968
Foreign	(5,886)	(14,501)	(2,314)
Current tax benefit (expense)	(43,055)	(24,080)	11,654
Deferred tax benefit (expense):			
U.S.	3,868	(3,376)	(1,621)
Foreign	(315)	59,490	1,780
Deferred tax benefit (expense)	3,553	56,114	159
Income tax benefit (expense)	$ (39,502)	$ 32,034	$ 11,813

Income (loss) before income taxes is comprised of the following:

	Years Ended December 31,		
	2021	2020	2019
		(In thousands)	
Income (loss) before income taxes:			
U.S.	$ 170,599	$ (484,131)	$ 1,998
Foreign	44,475	230,411	42,006
Income (loss) before income taxes	$ 215,074	$ (253,720)	$ 44,004

The provision for income taxes differs from the amount computed by applying the U.S. corporate statutory income tax rate to income (loss) before income taxes for the reasons set forth below:

	Years Ended December 31,		
	2021	2020	2019
Income taxes at the statutory rate	(21.0)%	(21.0)%	(21.0)%
Foreign tax rate differential	(1.0)	(0.2)	5.1
State taxes, net of federal benefit	(1.5)	(0.7)	(0.1)
Permanent differences	(0.9)	0.6	8.7
Cariflex disposition	—	(4.3)	—
Dutch transfer of assets	—	(25.9)	—
Tax credits	0.4	(0.5)	3.6
Uncertain tax positions	(0.2)	(1.2)	40.3
Valuation allowance	0.8	(0.6)	10.6
Goodwill impairment	—	33.1	—
Deferred tax rate change and transition tax	0.8	0.2	(7.7)
U.S. minimum tax on foreign entities	2.1	2.0	(17.8)
Return to provision adjustments	2.1	5.9	5.1
Effective tax rate	(18.4)%	(12.6)%	26.8 %

During the year ended December 31, 2020, we recorded a deferred tax asset of $65.8 million related to the intercompany transfer of certain intellectual property rights to our Dutch subsidiary. This transfer was to align the ownership of these rights with our evolving business. The transfer did not result in a taxable gain; however, our Dutch subsidiary received a step-up in tax basis based on the fair value of the transferred intellectual property rights. The fair value was determined utilizing certain estimates within the income approach based on our expectations of future cash flows, long-term growth rates, and discount rates. We recorded a one-time benefit of $65.8 million for the recognition of the deferred tax asset in the Netherlands.

The Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted by the U.S. on March 27, 2020. The CARES Act among other things, includes provisions relating to modifications of the net interest deduction limitations and revisions to alternative minimum tax credit ("AMT") refunds. We have recognized a current tax benefit of $9.7 million related to the modification to the interest deduction limitation. As a result of the CARES Act, we reclassified $1.6 million of expected AMT refunds from long-term to current. We are continuing to analyze the CARES Act, but we do not anticipate the other income tax provisions of the CARES Act to have a material impact on our financial statements.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as net operating loss and tax credit carryforwards. The tax effects of temporary differences are comprised of the following:

	December 31, 2021	December 31, 2020
	(In thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 35,863	$ 36,093
Interest carryforwards	6,254	4,974
Tax credit carryforwards	4,732	4,938
Inventory	4,203	8,309
Benefit plans accrual	24,908	31,431
Operating leases	12,013	13,279
Deferred income	31,160	36,999
Other accruals and reserves	6,454	11,821
Deferred tax assets	125,587	147,844
Valuation allowance for deferred tax assets	(33,894)	(39,517)
Net deferred tax assets after valuation allowance	91,693	108,327
Deferred tax liabilities:		
Property, plant, and equipment	104,318	117,678
Intangible assets	8,496	2,603
Operating leases	9,806	11,715
Investment in subsidiaries	18,356	18,356
Deferred tax liabilities	140,976	150,352
Net deferred tax liabilities	$ 49,283	$ 42,025

	December 31, 2021	December 31, 2020
	(In thousands)	
Net deferred tax liabilities consist of:		
Non-current deferred tax assets	$ 79,627	$ 83,534
Non-current deferred tax liabilities	128,910	125,559
Net deferred tax liabilities	$ 49,283	$ 42,025

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. We consider all available material evidence, both positive and negative, in assessing the appropriateness of a valuation allowance for our deferred tax assets. As of December 31, 2021 and December 31, 2020, we recorded a valuation allowance of $33.9 million and $39.5 million, respectively, against our net operating loss carryforwards ("NOL") and other deferred tax assets.

We currently believe that certain unremitted foreign earnings of our subsidiaries will be permanently reinvested for an infinite period of time. Accordingly, we have not provided deferred taxes for the differences between these subsidiaries' book basis and underlying tax basis or on related foreign currency translation adjustment amounts.

As of December 31, 2021, we had $130.6 million of NOL carryforwards, related to foreign jurisdictions of which $118.1 million is subject to a valuation allowance. Of the NOL carryforwards, $12.5 million are set to expire at various times between 2027 through 2037, and $118.1 million are non-expiring.

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. Our U.S. federal income tax returns, for 2004 remain open to examination, as a result of the utilization of NOL carryforwards from 2004. In addition, open tax years for state and foreign jurisdictions remain subject to examination. Although the outcome of tax audits is always uncertain, we believe that adequate amounts of tax, interest, and penalties have been provided for in the accompanying financial statements for any adjustments that might be incurred due to federal, state, or foreign audits.

As of December 31, 2021 and December 31, 2020, we had unrecognized tax benefits of $8.8 million and $8.8 million, respectively, if recognized, would impact our effective tax rate.

Interest and penalties relating to income taxes are included in income tax expense. As of December 31, 2021 and December 31, 2020, we had $2.2 million and $1.7 million of penalties and interest included in the total unrecognized tax benefits. Accrued interest and penalties relating to uncertain tax positions that are not actually assessed will be reversed in the year of resolution.

It is reasonable that the existing liabilities for the unrecognized tax benefits may increase or decrease over the next 12 months as a result of audit closures and statute expirations; however, the ultimate timing of the resolution and/or closure of audits is highly uncertain.

The following presents a roll forward of our unrecognized tax benefits including associated interest and penalties.

	December 31, 2021	December 31, 2020
	(In thousands)	
Balance at January 1	$ 8,849	$ 11,294
Increase in current year tax positions	155	148
Increase in prior year tax positions	172	1,142
Decrease in prior year tax positions	(24)	—
Lapse of statute of limitations	(331)	(3,735)
Balance at December 31	$ 8,821	$ 8,849

11. Commitments and Contingencies

(a) Lease Commitments

All of our lease right-of-use ("ROU") assets and lease liabilities are related to operating and finance leases, where the lease term exceeds one year. Our operating leases are generally for railcars, office space, and equipment and our finance leases are generally related to equipment used to conduct our operations. These operating and finance leases were discounted using a weighted average rate of 3.689% and 5.27%, respectively, which is based on a weighted average borrowing rate of specific debt. Non-variable lease costs include the amortization of the asset recorded on a straight-line basis. Variable lease components are non-index based payments based on performance or usage of the underlying asset. We have no material lessor or sublease income.

Operating Leases

The components of lease cost for operating leases are as follows:

	Year Ended December 31, 2021	Year Ended December 31, 2020
	(In thousands)	
Lease cost	$ 24,208	$ 24,488
Variable lease cost	713	1,090
Operating lease expense	$ 24,921	$ 25,578

The operating lease liabilities on a discounted basis arising from obtaining ROU assets as of December 31, 2021 were comprised as follows:

Leased Asset Class	Polymer	Chemical	Percentage	Average Months Remaining on the Lease	Weighted Average in Months
	(In thousands)				
Railcars	$ 1,860	$ 21,261	23.4 %	38	8.9
Buildings	28,677	11,068	40.3 %	39	15.7
Equipment	6,396	16,181	22.9 %	30	6.9
Land	6,806	40	6.9 %	232	16.1
Other	1,769	4,682	6.5 %	24	1.5
Total	$ 45,508	$ 53,232			49.1

The following tables show the undiscounted cash flows for the operating lease liabilities.

	December 31, 2021
	(In thousands)
2022	$ 23,410
2023	20,538
2024	15,895
2025	13,569
2026	12,094
Thereafter	25,567
Total undiscounted operating lease liabilities	111,073
Present value discount	(12,356)
Foreign currency and other	23
Total discounted operating lease liabilities	$ 98,740

	December 31, 2020
	(In thousands)
2020	$ 21,098
2021	15,992
2022	14,309
2023	10,668
2024	8,605
Thereafter	26,988
Total undiscounted operating lease liabilities	97,660
Present value discount	(11,474)
Foreign currency and other	11
Total discounted operating lease liabilities	$ 86,197

Finance Leases

The components of lease cost for finance leases are as follows:

	Year Ended December 31, 2021	Year Ended December 31, 2020
	(In thousands)	
Lease amortization	$ 1,021	$ 711
Lease interest	162	53
Finance lease expense	$ 1,183	$ 764

The finance lease liabilities on a discounted basis arising from obtaining ROU assets as of December 31, 2021 were comprised as follows:

Leased Asset Class	Polymer	Chemical	Percentage	Average Months Remaining on the Lease	Weighted Average in Months
	(In thousands)				
Equipment	$ 645	$ 2,518	100.0 %	61	60.9
Total	$ 645	$ 2,518			60.9

The following tables show the undiscounted cash flows for the finance lease liabilities.

	December 31, 2021
	(In thousands)
2022	$ 1,105
2023	1,147
2024	1,147
2025	18
2026	3
Thereafter	—
Total undiscounted finance lease liabilities	3,420
Present value discount	(262)
Foreign currency and other	5
Total discounted finance lease liabilities	$ 3,163

	December 31, 2020
	(In thousands)
2021	$ 232
2022	232
2023	232
2024	232
2025	—
Thereafter	—
Total undiscounted finance lease liabilities	928
Present value discount	(92)
Foreign currency and other	(1)
Total discounted finance lease liabilities	$ 835

These finance lease liabilities are included within current and long-term debt on the Consolidated Balance Sheet. See Note 8 *Long-Term Debt* for additional information.

(b) Environmental and Safety Matters

Our finished products are not generally classified as hazardous under U.S. environmental laws. However, our operations involve the handling, transportation, treatment, and disposal of potentially hazardous materials that are extensively regulated by environmental, health and safety laws, regulations, and permit requirements. Environmental permits required for our operations are subject to periodic renewal and can be revoked or modified for cause or when new or revised environmental requirements are implemented. Changing and increasingly stringent environmental requirements can affect the manufacturing, handling, processing, distribution and use of our chemical products and the raw materials used to produce such products and, if so affected, our business and operations may be materially and adversely affected. In addition, changes in environmental requirements can cause us to incur substantial costs in upgrading or redesigning our facilities and processes, including waste treatment, disposal, and other waste handling practices and equipment.

We conduct environmental management programs designed to maintain compliance with applicable environmental requirements at all of our facilities. We routinely conduct inspection and surveillance programs designed to detect and respond to leaks or spills of regulated hazardous substances and to identify and correct identified regulatory deficiencies. However, a business risk inherent with chemical operations is the potential for personal injury and property damage claims from employees, contractors and their employees, and nearby landowners and occupants. While we believe our business operations and facilities generally are operated in compliance, in all material respects, with all applicable environmental and health and safety requirements, we cannot be sure that past practices or future operations will not result in material claims or regulatory action, require material environmental expenditures, or result in exposure or injury claims by employees, contractors and their employees, and the public. Some risk of environmental costs and liabilities are inherent in our operations and products, as it is with other companies engaged in similar businesses.

Our Belpre, Ohio, facility is subject to a number of actual and/or potential environmental liabilities primarily relating to contamination caused by former operations at this facility. Some environmental laws could impose on us the entire costs of cleanup regardless of fault, legality of the original disposal, or ownership of the disposal site. In some cases, the governmental entity with jurisdiction could seek an assessment for damage to the natural resources caused by contamination from this site. Shell Chemicals has agreed, subject to certain limitations, in time and amounts, to indemnify us against most environmental liabilities related to the acquired facility that arose from conditions existing prior to the closing.

We had no material operating expenditures for environmental fines, penalties, government imposed remedial, or corrective actions in each of the years ended December 31, 2021, 2020, and 2019, respectively.

As of December 31, 2021 and 2020, we have recorded an environment obligation and corresponding receivable of $2.5 million and $2.2 million, respectively, relating to an indemnification agreement with International Paper, our Chemical segment's former owner.

(c) Legal Proceedings

We received an initial notice from the tax authorities in Brazil during the fourth quarter of 2012 in connection with tax credits that were generated from the purchase of certain goods which were subsequently applied by us against taxes owed. The tax authorities are currently assessing R$10.2 million, or approximately $1.8 million, including penalties and interest.. We have appealed the assertion by the tax authorities in Brazil that the goods purchased were not eligible to earn the credits. While the outcome of this proceeding cannot be predicted with certainty, we do not expect this matter to have a material adverse effect upon our financial position, results of operations, or cash flows.

We and certain of our subsidiaries, from time to time, are parties to various other legal proceedings, claims, and disputes that have arisen in the ordinary course of business. These claims may involve significant amounts, some of which would not be covered by insurance. A substantial settlement payment or judgment in excess of our accruals could have a material adverse effect on our financial position, results of operations or cash flows. While the outcome of these proceedings cannot be predicted with certainty, we do not expect any of these existing matters, individually or in the aggregate, to have a material adverse effect upon our financial position, results of operations or cash flows.

(d) Asset Retirement Obligations (“ARO”)

The changes in the aggregate carrying amount of our ARO liability are as follows:

	December 31,	
	2021	**2020**
	(In thousands)	
Beginning balance	$ 6,332	$ 6,523
Additional accruals	316	119
Accretion expense	407	348
Obligations settled	(1,285)	(1,164)
Foreign currency translation	(383)	506
Ending balance	$ 5,387	$ 6,332

In the first quarter of 2021, the Company recorded an ARO of $0.3 million related to the office rebuild of our research facility in Europe.

12. Employee Benefits

(a) Pension Plans.

U.S. Retirement Benefit Plan. We have two U.S. noncontributory defined benefit pension plans ("U.S. Pension Plans"). Our Polymer segment U.S. Pension Plans covers all salaried and hourly wage employees in the U.S. who were employed by us on or before December 31, 2005. Employees who began their employment with us after December 31, 2005 are not covered by our Pension Plans. The benefits under the Pension Plans are based primarily on years of service and employees' pay near retirement. For our employees who were employed as of March 1, 2001 and who: (1) were previously employed by Shell Chemicals; and (2) elected to transfer their pension assets to us, we consider the total combined Shell Chemicals and Kraton service when calculating the employee's pension benefit. For those employees who: (1) elected to retire from Shell Chemicals; or (2) elected not to transfer their pension benefit, only Kraton service (since March 1, 2001) is considered when calculating benefits. Our Chemical segment U.S. Pension Plans cover all U.S. employees hired prior to July 2004 and certain retirees of the Company participate in International Paper's defined benefit pension plans. International Paper remains responsible for all benefits related to years of service prior to December 31, 2007. The Company implemented its own defined benefit pension plan for then eligible U.S. employees on March 1, 2007.

Based on the funded status and a related change in accrued pension obligations we reported a decrease in our accumulated other comprehensive income (loss) of approximately $13.4 million and an increase of $9.9 million as of December 31, 2021 and 2020, respectively.

Non-U.S. Retirement Benefit Plan. The Company sponsors defined benefit pension and retirement plans ("non-U.S. Pension Plans") in certain foreign subsidiaries. Generally, the Company's non-U.S. Pension Plans are funded using the projected benefit as a target in countries where funding of benefit plans is required.

Based on the funded status and a related change in accrued pension obligations we reported a decrease in our accumulated other comprehensive income (loss) of approximately $9.2 million and an increase $2.8 million as of December 31, 2021 and 2020, respectively.

The 2021 measurement date of the Pension Plan's assets and obligations was December 31, 2021. Information concerning the pension obligation, plan assets, amounts recognized in our financial statements, and underlying actuarial and other assumptions are as follows:

	U.S. Plans		Non-U.S. Plans	
	December 31,		December 31,	
	2021	2020	2021	2020
	(In thousands)			
Change in benefit obligation:				
Benefit obligation at beginning of period	$ 215,618	$ 194,897	$ 112,764	$ 95,265
Service cost	—	187	1,984	1,861
Interest cost	5,588	6,621	1,247	1,656
Participant contributions	—	—	267	242
Benefits paid	(8,614)	(8,170)	(5,524)	(5,255)
Plan amendments	—	—	—	—
Settlements	—	—	(284)	(1,018)
Other events	—	—	—	9,183
Actuarial (gain) loss	(3,965)	22,083	(4,230)	5,326
Exchange rate (gain) loss	—	—	(3,318)	5,504
Benefit obligation at end of period	208,627	215,618	102,906	112,764
Change in plan assets:				
Fair value at beginning of period	147,328	131,980	69,286	52,680
Return on plan assets	16,975	19,653	6,474	7,501
Employer contributions	10,250	3,865	5,598	5,502
Participant contributions	—	—	267	242
Benefits paid	(8,614)	(8,170)	(5,524)	(5,255)
Settlements	—	—	(284)	(1,018)
Other events	—	—	—	6,952
Exchange rate (gain) loss	—	—	(1,293)	2,682
Fair value at end of period	165,939	147,328	74,524	69,286
Funded status at end of period	$ (42,688)	$ (68,290)	$ (28,382)	$ (43,478)
Amounts recognized on balance sheet:				
Current liabilities	$ —	$ —	$ (2,750)	$ (2,945)
Noncurrent liabilities	(42,688)	(68,290)	(25,632)	(40,533)
	$ (42,688)	$ (68,290)	$ (28,382)	$ (43,478)
Amounts recognized in accumulated other comprehensive loss:				
Prior service costs	$ —	$ —	$ 2,347	$ 2,754
Net actuarial loss	54,983	68,407	12,353	21,112
Amounts recognized in accumulated other comprehensive loss	$ 54,983	$ 68,407	$ 14,700	$ 23,866
Accumulated benefit obligations	$ 208,627	$ 215,618	$ 96,349	$ 106,525

Estimated Future Cash Flows. The following employer contributions and benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

	U.S. Plans	Non-U.S. Plans
	(In thousands)	
Employer Contributions		
2022 Employer contributions	$ —	$ 4,661
Benefit Payments		
2022	$ 8,800	$ 5,576
2023	9,074	4,728
2024	9,339	5,041
2025	9,643	5,969
2026	9,897	6,830
Years 2026-2030	53,665	31,959
Total Benefit Payments	$ 100,418	$ 60,103

Net Periodic Pension Costs. Net periodic pension costs consist of the following components:

	U.S. Plans			Non-U.S. Plans		
	Years Ended December 31,			Years Ended December 31,		
	2021	2020	2019	2021	2020	2019
	(In thousands)					
Service cost benefits earned during the period	$ —	$ 187	$ 2,671	$ 1,984	$ 1,861	$ 1,491
Interest on prior year's projected benefit obligation	5,588	6,621	7,781	1,247	1,656	2,112
Expected return on plan assets	(9,931)	(9,106)	(10,065)	(3,427)	(2,731)	(2,520)
One-time settlement costs	—	—	—	32	143	56
Amortization of prior service costs	—	—	—	236	17	34
Amortization of net actuarial loss	2,416	1,634	3,487	904	1,050	419
Net periodic pension costs	$ (1,927)	$ (664)	$ 3,874	$ 976	$ 1,996	$ 1,592

Significant Assumptions. Discount rates are determined annually and are based on rates of return of high-quality long-term fixed income securities currently available and expected to be available during the maturity of the pension benefits.

	U.S. Plans		Non-U.S. Plans	
	December 31,		December 31,	
	2021	2020	2021	2020
Weighted average assumptions used to determine benefit obligations:				
Discount rate	2.91 %	2.66 %	1.66 %	1.13 %
Rates of increase in salary compensation level	N/A	3.00 %	3.03 %	2.73 %
Expected long-term rate of return on plan assets	7.00 %	7.00 %	4.96 %	4.93 %
Weighted average assumptions used to determine net periodic benefit cost:				
Discount rate	2.66 %	3.45 %	1.13 %	1.79 %
Rates of increase in salary compensation level	N/A	3.00 %	2.73 %	2.96 %
Expected long-term rate of return on plan assets	7.00 %	7.00 %	4.93 %	5.24 %

Our management relied in part on actuarial studies in establishing the expected long-term rate of return on assets assumption. The studies include a review of anticipated future long-term performance of individual asset classes and consideration of the appropriate asset allocation strategy given the anticipated requirements of the Pension Plans to determine the average rate of earnings expected on the funds invested to provide for the Pension Plans' benefits. While the studies give appropriate consideration to recent fund performance and historical returns, the assumption is primarily a long-term, prospective rate. Based on our most recent study, the expected long-term return assumption for our U.S. Pension Plans effective for 2022 will be 7.0% and 5.0% for our non-U.S. Pension Plans.

Based on the U.S. Pension Plan's current target asset allocation, the median estimate for future asset returns (before non-investment expenses) was 7.5%. The asset return assumption set for determining the 2021 FASB ASC 715 expense was 7.0%, after non-investment expenses paid by the Trust. For the past three years, non-investment related expenses have averaged 0.5%. Therefore, the 7.0% return after non-investment expenses assumption is equivalent to a gross assumption of 7.5% (7.0% + 0.5%). An 7.5% rate (before non-investment expenses) falls within an acceptable range of simulated asset returns, between the 40th and 60th percentile.

Pension Plan Assets. We maintain target allocation percentages among various asset classes based on an investment policy established for our Pension Plans. The target allocation is designed to achieve long term objectives of return, while mitigating downside risk and considering expected cash flows. Our investment policy is reviewed from time to time to ensure consistency with our long term objectives. Our Pension Plan asset allocations at December 31, 2021 and 2020 by asset category are as follows:

	U.S. Plans			Non-U.S. Plans		
	Target Allocation	Percentage of Plan Assets at December 31,		Target Allocation	Percentage of Plan Assets at December 31,	
	2021	2021	2020	2021	2021	2020
Equity	50.0 %	72.2 %	68.1 %	45.0 %	38.6 %	36.2 %
Debt	35.0	27.8	31.9	—	44.3	50.9
Other	15.0	—	—	55.0	17.1	12.9
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

No pension assets were invested in debt or equity securities of Kraton at December 31, 2021 or 2020.

The inputs and methodology used for valuing securities are not an indication of the risk associated with investing in those securities. The following is a description of the primary valuation methodologies used for assets measured at fair value:

- Common/Collective Trust Funds: Valued at the net asset value per unit held at year end as quoted by the funds.
- Mutual Funds, Real Estate Funds, and Other Funds: Valued at the net asset value of shares held at year end as quoted in the active market.
- Insurance contracts for purposes of funding pension benefits.

A summary of total investments for our pension plan assets measured at fair value is presented below. See Note 9 *Fair Value Measurements, Financial Instruments, and Credit Risk* to the consolidated financial statements for a detailed description of fair value measurements and the hierarchy established for Level 1, 2, and 3 valuation inputs.

	Pension Plan Assets Fair Value Measurements at December 31, 2021			
	Total	Quoted Prices In Active Markets Identical Assets (Level 1)	Significant Observable Inputs (Level 2)(1)	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Cash and Cash Equivalents	$ 4,798	$ 1,545	$ 3,253	$ —
Equity	$ 148,518	$ 77,509	$ 71,009	$ —
Debt	79,136	9,386	69,750	—
Other	8,011	—	—	8,011
Total	$ 240,463	$ 88,440	$ 144,012	$ 8,011

(1) Included are plan assets of $79.0 million, which are comprised of $42.3 million and $36.7 million in equity and debt, respectively, valued using the net asset value practical expedient measuring the fair value of investments in certain entities that calculate net asset value per share (or its equivalent).

	Pension Plan Assets Fair Value Measurements at December 31, 2020			
	Total	Quoted Prices In Active Markets Identical Assets (Level 1)	Significant Observable Inputs (Level 2)[(1)]	Significant Unobservable Inputs (Level 3)
	(In thousands)			
Equity	$ 125,359	$ 62,790	$ 62,569	$ —
Debt	82,253	14,063	68,190	—
Other	9,002	984	—	8,018
Total	$ 216,614	$ 77,837	$ 130,759	$ 8,018

(1) Included are plan assets of $70.4 million, which are comprised of $37.5 million and $32.9 million in equity and debt, respectively, valued using the net asset value practical expedient measuring the fair value of investments in certain entities that calculate net asset value per share (or its equivalent).

(b) Other Retirement Benefit Plans. Certain employees were eligible to participate in non-qualified defined benefit restoration plans ("BRP"), which were intended to restore certain benefits under the Pension Plan in the U.S. and the Kraton Savings Plan in the U.S., that would otherwise be lost due to certain limitations imposed by law on tax-qualified plans.

(c) Postretirement Benefits Other Than Pensions. Health and welfare benefits are provided to benefit eligible employees in the U.S. who retire from Kraton and were employed by us prior to January 1, 2006. Retirees under the age of 65 are eligible for the same medical, dental, and vision plans as active employees, but with an annual cap on premiums that vary based on years of service and ranges from $7,000 to $10,000 per employee. Our subsidy schedule for medical plans is based on accredited service at retirement. Retirees are responsible for the full cost of premiums for postretirement dental and vision coverage. In general, the plans stipulate that health and welfare benefits are paid as covered expenses as incurred. We accrue the cost of these benefits during the period in which the employee renders the necessary service.

Employees who were retirement eligible as of February 28, 2001, have the option to participate in either Shell Chemicals' or Kraton's postretirement health and welfare plans.

ASC 715, *"Compensation-Retirement Benefits,"* requires that we measure the plans' assets and obligations that determine our funded status at the end of each fiscal year. The 2021 measurement date of the plans' assets and obligations was December 31, 2021. We are also required to recognize as a component of accumulated other comprehensive income (loss) the changes in funded status that occurred during the year that are not recognized as part of new periodic benefit cost.

Based on the funded status of our postretirement benefit plan as of December 31, 2021 and 2020, we reported an increase in our accumulated other comprehensive income (loss) of approximately $0.1 million and an increase of $2.9 million, respectively, and a related change in accrued pension obligations.

Information concerning the plan obligation, the funded status and amounts recognized in our financial statements and underlying actuarial and other assumptions are as follows:

	December 31,	
	2021	2020
	(In thousands)	
Change in benefit obligation:		
Benefit obligation at beginning of period	$ 26,169	$ 23,979
Service cost	338	291
Interest cost	648	789
Benefits and expenses paid (premiums)	(1,230)	(921)
Actuarial (gain) loss	(658)	2,031
Plan amendments	—	—
Benefit obligation at end of period	25,267	26,169
Change in plan assets [(1)]:		
Fair value at beginning of period	—	—
Employer contributions	1,230	921
Benefits paid	(1,230)	(921)
Fair value at end of period	—	—
Funded status at end of year	$ (25,267)	$ (26,169)

(1) Shell Chemicals has committed to a future cash payment related to retiree medical expenses based on a specified dollar amount per employee, if certain contractual commitments are met. We have recorded an asset of approximately $3.0 million and $4.4 million as our estimate of the present value of this commitment as of December 31, 2021 and 2020, respectively.

	December 31, 2021	December 31, 2020
	(In thousands)	
Amounts recognized in the balance sheet:		
Current liabilities	$ (1,537)	$ (1,443)
Noncurrent liabilities	(23,730)	(24,726)
	$ (25,267)	$ (26,169)
Amounts recognized in accumulated other comprehensive loss:		
Prior service cost	$ (5,760)	$ (7,507)
Net actuarial loss	$ 9,344	$ 10,977
	$ 3,584	$ 3,470

Estimated Future Cash Flows. The following employer contributions and benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

	Retiree Medical Plan (In thousands)
Employer Contributions	
2022 Employer contributions	$ 1,559
Benefit Payments	
2022	$ 1,559
2023	1,521
2024	1,505
2025	1,515
2026	1,473
Years 2026-2030	7,219
Total Benefit Payments	$ 14,792

Net periodic benefit costs consist of the following components:

	Years Ended December 31, 2021	2020	2019
		(In thousands)	
Service cost	$ 338	$ 291	$ 290
Interest cost	648	789	941
Amortization of prior service cost	(1,747)	(1,747)	(1,747)
Amortization of net actuarial loss	975	887	621
Net periodic benefit costs	$ 214	$ 220	$ 105

	December 31,	
	2021	2020
Weighted average assumptions used to determine benefit obligations:		
Measurement date	12/31/2021	12/31/2020
Discount rate	2.86 %	2.55 %
Rates of increase in salary compensation level	N/A	N/A
Weighted average assumptions used to determine net periodic benefit cost:		
Discount rate	2.55 %	3.34 %
Rates of increase in salary compensation level	N/A	N/A
Expected long-term rate of return on plan assets	N/A	N/A

	December 31,	
	2021	2020
Assumed Pre-65 health care cost trend rates:		
Health care cost trend rate assumed for next year	6.50 %	7.00 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.50 %	4.50 %
Year that the rate reaches the ultimate trend rate	2026	2026

	December 31,	
	2021	2020
Assumed Post-65 health care cost trend rates:		
Health care cost trend rate assumed for next year	N/A	N/A
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	N/A	N/A
Year that the rate reaches the ultimate trend rate	N/A	N/A

Discount rates are determined annually and are based on rates of return of high-quality long-term fixed income securities currently available and expected to be available during the maturity of the postretirement benefit plan.

(d) Kraton Savings Plan. The Kraton Savings Plan, as adopted on March 1, 2001, covers substantially all U.S. employees, including executive officers. Through automatic payroll deduction, participants have the option to defer up to 60% of eligible earnings in any combination of pre-tax and/or post-tax contributions, subject to annual dollar limitations set forth in the Internal Revenue Code. Under this plan, we have two types of employer contributions:

(1) We make standard matching contributions of 50.0% of the first 6.0% contributed by the employee from start of employment and we make matching contributions of 100.0% of the first 6.0% contributed by the employee after completing five years of service.

(2) We make enhanced employer contributions of 4.0% for all employees.

For our employees who were employed as of February 28, 2001, and who were previously employed by Shell Chemicals, we recognize their Shell Chemicals years of service for purposes of determining employer contributions under our Plan. Our contributions to the plan for the years ended December 31, 2021, 2020, and 2019, were $11.0 million, $10.6 million, and $9.7 million, respectively.

13. Industry Segment and Foreign Operations

Our operations are managed through two operating segments: (i) Polymer segment and (ii) Chemical segment. In accordance with the provisions of ASC 280, "*Segment Reporting*," our chief operating decision-maker has been identified as the President and Chief Executive Officer, who reviews operating results to make decisions about allocating resources and assessing performance for the entire company.

- *Polymer Segment*. Our Polymer segment is comprised of our SBCs and other engineered polymers business.
- *Chemical Segment*. Our Chemical segment is comprised of our pine-based specialty products business.

Our chief operating decision maker uses operating income (loss) as the primary measure of each segment's operating results in order to allocate resources and in assessing the company's performance. In accordance with ASC 280, *Segment Reporting*, we have presented operating income (loss) for each segment. We currently do not have sales between segments.

Operating Results by Segment

	Year Ended December 31, 2021			Year Ended December 31, 2020		
	Polymer	Chemical	Total	Polymer	Chemical	Total
	(In thousands)					
Revenue	$ 1,098,785	$ 871,344	$ 1,970,129	$ 857,558	$ 705,592	$ 1,563,150
Cost of goods sold	775,804	605,569	1,381,373	627,297	537,982	1,165,279
Gross profit	322,981	265,775	588,756	230,261	167,610	397,871
Operating expenses:						
Research and development	29,869	10,537	40,406	29,972	10,771	40,743
Selling, general, and administrative	91,360	72,807	164,167	90,074	71,870	161,944
Depreciation and amortization	51,042	75,433	126,475	52,910	73,112	126,022
Impairment of goodwill	—	—	—	—	400,000	400,000
Loss on disposal of fixed assets	292	587	879	503	247	750
Operating income (loss)	$ 150,418	$ 106,411	256,829	$ 56,802	$ (388,390)	(331,588)
Other income (expense)			(209)			995
Disposition and exit of business activities			(149)			175,189
Loss on extinguishment of debt			—			(40,843)
Earnings of unconsolidated joint venture			461			457
Interest expense, net			(41,840)			(57,930)
Income (loss) before income taxes			$ 215,092			$ (253,720)

	Year Ended December 31, 2019		
	Polymer	Chemical	Total
		(In thousands)	
Revenue	$ 1,052,968	$ 751,468	$ 1,804,436
Cost of goods sold	820,410	569,597	1,390,007
Gross profit	232,558	181,871	414,429
Operating expenses:			
Research and development	29,392	11,681	41,073
Selling, general, and administrative	86,025	63,775	149,800
Depreciation and amortization	59,151	77,020	136,171
Gain on insurance proceeds	—	(32,850)	(32,850)
Loss on disposal of fixed assets	647	126	773
Operating income (loss)	$ 57,343	$ 62,119	119,462
Other expense			3,339
Loss on extinguishment of debt			(3,521)
Earnings of unconsolidated joint venture			506
Interest expense, net			(75,782)
Income (loss) before income taxes			$ 44,004

Goodwill

The Company conducts an annual impairment review of goodwill on October 1st of each year, unless events occur which trigger the need for an interim impairment review.

2021 Evaluation. As of October 1, 2021, we assessed qualitative factors and determined that it was not more likely than not that the fair values of our reporting units were less than their carrying values as of the testing date. As a result of our assessment, no goodwill impairment charge was recorded during the year ended December 31, 2021. There can be no assurances that future sustained declines in macroeconomic or business conditions affecting our industry will not occur, which could result in goodwill impairment charges in future periods.

2020 Evaluation. During the third quarter of 2020, the Company updated its annual long-range plan, taking into consideration the following:

- a continued decline in rosin margins, resulting from excess hydrocarbon supply, negatively affecting our adhesives applications
- a significant decline in gum turpentine pricing, which began in the second half of 2019, resulting in lower CST margins
- the impacts of COVID-19, which weakened demand fundamentals, including applications such as oilfield, tires, and automotive

These and other factors were considered indicators of impairment of our Chemical segment's goodwill. We performed an interim impairment test of goodwill as of September 30, 2020. As a result, we recorded a non-cash impairment charge of $400.0 million within the Chemical segment. The Company updated this assessment as of October 1, 2020 (our annual impairment date) utilizing a qualitative approach, and noted no impairment indicators during the fourth quarter of 2020.

The Company estimated the fair value using both an income and market approach. The determination of the fair value using the income approach requires management to make significant estimates and assumptions related to forecasts of future revenues, profit margins, and discount rates. The determination of the fair value using the market approach requires management to make significant assumptions related to earnings before interest, taxes, depreciation, and amortization ("EBITDA") multiples. The Company estimates future cash flows based upon EBITDA projections within our long-range plan, discounted at an appropriate risk-adjusted rate.

Under the income approach, the fair value for Chemical segment was determined based on the present value of estimated future cash flows, discounted at an appropriate risk-adjusted rate. We used our internal forecast, including our annual long-range plan, updated for recent events, to estimate future cash flows, including a terminal value. Our internal forecast includes assumptions about future commodity pricing and expected demand for goods and services. Due to the inherent uncertainties involved in making estimates and assumptions, actual results may differ from those assumed in our forecast.

Valuations using the market approach were derived from metrics of selected publicly traded peer companies. The selection of peer companies was based on the markets in which the Chemical segment operates, considering risk profiles, size, geography, and diversity of products and services.

We derived our risk-adjusted rate using a capital asset pricing model and analyzing published rates for industries and comparable businesses similar to our Chemical segment taking into account the cost of equity and debt. We used a risk-adjusted rate that is commensurate with the risks and uncertainties inherent in the respective businesses and in our internally developed forecast.

Changes in goodwill from January 1, 2021 through December 31, 2021 were as follows:

	Chemical (In thousands)
Balance at January 1, 2021	$ 375,061
Foreign currency translation	(2,144)
Balance at December 31, 2021	$ 372,917

Impact of Hurricane Michael

During the year ended December 31, 2019, we finalized our insurance claims with our carrier related to Hurricane Michael. As result, we received payments from our carrier of $32.9 million, of which $1.1 million was received in 2018 and deferred into 2019 when realized, which has been recorded as a gain on insurance proceeds within the Consolidated Statement of Operations. This brings our total insurance proceeds to $41.8 million to date, which offsets the lost margin and reimburses us for the direct costs and capital expenditures known to date.

Long-Lived Assets Including Goodwill and Total Assets

	December 31, 2021			December 31, 2020		
	Polymer	Chemical	Total	Polymer	Chemical	Total
	(In thousands)					
Property, plant, and equipment, net	$ 521,304	$ 413,539	$ 934,843	$ 523,067	$ 419,636	$ 942,703
Investment in unconsolidated joint venture	$ 12,023	$ —	$ 12,023	$ 12,723	$ —	$ 12,723
Goodwill	$ —	$ 372,917	$ 372,917	$ —	$ 375,061	$ 375,061
Total assets	$ 1,259,912	$ 1,394,696	$ 2,654,608	$ 1,104,954	$ 1,356,003	$ 2,460,957

During the years ended December 31, 2021, 2020, and 2019, no single customer accounted for 10.0% or more of our total revenue.

For geographic reporting, revenue is attributed to the geographic location in which the customers’ facilities are located. Long-lived assets consist primarily of property, plant, and equipment, which are attributed to the geographic location in which they are located and presented at historical cost.

Revenue by Geographic Region

	December 31, 2021			December 31, 2020		
	Polymer	Chemical	Total	Polymer	Chemical	Total
	(In thousands)					
Revenue:						
United States	$ 422,599	$ 339,670	$ 762,269	$ 311,129	$ 289,989	$ 601,118
Germany	125,146	58,339	183,485	89,304	44,439	133,743
All other countries	551,040	473,335	1,024,375	457,125	371,164	828,289
	$ 1,098,785	$ 871,344	$ 1,970,129	$ 857,558	$ 705,592	$ 1,563,150

	December 31, 2019		
	Polymer	Chemical	Total
	(In thousands)		
Revenue:			
United States	$ 352,735	$ 317,347	$ 670,082
Germany	107,661	51,598	159,259
All other countries	592,572	382,523	975,095
	$ 1,052,968	$ 751,468	$ 1,804,436

Long-Lived Assets by Geographic Region

	December 31, 2021			December 31, 2020		
	Polymer	Chemical	Total	Polymer	Chemical	Total
	(In thousands)					
Long-lived assets, at cost:						
United States	$ 687,569	$ 436,934	$ 1,124,503	$ 591,361	$ 413,787	$ 1,005,148
Taiwan	195,112	—	195,112	191,726	—	191,726
France	105,259	17,913	123,172	156,410	15,489	171,899
Germany	77,756	6,325	84,081	79,388	6,057	85,445
Sweden	—	74,575	74,575	—	78,329	78,329
All other countries	47,831	77,404	125,235	68,833	73,602	142,435
	$ 1,113,527	$ 613,151	$ 1,726,678	$ 1,087,718	$ 587,264	$ 1,674,982

Our capital expenditures, excluding software and other intangibles, for the Polymer segment, excluding capital expenditures by the KFPC joint venture, were $45.9 million and $36.5 million during the year ended December 31, 2021 and 2020, respectively, and capital expenditures, excluding software and other intangibles, for our Chemical segment were $44.5 million and $37.4 million during the year ended December 31, 2021 and 2020, respectively.

14. Related Party Transactions

We own a 50.0% equity investment in an SBC manufacturing joint venture in Kashima, Japan. Our outstanding payables were $14.8 million and $14.8 million as of December 31, 2021 and 2020, respectively, which were recorded in “Due to related party” liability on the Consolidated Balance Sheets. Our total purchases from the joint venture were $30.0 million, $28.4 million, and $33.0 million for the years ended December 31, 2021, 2020, and 2019, respectively.

We own a 50% variable interest in KFPC, an HSBC manufacturing joint venture in Mailiao, Taiwan. The KFPC joint venture is fully consolidated in our financial statements, and our joint venture partner, Formosa Petrochemical Corporation (“FPCC”), is a related party affiliate. Under the terms of the joint venture agreement, FPCC is to provide certain site services and raw materials to KFPC. Additionally, we purchase certain raw materials from FPCC for our other manufacturing locations. Our outstanding payables were $2.5 million and $2.3 million as of December 31, 2021 and 2020, respectively, which were recorded in “Due to related party” liability on the Consolidated Balance Sheets. Our total purchases from this joint venture were $49.1 million, $47.6 million, and $48.5 million for the years ended December 31, 2021, 2020, and 2019, respectively. See Note 15 *Variable Interest Entity*, for further discussion related to the KFPC joint venture.

15. Variable Interest Entity

We hold a variable interest in a joint venture with FPCC to own and operate a 30 kiloton HSBC plant at FPCC's petrochemical site in Mailiao, Taiwan. Included in the below assets and liabilities is a land lease with FPCC to support our operations at the HSBC plant. Kraton and FPCC are each 50% owners of the joint venture company, KFPC. Under the provisions of an offtake agreement with KFPC, we have exclusive rights to purchase all production from KFPC. Additionally, the agreement requires us to purchase a minimum of 80% of the plant production capacity each year at a defined fixed margin. This offtake agreement represents a variable interest that provides us the power to direct the most significant activities of KFPC and exposes us to the economic variability of the joint venture. As such, we have determined that we are the primary beneficiary of this variable interest entity, and therefore, we have consolidated KFPC in our financial statements and reflected FPCC's 50% percent ownership as a noncontrolling interest.

During the year ended December 31, 2021, KFPC declared a dividend to Kraton and FPCC in aggregate of $0.2 million. The dividend was paid in the fourth quarter of 2021.

The following table summarizes the carrying amounts of assets and liabilities as of December 31, 2021 and 2020 for KFPC before intercompany eliminations. See Note 8 *Long Term Debt*, for further discussion related to the KFPC Loan Agreement executed on July 17, 2014.

	December 31, 2021	December 31, 2020
	(In thousands)	
Cash and cash equivalents	$ 9,890	$ 3,097
Other current assets	14,814	17,304
Property, plant, and equipment	142,790	150,838
Intangible assets	7,355	7,959
Long-term operating lease assets, net	6,938	7,178
Other long-term assets	2,683	6,510
Total assets	$ 184,470	$ 192,886
Current portion of long-term debt	$ 67,726	$ 72,156
Current liabilities	8,273	5,209
Long-term debt	—	17,559
Deferred income taxes	675	1,984
Long-term operating lease liabilities	6,445	6,700
Total liabilities	$ 83,119	$ 103,608

16. Subsequent Events

We have evaluated significant events and transactions that occurred after the balance sheet date and determined that there were no events or transactions that require recognition or disclosure in our consolidated financial statements for the period ended December 31, 2021.

KRATON CORPORATION
SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS AND RESERVES
For the Years Ended December 31, 2021, 2020, and 2019
(In thousands)

	Balance at Beginning of Period	Net Expenses	Write-offs	Balance at End of Period
Allowance for doubtful accounts:				
Year Ended December 31, 2021	$ 598	$ 86	$ —	$ 684
Year Ended December 31, 2020	$ 434	$ 164	$ —	$ 598
Year Ended December 31, 2019	$ 784	$ (117)	$ (233)	$ 434

	Balance at Beginning of Period	Net Expenses	Foreign Currency	Balance at End of Period
Inventory reserves:				
Year Ended December 31, 2021	$ 8,968	$ (1,700)	$ (137)	$ 7,131
Year Ended December 31, 2020	$ 8,923	$ 22	$ 23	$ 8,968
Year Ended December 31, 2019	$ 8,951	$ 6	$ (34)	$ 8,923

KRATON CORPORATION
RESTRICTED STOCK UNIT AWARD AGREEMENT

Upon acceptance by you through the online acceptance procedures set forth at www.etrade.com, this Restricted Stock Unit Award Agreement (this "***Agreement***") is made effective as of the Grant Date (defined below) between Kraton Corporation (the "***Company***") and you (the "***Participant***"). This Agreement evidences a grant of restricted stock units consisting of an unfunded and unsecured promise to deliver shares of the common stock, $0.01 par value, of the Company ("***Common Stock***") under the Company's Amended and Restated 2016 Equity and Cash Incentive Plan (as amended, the "***Plan***"). Unless otherwise indicated, any capitalized term used but not defined herein shall have the meaning ascribed to such term in the Plan.

1. Grant of Restricted Stock Units. Pursuant to, and subject to, the terms and conditions set forth herein and in the Plan, the Company hereby grants to the Participant an award of the number of restricted stock units of the Company set forth on the Participant's online award acceptance page at www.etrade.com, which is incorporated by reference herein (collectively, the "***Restricted Stock Units***"). Each Restricted Stock Unit constitutes an unfunded and unsecured promise of the Company to deliver one share of Common Stock to Participant on the vesting date subject to the terms and conditions of this Agreement. Participant's rights with respect to the Restricted Stock Units shall be forfeitable until the Restricted Stock Units vest in accordance with Section 4. As a holder of Restricted Stock Units, the Participant has the rights of a general unsecured creditor of the Company unless and until the Restricted Stock Units are converted to shares of Common Stock upon vesting and transferred to Participant, as set forth herein. During the period prior to vesting of the Restricted Stock Units in accordance with Section 4, the Restricted Stock Units shall be bookkeeping entries only, and Participant shall have no rights to receive any shares of Common Stock hereunder. Participant shall have no voting or other rights of a stockholder of the Company with respect to the Restricted Stock Units prior to the issuance of Shares in accordance with Section 6.

2. Grant Date. The grant date of the Restricted Stock Units (the "***Grant Date***") is the date set forth on the Participant's online award acceptance page at www.etrade.com, which is incorporated by reference herein.

3. Incorporation of Plan. All terms, conditions and restrictions of the Plan are incorporated herein and made part hereof as if stated herein. If there is any conflict between the terms and conditions of the Plan and this Agreement, the terms and conditions of the Plan, as interpreted by the Committee, shall govern. All capitalized terms used herein that are not defined in this Agreement shall have the meanings given to such terms in the Plan.

4. Vesting Date: Settlement. The Restricted Stock Units shall become vested as follows:

(a) One-third (1/3rd) of the Restricted Stock Units (rounded up to the nearest whole share) shall vest on each of the first (1st) three (3) anniversaries of the Grant Date, *provided* that the Participant remains continuously employed by the Company through each such date; or

(b) One hundred percent (100%) of the Restricted Stock Units shall vest on the date that the Participant's employment is terminated due to Disability or death at any time prior to the third (3rd) anniversary of the Grant Date.

Notwithstanding the foregoing:

(c) If the Participant's employment is terminated without Cause (and other than as a result of Participant's death or Disability) prior to the third (3rd) anniversary of the Grant Date, the vested portion of the Restricted Stock Units held by such Participant as of such termination date will be determined as if the Participant had remained continuously employed by the Company through the Grant Date anniversary coinciding with or next following the date of the Participant's termination of employment.

(d) If on or before the second (2nd) anniversary of a Change in Control either the Participant's employment is terminated without Cause or the Participant terminates Participant's employment for Good Reason, all Restricted Stock Units held by such Participant shall immediately vest as of the effective date of such termination of the Participant's employment, subject to the Participant's execution of an effective general release and waiver of all claims against the Company, its affiliates and their respective officers and directors related to the Participant's employment, in a form acceptable to the Company at the Participant's termination of employment.

(e) In the event a Change in Control occurs as a result of the closing of the transactions contemplated by that certain agreement and plan of merger, dated as of September 27, 2021 (as it may be amended from time to time), by and between DL Chemical Co., Ltd, DLC US Holdings, Inc., DLC US, Inc. and the Company within twelve (12) months after the Grant Date, the Restricted Stock Units will vest pro rata based on a fraction (the numerator of which is the total number of days after the Grant Date that the Change in Control occurs and the denominator of which is 365) and the remaining Restricted Stock Units shall (notwithstanding anything else in this Agreement, the Plan, or otherwise, to the contrary) terminate and be cancelled upon the occurrence of such Change in Control with no payment to be made with respect thereto or in respect thereof.

Upon the occurrence of each applicable date of vesting described above, the Company shall deliver to the Participant the applicable number shares of Common Stock via electronic book-entry issuance. If and when cash dividends or other cash distributions are paid or distributed with respect to the Common Stock while the Restricted Stock Units are outstanding, the dollar amount of such dividends or distributions with respect to the number of shares of Common Stock then underlying the Restricted Stock Units shall be reflected in a notional account maintained by the Company on your behalf. Any such cash dividends or other cash distributions shall vest and be paid in cash if and at such times as the underlying Restricted Stock Units are vested and paid.

For purposes of this Agreement, "Good Reason" has the meaning ascribed to it in the Company's Executive Severance Program or "ESP" (as in effect immediately prior to the Change in Control; provided, however that such definition is no less favorable to Participant than the definition in the ESP in effect as of the date hereof or, if no ESP exists at such time, the definition in the ESP in effect as of the date hereof), "***Disability***" has the meaning ascribed to it in the Company's long-term disability plan, and "***Cause***" means (i) a material breach by the Participant of any of the Participant's obligations under any written agreement with the Company or any of its affiliates, (ii) a material violation by the Participant of any of the Company's policies, procedures, rules and regulations applicable to employees generally or to employees at your grade level, in each case, as they may be amended from time to time in the Company's sole discretion; (iii) the failure by the Participant to reasonably and substantially perform his or her duties to the Company or its affiliates (other than as a result of physical or mental illness or injury); (iv) the Participant's willful misconduct or gross negligence that has caused or is reasonably expected to result in material injury to the business, reputation or prospects of the Company or any of its affiliates; (v) the Participant's fraud or misappropriation of funds; or (vi) the commission by the Participant of a felony or other serious crime involving moral turpitude; *provided* that if the Participant is a party to an employment agreement with the Company or its affiliate (an "***Employment Agreement***") at the time of his or her termination of employment and such Employment Agreement contains a different definition of "cause" (or any derivation thereof), the definition in such Employment Agreement will control for purposes of this Agreement. "***Continuously employed***" (or similar) means employment with the Company measured from the most recent date of hire with the Company and disregarding any and all periods of employment prior to such date.

If a Participant is terminated without Cause and, within the twelve (12)-month period subsequent to such termination of employment, the Company determines in good faith that the Participant's employment could have been terminated for Cause, subject to anything to the contrary that may be contained in the Participant's Employment Agreement at the time of his or her termination of employment, the Participant's employment will, at the election of the Company, be deemed to have been terminated for Cause, effective as of the date the events giving rise to Cause occurred.

5. Forfeiture: Restrictions. Subject to the provisions of the Plan and Section 4 of this Agreement, with respect to the Restricted Stock Units that have not become vested on the date the Participant's employment is terminated, the award of Restricted Stock Units shall expire and such unvested Restricted Stock Units shall immediately be forfeited on such date. Participant shall not sell, transfer, pledge, assign, alienate, hypothecate, or otherwise encumber or dispose of the Restricted Stock Units other than by will or the laws of descent and distribution.

6. Delivery of Shares: Compliance with Securities Laws. Upon the vesting of any Restricted Stock Units granted hereunder, the Company shall direct its transfer agent to record by electronic book-entry in Participant's name a number of unrestricted shares of Common Stock equal to the whole number of Restricted Stock Units that become vested hereunder. Nothing herein shall obligate the Company to register the Restricted Stock Units pursuant to any applicable securities law or to take any other affirmative action in order to cause the issuance or transfer of the Restricted Stock Units to comply with any law or regulation of any governmental authority. The Company shall not be required to issue any shares of Common Stock prior to: (a) the obtaining of any approval from any governmental agency which the Company determines to be necessary or advisable; and (b) the Participant's payment to the Company of any federal, state or local tax or other withholding owed by Participant as a result of vesting of the Restricted Stock Units.

7. Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party hereto upon any breach or default of any party under this Agreement, shall impair any such right, power or remedy of such party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party or any provisions or conditions of this Agreement, shall be in writing and shall be effective only to the extent specifically set forth in such writing.

8. Integration. This Agreement and the Plan contain the entire understanding of the parties with respect to its subject matter. There are no restrictions, agreements, promises, representations, warranties, covenants or undertakings with respect to the subject matter hereof other than those expressly set forth herein and the Plan. This Agreement and the Plan supersede all prior agreements and understandings between the parties with respect to the subject matter of this Agreement.

9. Governing Law: Jurisdiction and Venue. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Texas, without regard to the provisions governing conflict of laws, to the maximum extent practicable calls for performance and shall be performable at the offices of the Company in Houston, Harris County, Texas and venue for any dispute arising hereunder shall lie exclusively in the state and/or federal courts of Harris County, Texas and the Southern District of Texas, Houston Division, respectively.

10. Participant Acknowledgment. The Participant hereby acknowledges receipt of a copy of the Plan via online delivery at www.etrade.com. The Participant hereby acknowledges that all decisions, determinations and interpretations of the Committee in respect of the Plan, this Agreement and the Restricted Stock Units shall be final and conclusive.

11. Mandatory Withholding of Taxes. The Participant acknowledges and agrees that the Company shall deduct from the shares of Common Stock or cash otherwise payable or deliverable an amount of cash and/or number of shares of Common Stock (valued at their Fair Market Value) on the applicable date that is equal to the amount of all federal, state and local taxes required to be withheld by the Company, as determined by the Committee.

12. Adjustments. As provided in Section 15 of the Plan, certain adjustments may be made to the Restricted Stock Units upon the occurrence of events or circumstances described in Section 15 of the Plan.

13. Restrictions Imposed by Law. The Company shall not be required to issue shares of Common Stock unless and until (i) such shares have been duly listed upon each stock exchange on which the Common Stock is then registered and (ii) the Company has complied with applicable federal and state securities laws.

14. Participant Employment. Nothing contained in this Agreement, and no action of the Company or the Committee with respect hereto, shall confer or be construed to confer on the Participant any right to continue in the employ of the Company or any of its Subsidiaries or interfere in any way with the right of the Company or any employing Subsidiary to terminate the Participant’s employment at any time, with or without cause; subject, however, to the provisions of any employment agreement between the Participant and the Company or any Subsidiary.

15. Section 409A. Payments under this Agreement are designed to be made in a manner that is exempt from Section 409A of the Code as a “short-term deferral,” and the provisions of this Agreement will be administered, interpreted and construed accordingly (or disregarded to the extent such provision cannot be so administered, interpreted, or construed).

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Exhibit 21.1

KRATON CORPORATION

List of Significant Subsidiaries as of December 31, 2021 [(1)]

	Jurisdiction of Organization
Kraton Polymers Holdings B.V.	Netherlands Antilles
Kraton Polymers LLC	Delaware
Kraton Polymers U.S. LLC	Delaware
Kraton Chemical, LLC	Delaware
Kraton Chemical B.V.	Netherlands

(1) Listing includes only doing business names and does not include trade names.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-163893, No. 333-211817, No. 333-216223, No. 333-225663, No. 333-230918, and No. 333-256428) on Form S-8 and in the registration statement (No. 333-223096) on Form S-3 of Kraton Corporation of our reports dated February 24, 2022, with respect to the financial statements and financial statement schedule II of Kraton Corporation, and the effectiveness of internal control over financial reporting.

(signed) KPMG LLP

Houston, Texas
February 24, 2022

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
UNDER SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, Kevin M. Fogarty, certify that:

1. I have reviewed this Annual Report on Form 10-K of Kraton Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 24, 2022

By: /s/ Kevin M. Fogarty
Kevin M. Fogarty
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
UNDER SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, Atanas H. Atanasov, certify that:

1. I have reviewed this Annual Report on Form 10-K of Kraton Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2022

By: /s/ Atanas H. Atanasov

Atanas H. Atanasov
Executive Vice President, Chief Financial Officer, and Treasurer

Exhibit 32.1

Certification of Chief Executive Officer and Chief Financial Officer

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Kraton Corporation a Delaware corporation (the "Registrant"), does hereby certify, to such officer's knowledge, that:

The Annual Report on Form 10-K for the fiscal year ended December 31, 2021 ("Form 10-K") of the Registrant fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Dated: February 24, 2022

By: /s/ Kevin M. Fogarty
Kevin M. Fogarty
President and Chief Executive Officer

By: /s/ Atanas H. Atanasov
Atanas H. Atanasov
Executive Vice President, Chief Financial Officer, and Treasurer