2020 Annual Report



element solutions

element solutions

ENABLING **SUSTAINABILITY**

We partner with industry groups, universities, and governments to develop commercially viable, environmentally friendly solutions to improve customer outcomes around the world. We enable our customers to reduce their environmental footprints with a unique portfolio of wastewater treatment and chemistry solutions, metals recycling and reclaim capabilities, and innovative process solutions such as carbon-based metallization, low temperature solders and REACH compliant plating chemistries. We are taking big steps to help leave a smaller footprint.



THE PILLARS OF **OUR STRATEGY**

As a results-orientated company focused on innovation and service, our strategic pillars serve as foundational behaviors for long-term success and continuous high performance.

COMMERCIAL EXCELLENCE

CUSTOMER-LED INNOVATION

ENABLING SUSTAINABILITY*

REMOVING HAZARDOUS CHEMICALS THROUGH GREEN CHEMISTRY

Chromium and PFOS-Free Pre-treatment for Plating on Plastics: Evolve Technology System
Safer Solder: Lead-free Solder and Halogen-Free Fluxes
Biodegradable Oceanic Hydraulic Fluid: Ocean-Safe Solutions

SUPPORTING THE CIRCULAR ECONOMY

Giving Metals a Second Life: Recycled Tin and Metals Reclaim Operations
Value Creation for Plastics: Plastic Cleansing Chemistry

REDUCING ENVIRONMENTAL IMPACT WITH INNOVATION

Improved Range and Reliability of Electric Vehicle Electronics: Silver Sinter Technology
Reduced Footprint in Circuit Board Metallization: Blackhole, Eclipse and Shadow Metallization Process
Improving Energy Generation in Photovoltaics, LEDs and Energy Storage: Innovative Soldering and Metal Coating Process

Read our 2020 ESG Report

**For more information on our sustainability initiatives, including more detail on each of the categories above, please refer to our inaugural sustainability report at www.elementsolutionsinc.com/sustainability*

DECISIVENESS & ACTION ORIENTATION

RECRUITMENT & TALENT DEVELOPMENT

Element Solutions has a company-wide contest for designs of our Annual Report cover.
This year's winner was Jenniffer Warwick. Runners up were Sathish Kumar, Deanna Cullen and Saminda Dharmarathna.



THE ELEMENTS OF **OUR CULTURE**

Our employees embody the 5 C's of our culture in their interactions with customers, colleagues and other counterparties to drive sustainable financial performance and create a rewarding environment.

CHALLENGE

WE ESTABLISH AMBITIOUS GOALS, TAKE CALCULATED RISKS, MAINTAIN HIGH STANDARDS AND SEEK TO EXCEED EXPECTATIONS.

COLLABORATE

WE VALUE TEAMWORK, WITH OUR CUSTOMERS AND OUR COLLEAGUES, IN PURSUIT OF EXCELLENCE AND IMPROVEMENT IN EVERYTHING WE DO.

CARE

WE CARE ABOUT OUR CUSTOMERS, OUR COLLEAGUES, OUR ENVIRONMENT AND OUR PLACE IN THE WORLD AT LARGE.

COMMIT

WE MAKE COMMITMENTS AND HOLD OURSELVES ACCOUNTABLE, INDIVIDUALLY AND AS TEAMS, TO DELIVER ON THEM.

CHOOSE

WE EMPOWER OUR EMPLOYEES TO MAKE CHOICES AND TAKE CALCULATED RISKS; WE CHOOSE TO HIRE, RECOGNIZE AND REWARD PEOPLE WHO DEMONSTRATE GOOD JUDGMENT AND CHOOSE TO HAVE GOOD ATTITUDES AND STRONG WORK ETHICS.

LETTER FROM THE **EXECUTIVE CHAIRMAN**

DEAR FELLOW SHAREHOLDERS,

Our company had a defining year in 2020. In the face of unprecedented disruptions to our end-markets and operations from the COVID-19 pandemic, we reported record financial results since the launch of Element Solutions. While protecting the health of our operators and ensuring reliable supply of our products to numerous essential industries, we managed to grow our net sales and free cash flow, expand our adjusted EBITDA margins, complete an acquisition and declare our first dividend. Element Solutions and its predecessor companies have long talked about the resilience of our variable cost, asset-light business model. This year we demonstrated the quality of that model and the quality of our leadership team. This performance and resilience are not automatic. They are the product of strong leaders and dedicated people around the world. I could not be more proud of our organization.

As Executive Chairman, I remain focused on three primary topics: people, culture and capital allocation. We are seeing great outcomes in all three of these areas. Our leadership team has coalesced and is effectively driving the organization towards ambitious, long-term objectives. The company has made significant strides in employee development and training, improved communication channels and enhanced our health and safety focus. We also added great new talent at many levels in the organization. The culture of the company is as strong as it has ever been and is evidenced by higher retention rates and highly successful recruitment efforts. People are happier and more motivated at ESI than ever before. 2020 was a year that tested the organization and the team came together like never before to deliver for customers, shareholders and, importantly, for each other.

Our consistent, strong cash flow generation offers many capital allocation opportunities to deliver long-term shareholder value. With ESI, we are committed to prudently and opportunistically deploying this cash in ways that we believe offer attractive risk-adjusted returns. In 2020 we did exactly that. First, we repurchased $56 million of our stock at an average price below $10 per share—which when added to the 2019 amount, means we have repurchased more than 17% of our outstanding shares since we launched ESI. We also acquired an exciting growth business at a single-digit adjusted EBITDA multiple, refinanced our senior unsecured notes—reducing





SIR MARTIN E. FRANKLIN
Executive Chairman

our overall annualized interest expense by over 20% and instituted a dividend that we expect to grow over time. We did all of this while de-levering our balance sheet by almost half a turn of net leverage, with our net debt to adjusted EBITDA ratio ending the year below 3.0x for the first time since we acquired MacDermid. While the mix of capital deployment may change over time, our focus on driving shareholder value will not.

We have been pleased to see this performance and our outlook recognized by the investment community, driving our share price up by 52% in 2020 and our multiple on adjusted EBITDA closer to those of our peers. However, we continue to trade at a relative discount on free cash flow metrics, while our business converts earnings to cash flow at a rate that is unique among our peers. As we continue to drive cash flow and seek to deploy it in value enhancing ways, we are confident further recognition will follow.

Over my business career, I have seen organizations encounter unexpected challenges in many forms. While 2020 threw new challenges our way, the result for great businesses is almost always the same—they come out stronger on the other side. The amount of progress this organization has made over the past few years, built on top of its very solid foundation, is outstanding to see and exciting to be a part of. This progress is reflected not only internally but also with how our markets and customers are responding to our new growth-oriented approach.

I want to thank all our employees, partners and shareholders once again for supporting Element Solutions on its journey to be the best-in-class specialty chemicals company in our industry.

Faithfully yours,



Sir Martin E. Franklin



LETTER FROM THE **CHIEF EXECUTIVE OFFICER**

DEAR FELLOW SHAREHOLDERS,

A sentence from my annual letter last year summarizes the takeaway of this one:

"It would have been far easier to launch Element Solutions into more docile seas, but the choppy environment allowed us to demonstrate who we are and what we are capable of."

I wish I could say this was a prediction, but, as for most of us, what 2020 held in store was a surprise. While our markets had headwinds in 2019, the challenges of 2020 made the choppiness of the '19 seas seem like a windless day. Yet 2020 was a record year since the launch of Element Solutions. We took the challenges in stride, developed our pandemic playbook, pivoted when we needed to and delivered outstanding results. There were silver linings for us.

We begin, however, by recognizing the toll this past year took on our global community. The pandemic and the civil strife of the summer of 2020 have brought to the fore divides that we must all play a role in addressing. These events touched each of us, and we feel deeply for those who have suffered and continue to today. In that context, the dichotomy between our record results and the health and socioeconomic crises of 2020 is stark. The suffering and difficulty we experienced makes the resilience and persistence of our team in 2020 that much more meaningful. We are immensely grateful to our global team that delivered for the company, our customers and each other this past year. The learnings from 2020 will remain with Element Solutions.

A company's performance over time can be seen as the mathematical product of its people and its culture. The culture can amplify or undermine the quality of the people. Our company has a culture of accepting challenges, commitment, teamwork, strong decision-making and care, and we have great people who embody it. This was never more true than in 2020 where we can draw a straight line from the exceptional efforts of our colleagues to our exceptional financial outcomes. By the time our facilities were deemed "essential" in our various locations, we were already running with a high-level of health and safety protocols designed to allow for continued production in a safe setting. That allowed our facilities generally to remain open throughout the year. Because our IT organization had rolled out new video telecommunications applications in 2019, the shift of work from our offices to our homes was seamless. The innovation activity from our labs continued effectively, with our people working on split shifts, both early and late, to ensure new product development and technical service responsiveness remained on track. This adaptability of our work force to a dynamic environment and the level of personal sacrifice to support the company, specifically, are the sources of our strong results.

There are many examples of great sacrifice. A group of more than 30 Malaysian chemical operators made sacrifices to live away from their families for five months in a hotel in Singapore to support our facilities there when the border closed. The lead of our Assembly facility in Shenzen did the same for several three-month stints. The manufacturing teams in the US and Europe went on alternating furloughs when volumes dropped precipitously in April through June. To help us preserve cash flow, colleagues in the most impacted businesses took reduced salaries for several months, as did our senior leadership team. These compensation sacrifices are modest in the context of our more than 2,000 essential workers who put themselves on the front lines to keep our facilities and customers operating. All of this while countless of us were caring for sick family members or grieving lost loved ones.

In early summer, factories in the West reopened, and our volumes increased steadily to meet surging demand. We reached record sales months since the launch of ESI in November and again in December. This pivot once again required nimbleness from our organization. The supply chain, in particular, had to shift rapidly from furlough and cost control to overtime production, in some cases while shorthanded due to precautionary COVID-19 protocols.

Against this backdrop, it would not have been surprising to see metrics around worker safety or quality deteriorate. In fact, they improved. Our safety statistics were better year-over-year, as was our perfect order performance, which is our primary quality metric.

All the while, we continued to chip away at major global system and process improvements, including acquisition integration, tax planning, and shared service implementation, among others. With such a challenging set of short-term dynamics, it would have been easy to deprioritize the long term. Similarly, we could have cut R&D spending or permanently reduced our workforce when we tightened our belts at the COVID-trough. We did not. We continued delivering on our projects and investing throughout the year, maintaining our prior year spending levels in both R&D and capex and notably delivering on our commitment to preserve our employee base through the COVID-19 production-related shutdowns. We do not trade the long term for the short term.

In 2020, we were pushed out of our comfort zone and forced to build new capabilities while navigating dynamic, drastically different operating conditions in real time. In this regard, our company was doing the same things that each of us as individuals was forced to do. This is the silver lining of COVID for the world and for our company. What was initially far outside our comfort zone is now a new zone of competency. While no one will look back at 2020 fondly, we exited this year stronger and with much to be proud of.

Our financial results are an output of the effort we made this year and in the years leading up to it. For this reason, I waited to mention the exceptional figures until we covered the exceptional effort. We grew net sales, adjusted EBITDA, adjusted EPS and free cash flow for the year—all despite a second quarter during which net sales fell 15%. We demonstrated the resilience of our variable cost operating model and stable cash flow profile, preserving margins throughout the year and generating robust cash flow every quarter. Free cash flow on an adjusted basis grew 5% to $249 million in 2020.

When we launched Element Solutions in February 2019, we espoused a strategy balancing operational excellence and prudent capital allocation: running our high-quality businesses better every year and deploying the strong cash flows they generate in long-term value enhancing ways. Surely, our results in 2020 chalk up as a win for operational excellence.

In 2020, we deployed approximately $115 million of our $249 million in free cash. We repurchased $56 million of our shares at an average price of $9.74. We would have repurchased shares more aggressively, but, out of principle, we did not buy our own shares when our people were furloughed or on reduced salaries. While this might have been a missed capital allocation opportunity in the short-term, we believe that the long-term downside of a disenfranchised team is far worse than this potential gain. We deployed $46 million to refinance our outstanding bonds in August, which will save us $16 million in interest a year, a 35% return, while extending our maturities by two years. The balance sheet is as healthy as it has ever been. Our leverage ratio declined in 2020 from 3.2X adjusted EBITDA at the beginning of the year to 2.9x at year end. This is the power of our cash generative model, and, with no material maturities until 2026, our balance sheet provides substantial capacity for continued prudent capital allocation within our objective of keeping leverage below 3.5x adjusted EBITDA.

The balance of our capital deployment went to two small acquisitions in 2020. First, in Q1, we acquired a new environmentally oriented technology in our offshore business. Our products in this segment are already market leaders, but we believe this technology makes them better. It offers benchmark technical performance with industry-leading environmental attributes. In an industry under constant regulatory pressure, we believe this product to be far and away the best to come to market. We are only now commercializing it but with great expectations. In July, we acquired DMP Corporation, which formed the core of our new MacDermid Envio Solutions business. This is a business singly focused on improving our customers' environmental footprints by treating their wastewater. It is a small business with big ambition. The issues of water usage and waste discharge are increasingly challenging our customers, and we intend to be their solutions provider. In doing so, we would not only grow MacDermid Envio Solutions, but also our mindshare and market share in our chemistry businesses. Together, these acquisitions represented a little over $15 million in purchase price and have the potential to add more than $100 million to our top line in the next three to four years, generating extremely attractive returns on our capital deployed. Notably, both share a theme—sustainability.

Enabling Sustainability, one of the five pillars of our strategy, is the theme of our 2020 Annual Report. The intersection between sustainability and profitability is well-trafficked in our business. We have been developing products to improve our customers' environmental footprints for years. It is good business and good for the planet. We released our initial ESG report in February 2021, which was our first effort to aggregate and shed light on our sustainability initiatives, emissions data and social and governance activity. The data is favorable. As an asset-light formulator, our greenhouse gas (GHG) emission rate is lower than many of our peers in the chemicals industry. Transparency is the first step. Targets to improve come next. Expect them later this year.

Just like it would have been easy to deprioritize the important for the urgent in our business—which we did not—the global community could have lost focus on sustainability in 2020 in the midst of the urgency of the global pandemic. Certainly, it did not. Stakeholder engagement around this topic increased steadily through 2020, and we are glad for that. This momentum is good for the world, and it is good for Element Solutions. The more customers care about the environment, the more likely they are to choose to work with us. We believe we are leading the charge in our industries to provide sustainable solutions for our customers.

As we look to 2021, the sea is not quite docile, but we feel the wind at our backs. The high-end electronics market has continuing momentum and our more industrially exposed businesses are poised to return to or exceed 2019 levels. Currency is a tailwind for the first time in a long time, and our team has coalesced in a way that only navigating a crisis together can catalyze. Earnings should grow organically, and we are focused on compounding that growth through capital allocation while preserving our healthy balance sheet. Our motto for this year "Winning Now, Winning Later" is borrowed from David Cote's excellent book of that title. Our short-term results, products of the resilience we have demonstrated and the investments we have made over the past several years, should be records for Element Solutions, while we continue to lay the groundwork for future success through prudent, focused investment and talent development. Our people have bought into our vision and are living our culture daily. I could not be more grateful to my colleagues for their dedication and performance through this challenging moment. Together we have our hands firmly on the helm and our eyes on the long-term horizon. It is very bright.



Benjamin Gliklich

March 1, 2021

2020 HIGHLIGHTS

Demonstrated resilience of our variable cost operating model to preserve margins and grow free cash flow while navigating COVID-19 pandemic

Allocated capital to drive long-term per share intrinsic value while reducing leverage

OUTPERFORMANCE

AGAINST UNIT GROWTH IN KEY END-MARKETS

$249M FREE CASH FLOW

9% ADJ. EPS GROWTH

2% CONSTANT CURRENCY ADJ. EBITDA GROWTH

MacDermid ENVIO SOLUTIONS

STRATEGIC ACQUISITION OF DMP CREATED NEW SUSTAINABILITY PLATFORM FOR WASTEWATER TREATMENT AND RECYCLING SYSTEMS

$56M OF OUTSTANDING COMMON STOCK REPURCHASED

KEY FACTS & FIGURES

NET SALES BY SEGMENT



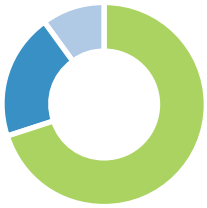
63% ELECTRONICS
37% INDUSTRIAL & SPECIALTY

NET SALES BY VERTICAL
ELECTRONICS



49% ASSEMBLY
34% CIRCUITRY
17% SEMICONDUCTOR

NET SALES BY VERTICAL
INDUSTRIAL & SPECIALTY



69% INDUSTRIAL
21% GRAPHICS
10% ENERGY

NET SALES BY REGION



30% AMERICAS
27% EMEA
43% ASIA

$1,854M NET SALES

42% GROSS MARGIN

50+ COUNTRIES

~40 GLOBAL MANUFACTURING FACILITIES

~2,400 PATENTS

$423M ADJ. EBITDA

23% ADJ. EBITDA MARGIN

~4,400 PEOPLE

15+ TECHNICAL & R&D CENTERS

~14,000 CUSTOMERS

For definitions and reconciliations of non-GAAP measures, see pages 7–8 of this 2020 Annual Report



element solutions

2020 ANNUAL REPORT
ON FORM 10-K

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

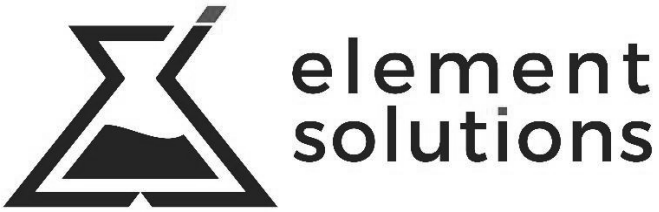
FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2020

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____

Commission file number: 001-36272



Element Solutions Inc
(Exact name of Registrant as specified in its charter)

Delaware		**37-1744899**
(State or other jurisdiction of incorporation or organization)		(I.R.S. Employer Identification No.)
500 East Broward Boulevard,	**Suite 1860**	**33394**
Fort Lauderdale, Florida		(Zip Code)
(Address of principal executive offices)		

Registrant's telephone number, including area code: (561) 207-9600

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 per share	ESI	New York Stock Exchange

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

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

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

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

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

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

The number of shares of common stock outstanding as of February 18, 2021 was 247,100,847. The aggregate market value of the common stock held by non-affiliates as of June 30, 2020 was approximately $2.25 billion, based upon the last reported sales price for such date on the New York Stock Exchange. All (i) executive officers and directors of the registrant and (ii) all persons who hold 10% or more of the registrant's outstanding common stock have been deemed, solely for the purpose of the foregoing calculation, to be "affiliates" of the registrant.

Documents Incorporated By Reference

Portions of the Company's definitive 2021 Proxy Statement are incorporated by reference into Part III of this 2020 Annual Report.

Element Solutions Inc

ANNUAL REPORT ON FORM 10-K

For the year ended December 31, 2020

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Terms	Definitions
Element Solutions; We; Us; Our; the Company	Element Solutions Inc, a Delaware corporation, and where the context requires, its subsidiaries or operating businesses.
Arysta	Arysta LifeScience Inc., a former subsidiary of Element Solutions which operated the Agricultural Solutions business prior to the Arysta Sale.
Arysta Sale	Sale of 100% of the issued and outstanding shares of common stock of Arysta and its subsidiaries to UPL Corporation Ltd. on January 31, 2019 for an aggregate purchase price of $4.28 billion in cash, after post-closing adjustments.
ASU	Accounting Standards Update.
Credit Agreement	Credit Agreement, dated as of January 31, 2019, as amended on November 26, 2019, among, inter alia, Element Solutions and MacDermid, as borrowers, certain subsidiaries of Element Solutions and the lenders from time to time parties thereto.
DMP Acquisition	Acquisition on July 1, 2020, from IWTS, LLC, of Industrial Water Treatment Solutions Corporation and its two subsidiaries, DMP Corporation and Industrial Specialty Chemicals, Inc., dba "DMP."
EBITDA	Earnings before interest, taxes, depreciation and amortization.
ESPP	Element Solutions Inc 2014 Employee Stock Purchase Plan.
E.U.	European Union.
Exchange Act	Securities Exchange Act of 1934, as amended.
FASB	Financial Accounting Standard Board.
GAAP	U.S. Generally Accepted Accounting Principles.
Kester Acquisition	Acquisition on December 2, 2019 of the Kester business from Illinois Tool Works Inc.
MacDermid	MacDermid, Incorporated, a Connecticut corporation and subsidiary of Element Solutions.
OEM	Original Equipment Manufacturer.
PDH	Platform Delaware Holdings, Inc., a former subsidiary of Element Solutions.
RSUs	Restricted stock units issued by Element Solutions from time to time under the 2013 Plan.
SEC	Securities and Exchange Commission.
Securities Act	Securities Act of 1933, as amended.
Series A Preferred Stock	Element Solutions' 2,000,000 shares of Series A convertible preferred stock, converted into shares of Element Solutions' common stock on February 25, 2020.
WACC	Weighted Average Cost of Capital.
2013 Plan	Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan.
2019 Annual Report	Element Solutions Inc's annual report on Form 10-K for the fiscal year ended December 31, 2019 filed with the SEC on February 28, 2020.
2020 Annual Report	This annual report on Form 10-K for the fiscal year ended December 31, 2020.
2021 Proxy Statement	Element Solutions' definitive proxy statement for its 2021 annual meeting of stockholders expected to be filed no later than 120 days after the Company's fiscal year end of December 31, 2020.
3.875% USD Notes due 2028	Element Solutions' $800 million aggregate principal amount of 3.875% senior notes due 2028, denominated in U.S. dollars, issued on August 18, 2020.
5.875% USD Notes due 2025	Element Solutions' $800 million aggregate principal amount of 5.875% senior notes due 2025, denominated in U.S. dollars, issued on November 24, 2017 and December 8, 2017 and redeemed on September 4, 2020.

Forward-Looking Statements

This 2020 Annual Report contains forward-looking statements that can be identified by words such as "expect," "anticipate," "project," "will," "should," "believe," "intend," "plan," "assume," "estimate," "predict," "seek," "continue," "outlook," "may," "might," "aim," "can have," "likely," "potential," "target," "hope," "goal" or "priority" and variations of such words and similar expressions. Many of the forward-looking statements include, but are not limited to, statements, beliefs, projections and expectations regarding the continuing economic impact of the coronavirus (COVID-19) pandemic on the global economy, our business, financial results, customers, suppliers, vendors and/or stock price, including the impact of governmental responses to the pandemic, the impact of variants of COVID-19 and the efficacy, availability and/or public acceptance of vaccines targeting COVID-19; capital requirements and need for and availability of financing; cost containment and cost savings; the impact of new accounting standards and accounting changes; share repurchases; our dividend policy and dividend declarations; our hedging activities; timing and outcome of environmental and legal matters; tax planning strategies and assessments; the Element Solutions Foundation and its charitable initiatives; impairments, including those on goodwill and other intangible assets; price volatility and cost environment; our liquidity, cash flows and capital allocation; funding sources; capital expenditures; debt and debt leverage ratio; off-balance sheet arrangements and contractual obligations; general views about future operating results; expected returns to stockholders; risk management programs; future prospects; and other events or developments that we expect or anticipate will occur in the future.

These forward-looking statements are based on our current expectations about future events and trends and do not directly relate to any historical or current facts. These statements are subject to a number of risks, uncertainties and assumptions, including those discussed in Part I, Item 1A, *Risk Factors,* of this 2020 Annual Report. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. In light of these risks, uncertainty and assumptions, our actual results may differ materially from the results anticipated or implied in the forward-looking statements.

Any forward-looking statement is based only on information currently available and speaks only as of the date on which it is made. We undertake no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise. Please consult any further disclosures on related subjects in our SEC filings.

Non-GAAP Financial Measures

This 2020 Annual Report contains non-GAAP financial measures, such as Adjusted EBITDA and operating results on a constant currency and organic basis. Non-GAAP financial measures should not be considered in isolation from, a substitute for, or superior to, performance measures calculated in accordance with GAAP. For additional information on these non-GAAP financial measures, including definitions, limitations and reconciliations to their most comparable applicable GAAP measures, see "*Non-GAAP Financial Measures"* in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, and Note 23, *Segment Information*, to the Consolidated Financial Statements, both included in this 2020 Annual Report.

Part I

Item 1. Business

Unless the context otherwise indicates or requires, all product names, trade names, trademarks, service marks or logos used in this 2020 Annual Report are part of the Company's intellectual property, although the "®" and "TM" trademark designations may have been omitted. For financial and other information about our segments and the geographic areas in which we do business, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7, "Financial Statements and Supplementary Data" in Part II, Item 8, as well as Note 1, "Background and Basis of Presentation" and Note 23, "Segment Information" to our audited Consolidated Financial Statements, all included in this 2020 Annual Report.

Business Overview

Element Solutions, incorporated in Delaware in January 2014, is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Our businesses provide products that, in substantially all cases, are consumed by customers as part of their production process, providing us with reliable and recurring revenue streams as the products are replenished in order to continue production. Our customers use our innovation as competitive advantages, relying on us to help them navigate through fast-paced, high-growth markets. Our product development and product extensions are expected to continue to drive sales growth in both new and existing markets, while expanding margins, through a consistent focus on increasing customer value propositions.

We generate revenue from the development, formulation and sale of our chemistry solutions globally. Our extensive global teams of specially trained scientists and engineers develop our products and our expert sales and service organizations ensure our customers' needs are met every day. We leverage close relationships with our customers and OEMs to execute our growth strategy and identify opportunities for new products. While our products typically represent only a small portion of our customers' costs, they are integral to our customers' manufacturing processes and overall product performance.

We believe the majority of our businesses hold strong positions in the high-growth markets they serve. Our strategy is based on a balance of operational excellence and prudent capital allocation. Our operating teams focus on the strong execution of customer-led product development, superior technical sales support and continuous supply chain optimization. Our senior leadership aims to foster an environment of accountability and success for our operating teams while also evaluating and executing on high-return capital allocation opportunities that can drive improvements in long-term shareholder value.

Acquisitions and Divestitures

We may pursue targeted and opportunistic acquisitions in our existing and adjacent end-markets that seek to strengthen our current businesses, expand and diversify our product offering, and enhance our growth and strategic position.

Our recent transactions included:

DMP Acquisition - On July 1, 2020, we completed the DMP Acquisition. The DMP business provides turnkey wastewater treatment and recycle and reuse solutions across multiple manufacturing industries. In connection with the DMP Acquisition, we launched MacDermid Envio Solutions, a new sustainable solutions platform within our Industrial & Specialty segment which focuses on helping customers reduce their environmental impact through proprietary chemistry, as well as equipment, for turnkey wastewater treatment and the recovery of metals and other valuable materials.

Kester Acquisition - On December 2, 2019, we completed the Kester Acquisition for $63.9 million net of cash, working capital and other closing adjustments, from Illinois Tool Works Inc. The Kester business, a global supplier of advanced technology assembly materials used in electronics assembly and semiconductor applications, complements our electronic Assembly and Semiconductor businesses.

Arysta Sale - The Arysta Sale was completed on January 31, 2019 for net cash proceeds of $4.28 billion, after post-closing adjustments. The proceeds of the Arysta Sale were primarily used to pay down in full our then existing credit facilities under our prior credit agreement.

Business Segments

The Company's operations are organized into two reportable segments: Electronics and Industrial & Specialty. In 2020, we achieved sales of $1.85 billion, to which our Electronics and Industrial & Specialty segments contributed approximately 63% and 37%, respectively. Neither of our segments is subject to significant seasonality, and both share a common focus on attractive niche markets, which we believe will grow faster than the diverse end-markets each segment serves.

These businesses generate revenue from the development, formulation and sale of their chemistry solutions globally. We leverage close relationships with customers and OEMs to execute our growth strategy and identify opportunities for new products. While our products typically represent only a small portion of our customers' costs, they are integral to our customers' manufacturing processes and overall product performance.

Our extensive global teams of specially trained scientists and engineers develop products while our expert sales and service organizations strive to ensure customer needs are met every day. We draw upon our broad and longstanding intellectual property portfolio and technical expertise and work closely with both customers and OEMs on an ongoing basis to develop proprietary solutions tailored to their manufacturing needs. We then seek to win qualifications and specifications into their supply-chains, which provides us with additional future revenue opportunity. We leverage our close relationships to execute our growth strategy by working directly with customers and OEMs to identify opportunities for new product development. Our continuous focus on customer-centric innovation serves as a catalyst to drive changes to existing formulations and to capitalize on adjacent market opportunities in our industry.

In addition, our employees provide highly technical service and support to customers and OEMs in conjunction with the sale of our products in order to optimize functional performance of the processes used at their manufacturing locations. Our specialty chemicals and processes are seen as integral to customer product performance. We believe that our customers place significant value on the consistency and quality represented by our brands, which help us secure significant market share, customer loyalty and supply chain access.

Electronics

Our Electronics segment researches, formulates and sells specialty chemicals and materials for all types of electronics hardware, from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the electronics manufacturing process and the functionality of end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways and its "assembly materials," such as solders, pastes, fluxes and adhesives, join those pathways together.

Our Electronics segment provides solutions through the following businesses:

Assembly Solutions - representing approximately 49% of the segment's 2020 net sales. Of our total net sales for Assembly Solutions, approximately 40% is metal content and we generally pass price fluctuations through to our customers. As a global supplier of solder technologies, fluxes, cleaners and other attachment materials for the electronics assembly industry, we develop innovative materials that join electronic circuits in high volume device manufacturing. Our high-performing interconnect materials are used to assemble consumer electronics from circuit boards, discrete electronic components, connectors and integrated circuit substrates. We believe our growth in this business will be driven by the increasing use of electronics in consumer, automotive, telecommunications, memory, medical, aerospace and other markets.

Circuitry Solutions - representing approximately 34% of the segment's 2020 net sales. As a global supplier of chemical formulations to the electronics industry, we design and manufacture proprietary liquid chemical processes ("baths") used by our customers to manufacture printed circuit boards. Our product portfolio is focused on specialized consumable chemical processes, such as surface treatments, circuit formation, primary metallization, electroplate and final finishes. We believe our growth in this business will be driven by demand in internet infrastructure, wireless devices, computers and the increasing use of electronics in automobiles.

Semiconductor Solutions - representing approximately 17% of the segment's 2020 net sales. As a global supplier to the semiconductor industry, we provide advanced copper interconnects, die attachment, wafer bump processes and photomask technologies to our customers for integrated circuit fabrication and semiconductor packaging. We believe our growth in this business will be driven by advanced electronics packaging, necessary to meet the growing needs of high performance computing, internet of things, 5G communications and the increasing content and complexity of electronics in automotive applications.

Products

A selection of Electronics' product offerings is presented below:

Assembly Solutions	
Electronic Assembly Materials	Chemicals and materials used in circuit board and electronic device assembly. Our product offering is primarily focused on solder technologies, including solder alloys, wires, pastes and preforms. The portfolio also includes fluxes, adhesives, encapsulants, cleaners and stencils, all of which facilitate wave solder and surface mount assembly activities. Our *Argomax* line of advanced sinter technology is used in power semiconductor and solid state lighting markets to improve reliability and device performance. Other key brands include *Alpha*, *Innolot*, *AccuFlux*, *Powerbond, Kester, TrueHeight and Alpha HiTech.*
Circuitry Solutions	
Circuit Board Metallization	Plating products are used to plate holes drilled through printed circuit boards to connect opposite sides of the board and multi-layered printed circuit boards. Products include *Shadow, Blackhole, MacuSpec*, *M-System and Systek*.
Circuit Formation Products	Circuit formation products represent an assortment of products for defining circuit patterns and bonding conductors to insulating materials.
Electronic Materials	Specialty products developed for evolving electronic applications including photovoltaics, memory disk and molded interconnect devices manufacturing as well as lead frame and dielectric plating solutions.
Surface Finishes	A portfolio of metallic and organic surface finishes that promote wire bondability, provide contact functionality and preserve solderability of the circuit board prior to component assembly. Key brands include *Sterling, Entek, Affinity and Ormecon*.
Semiconductor Solutions	
Semiconductor Materials & Packaging Applications	Our *Atrox* line of silver-filled die attach adhesives with high thermal and electrical conductive properties is used for semiconductor packaging applications. Our *Viaform* product family of copper damascene chemistry is used in semiconductor plating applications for creating conductors as narrow as 10 nanometers. Our *Microfab* family of plating chemistry is used in wafer level packaging applications, including copper pillar, redistribution layers (RDLs), nickel, tin bump, gold bump and thru-silicon via (TSV) applications.

Industrial & Specialty

Our Industrial & Specialty segment researches, formulates and sells specialty chemicals that enhance surfaces or improve industrial processes in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids in offshore energy production. These fully consumable products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end markets.

Our Industrial & Specialty segment provides solutions through the following businesses:

Industrial Solutions - representing approximately 69% of the segment's 2020 net sales. As a global supplier of industrial metal and plastic finishing chemistries, we primarily design and manufacture chemical systems that protect and decorate surfaces. Our high-performance functional coatings improve resistance to wear and tear, such as hard chrome plating of shock absorbers for cars or provide corrosion resistance for appliance parts. Our decorative performance coatings apply finishes for parts in various end markets, such as automotive interiors or jewelry surfaces. As part of our broader sustainable solutions platform, we also provide both chemistry and equipment for turnkey wastewater treatment and recycle and reuse solutions. Our industrial customer base is highly diverse and includes customers in the following end markets: appliances and electronics equipment; automotive parts; industrial parts; plumbing goods; construction equipment and transportation equipment. We believe our growth in this industry will be primarily driven by increased worldwide automobile production with elevated fashion elements and content per vehicle.

Graphics Solutions - representing approximately 21% of the segment's 2020 net sales. As a supplier of consumable materials used to transfer images on to consumer packaging materials, our products are used to improve print quality and printing productivity. We produce and market photopolymers through an extensive line of flexographic plates that are used in the consumer packaging and printing industries. Photopolymers are molecules that change properties upon exposure to light. Flexography is a printing process that utilizes flexible printing plates made of rubber or other flexible plastics. We believe

growth in this business will be driven by consumer demand and market shifts favoring the use of package imaging technologies that, like ours, offer a lower cost of ownership to customers.

Energy Solutions - representing approximately 10% of the segment's 2020 net sales. As a global supplier of specialized fluids to the offshore energy industry, we produce water-based hydraulic control fluids for major oil and gas companies and drilling contractors to be used in offshore deep-water production and drilling applications. We believe our growth in this business will be driven by continued capital expenditures in energy exploration and production.

Products

A selection of Industrial & Specialty's product offerings is presented below:

Industrial Solutions	
Electroless Nickel	Electroless nickel is applied to a variety of metal and plastic surfaces to enhance corrosion resistance, wear resistance, solderability and to repair worn or over-machined surfaces in a variety of applications.
Plating Products	The *CuMac* range of products for applications such as plating on aluminum wheels, plastic substrates and zinc-based die castings, and the *evolve* plating process used for chromium-free plating on plastics.
Pre-treatment and Cleaning Solutions	Pre-treatment and cleaning solutions are applied to prepare the surfaces of a wide variety of industrial products for subsequent treatment. This product family includes a complete line of aqueous and semi-aqueous pre-treatment and cleaning products.
Functional Conversion Coatings	Functional conversion coatings are applied to metals to enhance corrosion resistance and paint adhesion in a wide spectrum of industrial applications where heavy-duty usage and exposure to unfavorable environments are anticipated.
Hard-coated Films	Hard-coated films are used for the membrane switch in touch screen applications and the emerging technology of formable circuitry for durable human-machine-interface materials.
Wastewater Solutions	Wastewater treatment and recycling systems that allow for less waste discharge and a more sustainable use of resources including water, metals and other production inputs.
Water Treatment	*Fernox* is our water treatment product line used for the filtration, corrosion inhibition, and conditioning of water in residential and commercial boiler systems.
Graphic Solutions	
Solid Sheet Printing Elements	Solid sheet printing elements are digital and analog printing sheets, used in the flexographic printing and platemaking processes. Our extensive line of *Lux* flexographic plates are used in the commercial packaging letterpress newspaper and publication industries.
Liquid Imaging Products	Liquid products are liquid photopolymers used to produce printing plates for transferring images onto commercial packaging. Our key products are *LTL photopolymer*, *M Clear photopolymer* and *M Stamp 40 photopolymer*. We also offer products that are used in the production of liquid photopolymer plates such as substrate, coverfilms and detergents.
Energy Solutions	
Offshore Fluids	Production fluids are used to operate valves for the deep-water oil extraction and transportation process, and drilling fluids are used to operate valves for drilling rigs on the ocean floor. Production and drilling fluids are water-based hydraulic fluids used in subsea control systems.

Competitive Strengths

We believe the following competitive strengths differentiate our businesses from competitors and contribute to our ongoing success:

- ***Industry Leading Positions.*** We strategically focus on acquiring and maintaining leading positions in niche sectors of high-growth markets by offering innovative products and high value-added services to our customers. We believe our scale and global reach in product development, marketing and formulation provides us with advantages over many competitors, allowing us to maintain strong market share positions and drive profitable growth. Our strong market presence contributes to our ability to attract new customers and successfully enter new end-markets.

- ***Customer Driven Innovation.*** We frequently work alongside our customers and other industry participants to develop new products and identify new market opportunities. We participate in a variety of dynamic end-markets where new unmet needs are always materializing. Our sales and technical service teams provide continuous insights that help ensure our research and development efforts are appropriately focused. Customer requirements can lead to improved or uniquely tailored formulations of existing product offerings or to the development of completely new products to satisfy previously unmet needs. Tailoring products for specific OEMs leads to long-term relationships and significant customer switching costs.
- ***Comprehensive Offering of Critical Products.*** We provide our customers with a comprehensive offering of products that meet many of their specialty chemical needs. In many cases, we offer a full suite of products with complementary capabilities that provide a complete functional solution to the customer. We believe the ability to provide a "end-to-end" product offering is a significant competitive advantage over many of our smaller competitors. Additionally, we believe our breadth of touchpoints from circuit formation through circuit assembly is unique in the market and allows for a broader dialogue with customers. We also believe that our existing product offerings provide many opportunities for growth in adjacent end-markets.
- ***Stable Cash Flow and Low Capital Requirements.*** Our businesses typically generate high margins and require low capital expenditures, which translate into high cash flow margins and returns on capital. Instead of large investments in physical assets to sustain business or grow, we focus our investments on our technological innovation or sales and services areas. Our business involves the formulation of a broad range of specialty chemicals created by blending raw materials and incorporating them into multi-step technological processes. This model allows us to conservatively manage our investments in fixed assets to both maintain and grow. We believe our existing fixed asset base is well-maintained and, accordingly, requires low ongoing capital expenditures.
- ***Performance-Driven Culture, Experienced Management and Board with Proven Track Record.*** We place a premium on maintaining an expert and qualified employee base to provide innovative products and specialized technical service to our customers. We believe we have outstanding people who can deliver superior performance under the guidance and oversight of proven, experienced leadership. Our culture is performance-driven and decentralized. We empower our business teams and hold them accountable for their outcomes and business judgment. We measure our performance against industry benchmarks relating to efficiency growth and profitability, and drive operational excellence through continuous improvement. Our experienced management team is complemented by the Company's experienced Board of Directors, which includes individuals with proven track records of successfully acquiring and managing businesses. Our business segments are also led by executives that have extensive experience in their respective fields.

Business Strategies

We are building a best-in-class global specialty chemical solutions provider. Our primary long-term measures of success are the value we create for our customers, the growth opportunities we provide for our people and the growth in the intrinsic value of our shares, which is a byproduct of value to customers, a strong meritocratic culture and prudent capital allocation. We regularly develop new products and processes and leverage our existing technologies and global footprint to profitably enter new markets. Our efforts are directed by the following key business strategies:

- ***Commercial Excellence.*** We understand that reliably meeting our customers' needs through a focus on high-quality and reliable service leads to success for all parties. From product development and applications excellence through quality manufacturing and on-time delivery, we demand a customer-focus from all levels of the organization. We believe that we can capitalize on our existing technical capabilities, sophisticated process know-how, and strong industry relationships to enable customer success.
- ***Market Leading Innovation.*** Our customers participate in dynamic markets driven by innovation, which means that we too must place a strong emphasis on innovation. We work right alongside our customers to develop leading edge products based on our significant intellectual property portfolio, process experience, and technical expertise. Building on our core competencies in product innovation, applications development, and technical service should help drive organic growth. Innovation helps develop new high-growth markets and technologies and expand upon our existing portfolio with new products for current and adjacent markets.
- ***Enabling Sustainability.*** It is both socially responsible and commercially compelling to develop sustainable solutions that not only meet but exceed the increasingly stringent environmental standards of our customers and regulators. As part of our innovation and product development process, we actively partner with governments, industry groups and universities to develop commercially viable, environmentally friendly solutions for our customers use around the world. Enabling our customers to improve their environmental footprint will allow us to do well by doing good.

- ***Decisiveness and Action Orientation.*** A customer-oriented, customer-service driven organization requires decentralized decision making. We encourage our employees to make decisions and empower them to act swiftly to meet the ever-changing local needs of our customers. Clear communication, strong strategic alignment and a culture that rewards good judgement allow us to ensure the right decisions are being made by our trusted global workforce.
- ***Recruitment and Talent Development.*** Our success is a by-product of the efforts and capabilities of our people from our R&D laboratories to our customers' manufacturing floors. Our technical expertise and innovation track records are the result of a specialized, highly-skilled workforce. Our ability to drive profitable growth through technical process know-how, strong customer relationships and industry knowledge relies on our ability to attract, grow and retain a highly-skilled and motivated team at all levels of our organization.
- ***Disciplined and Prudent Capital Allocation.*** Our capital efficient business model translates to stable, substantial free cash flow. Our ability to grow the intrinsic value of our shares relies on deploying that capital prudently. We intend to be opportunistic with the allocation of our free cash flow and may pursue organic investments in priority markets, bolt-on and strategic acquisitions, as well as stockholder-friendly capital returns. Our investment decisions will be driven by comparing relative and absolute risk adjusted returns expectations.

Customers

Our businesses have diverse customer bases and sell products either directly to end-user customers or through intermediaries. We also have collaborative relationships with many OEMs and industry partners, who specify our chemistries and technologies for use in their products or grant us development rights to their intellectual property.

We believe that we are able to attract new customers successfully through our international reach, coupled with our local knowledge and on-the-ground presence, which enables us to meet the needs of our customers. We operate a relatively large number of small and medium-sized facilities located close to our customers throughout the world's major economic regions. This close proximity to our global customers' local sites enables access to all key growth markets and along with our efficient formulation process, allows for "just in time" supply chain management.

We believe that our businesses are not materially dependent upon any single customer, with no customer representing 10% or more of our consolidated net sales in 2020, 2019 or 2018.

Due to the relatively short cycle times in the majority of our business, our order backlog levels are minimal.

Selling & Marketing

We employ a customer-centric and highly-technical sales and marketing force worldwide. These professionals have technical expertise, local market knowledge and intimate customer relationships. Our local sales and marketing teams closely monitor their market trends and maintain active dialogue with our customers to assess and understand their constantly evolving challenges. We use this information from our local sales teams to anticipate future needs and respond rapidly to changing market conditions or technologies in order to deliver customized, value-added solutions to our customers. This feedback loop is an important source of new product ideas and helps guide our capital allocation decisions and research and development initiatives.

Our methods for selling and marketing our proprietary products vary slightly by geographic region. In total, we generate business through the efforts of regional sales, technical and service personnel, as well as distributors. In addition to regional sales and service staff, we maintain a group of global personnel focused on coordinating sales projects and obtaining design specifications for complex projects involving multiple customers within the manufacturing supply chain.

Human Capital Management

We strive to embody the five elements of our culture, our "5 Cs": Challenge, Commit, Collaborate, Choose and Care. These core values are the foundation of our organization. We believe they reinforce our strategic objectives and empower our employees when serving and engaging with our customers.

With our focus on innovation and service, our success depends upon our continued ability to hire, retain, engage and leverage highly skilled employees. In addition, we believe that an inclusive and diverse team drives innovation, which in turn allows us to compete effectively. To that end, we are committed to fostering an inclusive, safe and rewarding workplace that attracts and retains qualified talent.

At December 31, 2020, we employed over 4,400 full-time employees, of which approximately 40% are research and development chemists, experienced technical service and technical sales personnel. Our full-time employees are based throughout the world, with approximately 80% employed outside of the U.S. In certain countries where we operate, our employees are also members of unions or are represented by works councils. We believe our relationships with our employees and collective bargaining unions are satisfactory.

As a chemical company, the safety of our employees is key. We have implemented policies, safety programs and management systems to promote a healthy and safe workplace. In the context of the COVID-19 pandemic, we took certain proactive steps designed to preserve business continuity while keeping our colleagues safe.

In 2020, we appointed a Vice President of Talent, who is responsible for our human capital management efforts, including promoting diversity and inclusion, as well as developing our training, advancement and retention practices for our global workforce. We are committed to the continued development of our people. We offer many training opportunities to cultivate talent, improve targeted skills and facilitate internal mobility to create a high-performing and diverse workforce.

We communicate frequently with our employees through a variety of methods, including town hall meetings, our Company intranet and emails. To evaluate our employee experience and retention efforts, we conduct global employee culture surveys. We also survey our customers to gauge customer satisfaction and expectations.

Research and Development

Continued investment in research and development ensures that we remain ahead of emerging trends and continue to strengthen our strong positions in our market niches. Our research and development activities are also focused on developing products and improving formulations and processes that we expect will drive growth or otherwise add value to both our core business operations and customers. We accelerate market introductions and increase the impact of our local product offerings through collaboration with partners in the academic and commercial sectors (customers and value-chain partners) and by working with customers and OEMs on tailored application development around the world through our technical service teams. We plan to continue to make meaningful investments in a broad range of research and development efforts.

Our commitment to technological innovation and our extensive intellectual property portfolio enables us to develop differentiated products at the forefront of technological advances. Research resulting in new, proprietary formulations is performed principally in Germany, Great Britain, India, Singapore, and the United States. During 2020, our research and development expenses totaled $48.6 million. The majority of research and development activity was performed internally, with the exception of $6.3 million related to the acquisition of a new subsea production control fluid in the first quarter of 2020. See Note 8, *Goodwill and Intangible Assets*, to the Consolidated Financial Statements included in this 2020 Annual Report for additional information.

Competitive Environment

Our markets are competitive and subject to rapid changes in technology. Our businesses compete in markets for specialty chemicals for electronic applications, general metal and plastic finishing, offshore oil and gas exploration and production, and consumer packaging.

Our businesses compete primarily on the basis of quality, technology, performance, reliability, brand, reputation, range of products and services, and service and support. We maintain extensive technical support and testing services for our customers and are continuously developing new products to meet their needs. Further consolidation within our industry or other changes in the competitive environment could result in larger competitors that compete with us across several business areas. In addition, some of our competitors may have greater financial, technical and marketing resources than we do and may be able to devote greater resources to promoting and selling certain products. We believe, however, that our ability to manufacture, sell, service and develop new products and applications, enable us to compete successfully. Some large competitors operate globally, as we do, but most operate only locally or regionally. We also face competition from many smaller companies that specialize in particular segments of the markets in which we compete.

The specific competitive environment of each of our segments is described below:

Electronics

Our Electronics segment provides a broad line of proprietary chemical compounds and supporting services, and broadly competes within the specialty chemicals industry. Although competition varies by end-market and geography, our most significant competitors are Atotech Inc., DuPont de Nemours, Inc., Senju Metal Industry Co. and Uyemura International.

Industrial & Specialty

Our Industrial & Specialty segment provides a broad line of proprietary chemical compounds and supporting services, and broadly competes within the specialty chemicals industry. Although competition varies by end-market and geography, our most significant competitors are Atotech Inc., DuPont de Nemours, Inc., BP p.l.c., Miraclon Corp and Flint Group.

Sources and Availability of Raw Materials

Our businesses formulate a broad range of specialty chemicals, which we create by blending raw materials and incorporating them into multi-step technological processes. Our global operations depend upon obtaining adequate supplies of raw materials on a timely basis. We typically purchase our major raw materials as-needed from outside sources and we work closely with these suppliers to help ensure continuity of supply while maintaining high quality and reliability. As part of our sustainability efforts, we recycle certain raw materials, primarily tin, in our own smelting and refining facility in the U.S. for further use in our manufacturing process. The raw materials that are of greatest importance to our global operations are, in most cases, obtainable from multiple conformant sources worldwide.

Patents, Trademarks and Proprietary Products

We maintain an extensive intellectual property portfolio, which we developed or acquired over a number of years. This portfolio includes a combination of patents, copyrights, trade secrets, trade names, trademarks and other forms of intellectual property rights in major markets and other commercially-relevant jurisdictions worldwide. Although we believe the ownership of such intellectual property rights is an important factor in our businesses, we also rely on the innovative skills, technical competence and selling abilities of our personnel.

We regularly file patent applications to protect innovations arising from our research and development. At December 31, 2020, we owned, had applications pending, or licensed the rights to, approximately 2,400 domestic and foreign patents, which have remaining lives of varying duration. Although certain of these patents are important to our business, no specific group or groups of intellectual property rights are material, and we have many proprietary products which are not covered by patents.

We also rely on confidentiality agreements and patent, trade secret, trademark and copyright law as well as judicial enforcement to protect our technologies, processes, product composition, formulations and other intellectual property rights. In addition, we implement confidentiality procedures, contractual exclusivity and other rights necessary to protect our proprietary intellectual property, formulations, processes and other product-related rights. We also enter into invention or patent assignment agreements, when applicable, with our employees, consultants, contractors and other third-parties who may be engaged in discovery or development of intellectual property and other proprietary rights. Finally, we seek to include provisions in our material transfer agreements, license and development agreements and other agreements that provide for the transfer of intellectual property rights back to us to the greatest extent possible under the circumstances of any specific transaction and development project.

Government Regulations

As a global manufacturer and distributor of specialty chemicals, our operations are subject to extensive domestic and foreign laws, regulations, rules and ordinances relating to safety, health and environmental matters (or SH&E requirements), including product safety, worker health and safety and environmental protection matters, such as discharges of pollutants, the management, handling, generation, emission, release, discharge, treatment, storage and disposal of hazardous substances and wastes and the cleanup of contaminated properties.

Compliance with SH&E requirements has not had, and in the future is not expected to have, a material effect on our capital expenditures, results of operations and competitive position as compared to prior periods. However, current governmental, regulatory and societal demands for increasing levels of product safety and environmental protection are resulting in increased pressure for more stringent regulatory control with respect to the chemical industry. We expect that this trend of increased regulation will continue in the future and we cannot predict with any certainty that future material capital expenditures or incremental operating expenses will not be required in order to ensure compliance.

In addition, with respect to environmental laws and regulations, we may in the future incur significant costs, including cleanup costs and fines or penalties, and face third-party claims for property or natural resource damage or personal injuries relating to past or future violations of, or liabilities under, such laws and regulations. We believe that we are in material compliance with such laws and regulations, and at December 31, 2020, we believe we had appropriate liabilities recorded for our various environmental matters.

Available Information

Our internet website address is *www.elementsolutionsinc.com*. We make available free of charge, through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, and proxy statements for our annual meetings of stockholders as soon as reasonably practicable after these are electronically filed with or furnished to the SEC. The SEC also maintains an internet website available at *www.sec.gov* that contains reports, proxy and information statements and other information filed by issuers, such as Element Solutions.

The information on or linked to our website is neither a part of nor incorporated by reference into this 2020 Annual Report or any of our other SEC filings.

Corporate Information

Our principal executive offices are located at 500 East Broward Boulevard, Suite 1860, Fort Lauderdale, Florida 33394 and our telephone number is (561) 207-9600.

Item 1A. Risk Factors

The following discussion of "risk factors" identifies the material factors that may adversely affect our business, financial condition or results of operations. Potential investors should carefully consider these risks and the other information in this 2020 Annual Report when evaluating our business. This discussion is not all inclusive and additional risks that are currently unknown to us or that we currently consider to be immaterial may also impair our business operations and cause our future results to differ from our expectations.

BUSINESS & OPERATIONAL RISK FACTORS

The extent of the impact of the COVID-19 pandemic on our results of operations and overall financial performance remains uncertain and subject to change.

The outbreak of COVID-19 has evolved into a global pandemic that negatively impacts the global economy, disrupts global supply chains and creates significant volatility in commercial and financial markets. The extent to which this pandemic will continue to impact our business or our future results of operations, financial condition, expected cash flows and/or stock price is currently unknown and will depend on the duration of the pandemic; the efficacy, availability and/or public acceptance of vaccines targeting COVID-19; the impact of variants of COVID-19 that may affect its spread or virulence or the effectiveness of vaccines on the virus; and other numerous and evolving factors that at this time are highly uncertain, vary by market and cannot be accurately predicted or quantified.

These factors include the effect of actions taken or that might be taken by governments, businesses or individuals to contain or reduce the repercussions of the pandemic and mitigate its economic implications; evolving macroeconomic factors, including general economic uncertainty, unemployment rates, and recessionary pressures; decreased consumer spending levels; reduction or changes in customer demand for our products and services; our ability to manufacture, sell and provide our products and services, including as a result of travel restrictions, closed borders, operating restrictions imposed on our facilities or reduced ability of our employees to continue to work efficiently; increased operating costs (whether as a results of changes to our supply chain or increases in employee costs or otherwise); collectability of customer accounts; additional and prolonged devaluation of other countries' currencies relative to the dollar; and the general impact of the pandemic on our customers, employees, suppliers, vendors and other stakeholders. Additionally, customers might defer decision making, delay orders or seek to renegotiate or terminate existing agreements. Our management is focused on mitigating the impact of the pandemic, which has required and will continue to require a substantial investment of time and resources across our Company and could delay other value-added initiatives. These factors could materially adversely affect our future business and our future results of operations, financial condition, expected cash flows and/or stock price, and the actual results that we will experience may differ materially from our estimates.

We may be unable to compete successfully in the competitive markets in which we operate and, as a result, we may experience pricing pressure, fewer customer orders, reduced margins and the loss of market share.

We may be unable to compete successfully in the competitive markets in which we operate. In these markets, we encounter competition from numerous and varied competitors in all areas of our business. Some of our competitors have longer operating histories, greater resources and greater brand recognition, and a larger base of customers than we do. As a result, we may lose business if we are unable to devote greater resources to the research and development, manufacturing, formulation, promotion, sale or support of our products, withstand adverse changes in economic conditions or prices of raw materials, and/or maintain competitive pricing. In addition, our competitors could enter into exclusive arrangements with our existing or potential customers or suppliers which could limit our ability to generate sales, acquire necessary raw materials and/or significantly increase costs.

The markets in which we operate are driven by consumer preferences that are rapidly changing as well as frequent new product introductions and improvements. As a result, we must develop new products and services that offer distinct value to our customers in order to compete successfully. We seek to provide products tailored to the often-unique and evolving needs of our customers which require an ongoing level of innovation. Our inability to anticipate customers' changing needs or adapt to emerging technological and business trends accurately, control research and development costs or execute our innovation strategy could adversely affect our ability to sustain our market positions and/or penetrate new markets.

Consolidation of our competitors could also place us at a competitive disadvantage and reduce our profitability. We operate in industries which are fragmented on a global scale, but in which there has been a trend toward consolidation in recent years. Consolidations of our competitors may jeopardize the strength of our positions in one or more of our markets which could adversely affect our business, financial condition or results of operations, as well as our growth potential.

If we don't successfully execute our go-to-market strategy, our business and financial performance may suffer.

Our go-to-market strategy is focused on leveraging our existing portfolio of products and services as well as introducing new products and services to meet the demands of our customers in a continually changing technological landscape. To successfully execute this strategy, we must emphasize the aspects of our core business where demand remains strong, identify and capitalize on organic growth, and innovate and develop new products and services that will enable us to expand beyond our existing technology categories. Any failure to successfully execute this strategy, including any failure to invest sufficiently in strategic growth areas, could adversely affect our business, financial condition or results of operations.

In addition, the process of developing new high-technology products and services and enhancing existing products and services is complex, costly and uncertain. After we develop a product, we must be able to manufacture appropriate volumes quickly while also managing costs and maintaining the high quality level that our customers expect. To this end, we must accurately forecast volumes, mixes of products and configurations that meet customer requirements. Any delay in the development, forecast, production or marketing of a new product, service or solution could result in us not being among the first to market which could further harm our competitive position.

Our substantial international operations subject us to risks of doing business in foreign countries which could affect our business, financial condition or results of operations.

Our products are manufactured, formulated, distributed and sold globally. In 2020, approximately 74% of our net sales were generated from non-U.S. operations. As a result, we face certain risks inherent in international trade which may reduce our international sales and harm our business, including:

- fluctuations in currency values and foreign currency exchange rates;
- political instability, war, terrorism and other political risks;
- adverse tax consequences, including as a result of transfer pricing practices involving our foreign operations, and additional withholding taxes or other taxes on foreign income;
- foreign exchange controls or other currency restrictions and limitation on the movement of funds, potentially leading to the inability to readily repatriate earnings from foreign operations effectively;
- establishing and maintaining relationships with local distributors and OEMs;
- global trade barriers, including tariff increases and retaliations, restrictive regulations and potential boycotts;
- instability in certain countries and negative impact on the global economy;
- import and export control and licensing requirements;
- public health crises, including the occurrence of contagious diseases or illnesses, such as the COVID-19 pandemic;
- business cultures accepting of various levels of corruption;
- compliance with a variety of U.S. laws, including the Foreign Corrupt Practices Act of 1977 and the United Kingdom Bribery Act 2010, the anti-bribery laws of other countries and rules regarding conflict minerals by us, our employees, suppliers or distributors;
- compliance with a variety of foreign laws and regulations, including unexpected changes in taxation and regulatory requirements;
- greater difficulty in safeguarding intellectual property than in the U.S.;
- difficulty in staffing and managing geographically diverse operations; and
- challenges in maintaining an effective internal control environment, including language and cultural differences, varying levels of GAAP expertise and internal control over financial reporting.

Any of these risks could impact our ability to manufacture, source, sell or export our products or repatriate profits. We could also experience a loss of sales and profitability from our international operations, and/or a substantial impairment or loss of assets, any of which could have a material adverse impact on our business, financial condition or results of operations.

Additionally, changes in U.S. policy regarding international trade, including import and export regulation and international trade agreements, could negatively impact our business. For example, trade tensions between the U.S. and China and other countries have led to a series of tariffs being imposed by the U.S. on certain goods imported from those countries and have resulted in retaliatory tariffs by their governments. At this time, it is unclear how long U.S. tariffs on these goods will remain in effect or whether additional tariffs will be imposed. Additional tariffs that may be imposed by the U.S., or further retaliatory trade measures that may be taken in response, by China or other countries, could result in an increase in supply chain costs that we may not be able to offset or that otherwise may adversely impact our results of operations.

Similarly, the U.K.'s exit from the E.U., commonly referred to as "Brexit," has created uncertainties affecting business operations in the U.K. and the E.U., and possibly other countries, including with respect to compliance with the regulatory regimes regarding the labeling and registration of the products we sell in these markets. The U.K. formally left the E.U. on January 31, 2020, starting an 11-month transition period in which a new trading relationship for goods and services was to be negotiated. On December 24, 2020, the U.K. and E.U. announced they had entered into a post-Brexit deal on certain aspects of trade and other strategic and political issues. While we have taken steps to mitigate any disruption to our operations by Brexit, we cannot predict the future implications of the post-Brexit deal and could face increased regulatory costs, further volatility in the global stock markets and currency exchange rates, and other related risks which could result in a negative impact on our business, financial condition or results of operations.

Failure to attract and retain key personnel, including our executive officers, or effectively manage succession could have an adverse impact on our business, financial condition or results of operations.

Our business involves complex operations and, therefore, our success depends to a significant degree on the skills, experience and efforts of our executive management and other key personnel and their ability to provide uninterrupted leadership and direction. In addition, due to the specialized and technical nature of our business, our future performance depends upon our ability to attract, develop and retain skilled employees, such as our specialized research and development and sales and service personnel, in order to maintain our efficient production processes, drive innovation in our product offerings and maintain our deep customer relationships. The failure to attract and retain key personnel, or effectively manage succession, could have an adverse material impact on our business, financial condition or results of operations.

In addition, we are highly dependent on the experience and track records of Sir Martin E. Franklin, our other Board members and our executive leadership team. If one or more of our executive officers or Board members were to cease to be employed by us or to serve as directors, or if we were unable to replace them in a timely manner, our business, financial condition, results of operations and/or stock price could be adversely affected.

Our reliance on certain key customers, contract manufacturers and suppliers could adversely affect our overall sales and profitability.

Although we believe our business is not materially dependent upon any single customer, the loss of one or more key customers may impair our results of operations for the affected earnings periods. In addition, there is limited available manufacturing capacity that meets our quality standards and regulatory requirements. If we are unable to arrange for sufficient production capacity among our suppliers or contract manufacturers, or if our suppliers or contract manufacturers encounter production, quality, financial or other difficulties (including due to the COVID-19 pandemic or labor or geopolitical disturbances), we may be unable to meet our customers' demands. Finally, we rely on independent distributors to distribute our products and to assist us with the marketing and sale of certain of our products. There can be no assurance that our distributors will focus adequate resources on selling our products to end users, or will be successful in selling our products, which could materially adversely affect our business and results of operations.

We may not realize the anticipated benefits of acquisitions or divestitures which may adversely affect our existing businesses, reputation and financial condition.

We have in the past completed several acquisitions and divestitures and may in the future pursue additional opportunistic strategic transactions. Our ability to benefit from acquisitions or divestitures depends on many factors, including our ability to negotiate favorable transaction terms, close such transactions in a timely and cost-effective manner and successfully integrate any businesses we acquire.

With respect to acquisitions, we may be exposed to successor liability relating to actions taken before the acquisition. The due diligence we conduct in connection with an acquisition, the controls and policies we implement and any contractual guarantees or indemnities that we receive from the sellers of acquired companies or assets may not be sufficient to protect us from, or compensate us for, actual liabilities. Acquisitions also involve compliance and reputational risks, as well as risks relating to differing levels of management and internal control effectiveness, systems integration, impairment charges relating to recorded goodwill and intangible assets, significant accounting charges and expenses resulting from the completion and integration of a sizable acquisition and the need to fund increased capital expenditures, working capital requirements and employee retention.

In addition to unanticipated delays, costs and other issues, divestitures may expose us to liabilities or claims for indemnification for retained liabilities or indemnification obligations associated with the assets or businesses that we sell. The magnitude of any such retained liability or indemnification obligation may be difficult to quantify at the time of the transaction, as it was the case for certain liabilities retained in connection with the Arysta Sale and described under Note 5, *Discontinued Operations,* to the

Consolidated Financial Statements included in this 2020 Annual Report. We cannot predict the ultimate resolution of these matters, and there can be no assurance that any such resolution, which may take several years, will not adversely impact our financial position or results of operations.

INDUSTRY RISK FACTORS

Industry and consumer trends may cause significant fluctuations in our results of operations and have a material adverse effect on our financial condition.

The specialty chemical industry is subject to constant and rapid technological change, product obsolescence, price erosion, evolving standards, finite product lifecycles, raw material price fluctuations, and changes in product supply and demand. For example, the mobile device market, particularly smartphones and tablets, is characterized by rapidly changing market conditions, frequent product introductions and intense competition based on features and price, which could impact our sale volumes and margins. In the automotive industry, demand for our products and services may be affected by technological advances, changing automotive OEM specifications and other factors that impact production levels of our customers that we cannot control, such as interest rates, fuel prices, shifts in vehicle mix, consumer confidence, regulatory and legislative oversight requirements and trade agreements. In addition, technological changes in our customers' products or processes may make certain of our specialty chemicals unnecessary or obsolete. Customers also have found, and may continue to find, alternative materials or processes which no longer require our products. Finally, the specialty chemical industry is currently being affected by globalization and a shift in customers' businesses. All these factors, consumer trends and industry characteristics may impact the demand for our products which may cause significant fluctuations in our results of operations and adversely affect our financial condition and cash flow.

Fluctuations in the supply and prices of raw materials may negatively impact our business, financial condition or results of operations.

The unavailability or increased prices of raw materials could have a material adverse impact on our business, financial condition or results of operations. We use a variety of specialty and commodity chemicals in our formulation processes, and such formulation operations depend upon obtaining adequate supplies of raw materials on a timely basis. We typically purchase our major raw materials under existing supply agreements or on an as-needed basis from outside sources. The availability and prices of raw materials may be subject to curtailment or change due to, among other things, the financial stability of our suppliers, new laws or regulations, protectionist nationalistic trade policies and practices, changes in exchange rates and worldwide price levels. In some cases, we are limited in our ability to purchase certain raw materials from other suppliers by our supply agreements which contain certain minimum purchase requirements.

The requirement of the Dodd-Frank Wall Street Reform and Consumer Protection Act, relating to the annual disclosure of a company's use of conflict minerals (tin, tantalum, tungsten, or gold) mined from covered countries (Democratic Republic of the Congo and adjoining countries) in its products could affect the sourcing, pricing, and availability of these conflict minerals. If only a limited pool of our suppliers can demonstrate that they do not source any conflict minerals from the covered countries or as permitted under the conflict minerals rules, we may not be able to obtain conformant conflict minerals in sufficient quantities or at competitive prices.

Commodities and energy prices are subject to volatility caused by market fluctuations, supply and demand, currency fluctuations, production and transportation disruptions, climate change and weather conditions and other world events. As we source many of our raw materials globally to help ensure quality control, if the cost of energy, shipping or transportation increases and we are unable to pass along those costs to our customers, our profit margins and working capital would be adversely impacted. Also, increasing our prices could result in long-term sales declines or loss of market share if our customers were to find alternative suppliers or choose to reformulate their consumer products to use fewer ingredients, which could have an adverse long-term impact on our business, financial condition or results of operations. If we are unable to price our products competitively to timely reflect volatility in prices of raw materials or if we do not accurately estimate the amount of raw materials needed for a specific geographic region, our margins could be adversely affected.

LEGAL & REGULATORY RISK FACTORS

Intellectual Property

If we are unable to protect our intellectual property rights, our business, financial condition or results of operations could be adversely affected.

Protection of our proprietary processes, methods, formulations and other technology is important to our business. To protect our intellectual property rights, we generally rely on patent, trade secret, trademark and copyright laws of the U.S. and certain other countries, in which our products are manufactured or sold, as well as nondisclosure and confidentiality agreements. The laws of other countries may not protect our intellectual property rights to the same extent as the laws of the U.S. Failure to protect our existing intellectual property rights, domestically or internationally, may result in the loss of valuable technologies and our competitors offering similar products, potentially resulting in the loss of one or more competitive advances and decreased sales and/or market shares. Additionally, we rely in some cases upon unpatented proprietary manufacturing expertise, continuing technological innovation and other trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality agreements with our employees and third-parties to protect our intellectual property, our confidentiality agreements could be breached and may not provide meaningful protection for, or adequate remedies to protect, our trade secrets or proprietary manufacturing expertise in the event of unauthorized use or disclosure of information.

Further, protecting against the unauthorized use of our products, technology and other proprietary rights is difficult, time-consuming and expensive, and we cannot be certain that the steps we are taking will prevent or minimize the risks of such unauthorized use. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could also result in substantial costs and diversion of resources, which could significantly harm our results of operations and reputation.

Additionally, we could face patent infringement claims from our competitors or others alleging that our processes or products infringe on their proprietary technologies. If we are found to be infringing on the proprietary technology of others, we may be liable for material damages and/or be required to change our processes, redesign our products partially or completely, pay to use the technology of others, stop using certain technologies or stop producing the infringing product entirely. Regardless of the merit of these claims, they can be time-consuming, divert the time and attention of our management and technical personnel, and result in costly litigation. Any settlement or adverse judgment resulting from such litigation could also prevent us from offering certain of our products and/or require us to obtain a license to continue to use the intellectual property rights that are the subject of the claim, or otherwise restrict or prohibit our use of such intellectual property rights. Any required licensing fees may not be available to us on acceptable terms, if at all.

Finally, our exposure to risks associated with the use of intellectual property may increase as a result of acquisitions, as we would have a lower level of visibility into the development process with respect to such technology and the steps taken to safeguard against the risks of infringing the rights of third parties.

Global Regulations

Changes in tax laws and regulations or exposure to additional tax liabilities could adversely affect our financial condition, results of operations and liquidity.

We are subject to U.S. federal and state, and other countries' and jurisdictions' income, payroll, property, sales and use, and other types of taxes. Tax laws and regulations may not be clear or consistently applied and are subject to sudden change. Changes in tax rates, enactment of new tax laws, revisions of tax regulations, and claims or litigation with taxing authorities may require significant judgment in determining the appropriate provision and related accruals for these taxes. As a result of these uncertainties, we could be subject to substantially higher taxes, which could have a significant adverse effect on our financial condition, results of operations and liquidity.

Currently, a significant amount of our net sales are generated from customers located outside of the U.S., and a large portion of our assets and employees are located outside of the U.S. The U.S., the E.U. and its member states, along with numerous other countries, are currently engaged in establishing fundamental changes to tax laws affecting the taxation of multinational corporations. For example, the Tax Cuts and Jobs Act of 2017 (or TCJA), enacted on December 22, 2017, contained significant changes to certain U.S. tax laws relevant to us. Regulatory guidance on the TCJA remains limited and to date, the TCJA has had an adverse effect on the U.S. federal income taxation of our operations, including significantly limiting interest expense deductions and imposing new U.S. taxes on certain earnings of non-U.S. entities on a current basis. In addition, the recent change of U.S. administration could lead to changes in tax laws, including a proposed increase in the U.S. corporate income tax

rate, increased U.S. taxation of certain earnings of foreign subsidiaries, the creation of a penalty on certain imports and a minimum tax on worldwide book income. These proposals (if enacted, in whole or in part) and other potential changes in U.S. and/or non-U.S. tax law could materially impact our tax provision, cash tax obligations and negatively impact our cash flows in the future. See Note 11, *Income Taxes*, to the Consolidated Financial Statements included in this 2020 Annual Report for additional information.

We are also subject to the examination of our income tax returns by the U.S. Internal Revenue Service and non-U.S. tax authorities in the countries and jurisdictions in which we operate at the discretion of such tax authorities, and we may be subject to further tax assessments as a result of such audits in the future. During these audits, tax authorities may disagree with our intercompany charges, cross-jurisdictional transfer pricing or other matters, and may assess additional taxes as a result. There can be no assurance that we will accurately predict the outcomes of these audits, and any amounts ultimately paid upon resolution of such audits could be materially different from the amounts previously included in our tax expense, and therefore could have a material impact on our tax provision, net income and cash flow.

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

The hazards associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes are inherent in our operations as our research and development, manufacturing, formulating and packaging activities involve the use of hazardous materials and the generation of hazardous waste. We cannot eliminate the risk of accidental contamination, discharge or injury resulting from those materials. Also, our suppliers or contract manufacturers may use and/or generate hazardous materials in connection with producing our products. We may be required to indemnify our suppliers, contract manufacturers or waste disposal contractors against damages and other liabilities arising out of the production, handling or storage of our products or raw materials or the disposal of related wastes. Potential risks include explosions and fires, chemical spills and other discharges or releases of toxic or hazardous substances or gases, and pipeline and storage tank leaks and ruptures. Those 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 fines, penalties and other sanctions, cleanup costs, and claims by governmental entities or third-parties. We are dependent on the continued operation of our production facilities (including third-party manufacturing on a tolling basis), and the loss or shutdown of operations over an extended period could have a material adverse effect on our financial condition or results of operations.

Our operations currently use, and have historically used, hazardous materials and generate, and have historically generated, quantities of hazardous waste. As a result, we are subject to regulatory oversight and investigation, remediation, and monitoring obligations at our current and former Superfund sites, as well as third-party disposal sites, under federal laws and their state and local analogues, including the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, the Clean Air Act, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as well as analogous foreign laws. We are also subject to ongoing obligations at active sites in the U.S. and are conducting closure activities pursuant to the RCRA and CERCLA at several of our sites in the U.S. The costs and liabilities associated with these issues may be substantial and, to the extent not covered by insurance, may materially impact the financial health of the Company.

Our products are subject to numerous, complex government regulations and compliance with these regulations could require us to incur additional costs or to reformulate or discontinue certain of our products.

Our products are subject to numerous, complex federal, state, local and foreign customs regulations, imports and international trade laws, export control, antitrust laws, environmental and chemicals manufacturing, global climate change, health and safety requirements and zoning and occupancy laws that regulate manufacturers generally or govern the importation, promotion and sale of our products, the operation of factories and warehouse facilities and our relationship with our customers, suppliers, employees and competitors.

Our products and manufacturing processes are also subject to numerous regulations and ongoing reviews by certain governmental authorities. Governmental, regulatory and societal demands for increasing levels of product safety and environmental protection are resulting in increased pressure for more stringent regulatory control with respect to the chemical industry. The European Union's REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulations enacted in 2009 have been a continuing source of compliance obligations and restrictions on certain chemicals, and REACH-like regimes have now been adopted in several other countries. In the U.S., the core provisions of the Toxic Substances Control Act (TSCA) were amended in June 2016 for the first time in 40 years. Among the more significant changes are mandatory safety reviews of existing "high priority" chemicals and regulatory actions to control any "unreasonable risks" identified as a result of such reviews. The U.S. Environmental Protection Agency (EPA) also must find no "unreasonable risk" associated

with any new chemical before it can be fully commercialized. These new mandates create uncertainty about whether existing chemicals of importance to our business may be designated for restriction and whether any new chemical approval process may become more difficult and costly. Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act relating to the use in our products of certain "conflict minerals" that are mined from the Democratic Republic of Congo and adjoining countries, and similar laws in other jurisdictions, also apply to us. All of these regulations and these types of changes in the Company's regulatory environment, particularly, but not limited to, in the U.S., the E.U. and China, may require us to re-design our products or supply chain to ensure compliance with the applicable standards; for example, by requiring the use of different types or sources of materials, which could have an adverse impact on the efficiency of our manufacturing process, the performance of our products, add greater testing lead-times for product introductions or other similar effects, which could materially alter our market share and reputation, or otherwise have a material adverse effect on our business, financial condition and results of operations.

In addition, we have incurred, are incurring and will incur in the future, costs and capital expenditures to comply with environmental, health and safety laws and regulations. For example, we have several product lines that rely on lead-based solder and many others that historically did so. Legal claims have been brought alleging harmful exposures or contamination as a result of lead-based solder, and it is possible that we may face additional claims in the future. We are also currently involved in various environmental investigations due to historic operations. Liability under some environmental laws relating to contaminated sites can be joint and several and imposed retroactively, regardless of fault or the legality of the activities that gave rise to the contamination. Some of our formulating and manufacturing facilities have an extended history of chemical formulating and manufacturing operations or other industrial activities, and contaminants have been detected at some of our sites and offsite disposal locations. Ultimate environmental costs and liabilities are difficult to predict and may significantly vary from current estimates. To the extent available, we maintain what we believe to be adequate insurance coverage. However, there can be assurance that we won't incur losses beyond the limits or outside the terms of such coverage. In addition, the discovery of additional contaminants, the inability or failure of other liable parties to satisfy their obligations, the imposition of additional cleanup obligations, or the commencement of related third-party claims could result in additional material costs and negatively impact our financial condition or results of operations.

Although it is our policy to comply with such laws and regulations, it is possible that we have not been, or may not be at all times, in material compliance with all such requirements. Current governmental, regulatory and societal demands for increasing levels of product safety and environmental protection are resulting in increased pressure for more stringent regulatory control with respect to the chemical industry. In addition, increasing focus on areas such as environmental, social and governance (ESG) matters requires the continuous monitoring of various and evolving standards, which may also evolve into new regulations and/or disclosure requirements. We expect these trends to continue and the ultimate cost of compliance could be material. In particular, changes in environmental and climate laws or regulations could lead to new or additional investment in production designs and could increase environmental compliance expenditures, for us and our suppliers. Changes in climate change concerns, or in the regulation of such concerns, including greenhouse gas emissions, could also subject us to additional costs and restrictions, including increased energy and raw materials costs, which could negatively impact our business, financial condition and results of operations.

Our offshore oil industry products are subject to the hazards inherent in the offshore oil production and drilling industry, and we may incur substantial liabilities or losses as a result of these hazards.

In the offshore oil industry, we are subject to the hazards inherent in the offshore oil production and drilling industry. Our offshore business produces water-based hydraulic control fluids for major oil companies and drilling contractors to be used for potentially hazardous offshore deepwater production and drilling applications. Offshore deepwater oil production and drilling are subject to hazards that include blowouts, explosions, fires, collisions, capsizing, sinking and damage or loss to pipeline, subsea or other facilities from severe weather conditions. Those hazards could result in personal injury and loss of life, severe damage to or destruction of property and equipment, pollution or environmental damage and suspension of operations. A catastrophic occurrence at a location where our products are used may expose us to substantial liability for personal injury, wrongful death, product liability or commercial claims. To the extent available, we maintain insurance coverage that we believe is customary in our industry. Such insurance does not, however, provide coverage for all liabilities, and there can be no assurance that our insurance coverage will be adequate to cover claims that may arise, or that we will be able to maintain adequate insurance at rates we consider reasonable. The occurrence of a significant offshore deepwater oil production or drilling event that results in liability to us that is not fully insured could have a material adverse effect on our financial condition or results of operations.

Certain of our products may be subject to various export control regulations and exports may require a license from the U.S. Department of State or the U.S. Department of Commerce.

As a global company, we are subject to various laws and regulations relating to the export of products, services, and technology. In the U.S., these laws include, among others, the U.S. Export Administration Regulations (EAR), administered by the U.S. Department of Commerce's Bureau of Industry and Security, and the International Traffic in Arms Regulations (ITAR), administered by the U.S. Department of State's Directorate of Defense Trade Controls. Some of our products or technology may have military or strategic applications governed by the ITAR or represent so-called "dual use" items governed by the EAR. Although our relevant products are currently subject to automatic approval and do not require government licenses to be exported to certain jurisdictions or persons, this may change in the future if these laws and regulations are amended or if new laws or regulations are adopted. Any failure to comply with these laws and regulations could result in civil or criminal penalties, fines, investigations, adverse publicity and restrictions on our ability to export our products, which could result in a material adverse effect on our business, financial condition or results of operations.

Failure to comply with anti-corruption laws could subject us to penalties and damage our reputation.

Our international operations are subject to the Foreign Corrupt Practices Act of 1977, the United Kingdom Bribery Act 2010 and similar anti-bribery laws in other jurisdictions, which generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. Under these laws, companies may also be held liable for actions taken by third-parties acting on their behalf, such as strategic or local partners or representatives. Our policies mandate compliance with these anti-bribery laws, including the requirements to maintain accurate information and internal controls. However, certain of the jurisdictions in which we conduct business have experienced a heightened risk for corruption, extortion, bribery, pay-offs, theft and other improper practices and, despite our training and compliance programs, there is no assurance that our internal control policies and procedures will protect us from acts committed by our employees or agents. Failure by us or our intermediaries to comply with applicable anti-corruption laws may result in civil and/or criminal penalties or other sanctions, including disgorgement of profits and contract suspensions or cancellations, any of which could damage our reputation and have a material adverse effect on our business, financial condition or results of operations.

Failure to comply with international trade restrictions and economic sanctions laws and regulations could adversely affect our business, financial condition or results of operations.

We have operations, assets and/or make sales in countries all over the world, including countries that are or may become the target of trade and economic restrictions from the U.S. and/or other countries, which we refer to collectively as "Economic Sanctions Laws." Economic Sanctions Laws are complex and change with time as international relationships and confrontations between and among nations evolve. For example, the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) and the U.S. State Department administer certain laws and regulations that impose penalties upon U.S. persons and entities and, in some instances, non-U.S. entities, for conducting activities or transacting business with certain countries, governments, entities, or individuals subject to Economic Sanctions Laws. We have established policies and procedures to assist with our compliance with Economic Sanctions Laws and believe we do not unlawfully conduct business in any sanctioned countries. However, given the breadth of our international operations and the scope of our sales globally, including via third-party distributors over whom we may have limited or no control, coupled with the complexity and ever-changing nature of Economic Sanctions Laws, there can be no assurance that our controls and procedures have prevented in the past or will prevent at all times in the future a violation of these laws. Failure to comply with Economic Sanctions Laws, or allegations of such failure, could lead to investigations and/or actions being taken against us which could materially and adversely affect our reputation and/or have a material adverse effect on our business, financial condition or results of operations.

Changes in data privacy and data protection laws and regulations, or any failure to comply with such laws and regulations, could adversely impact our business.

Our global business is subject to a wide variety of domestic and foreign laws and regulations designed to protect the privacy of customers, employees and other third parties. The interpretation and application of such privacy laws and regulations, including, without limitation, the General Data Protection Regulation (GDPR) in the E.U. and the California Consumer Protection Act (CCPA) in the U.S., which became effective on January 1, 2020, is uncertain and evolving. For example, on July 16, 2020, the European Court of Justice invalidated the E.U.-U.S. Privacy Shield and ruled that transfers made pursuant to the Standard Contractual Clauses (or "SCCs") and other alternative transfer mechanisms need to be analyzed on a case-by-case basis to ensure E.U. standards of data protection are met in the jurisdiction where the data importer is based, and there continue to be concerns about whether the SCCs and other mechanisms will face additional challenges. Complying with these various laws and regulations is difficult and could require us to incur substantial costs or change our business practices in a manner adverse to our business.

Although we have implemented internal controls and procedures designed to ensure compliance with the GDPR, the CCPA and other privacy-related laws, rules and regulations, there can be no assurance that our controls and procedures enable us to be fully compliant. Any failure, or perceived failure, by us to comply with the GDPR, the CCPA or any other applicable regulatory requirements or orders, including, but not limited to, privacy, data protection, information security, or consumer protection-related privacy laws and regulations, in one or more jurisdictions within the E.U., the U.S. or elsewhere, could result in proceedings or actions against us by governmental entities or individuals; subject us to significant fines, penalties, and/or judgments; require us to change our business practices; limit access to our products and services in certain countries; or otherwise adversely affect our business, as we would be at risk to lose both customers and sales, and incur substantial costs.

FINANCIAL RISK FACTORS

Our net sales and gross profit have varied depending on our product, customer and geographic mix for any given period which makes it difficult to forecast future operating results.

Our net sales and gross profit vary among our products, customers and markets, and therefore may be different in future periods from historic or current periods. Overall gross profit margins in any given period are dependent in large part on the product, customer and geographic mix reflected in that period's net sales. Market trends, competitive pressures, commoditization of products, increased component or shipping costs, regulatory conditions and other factors may also result in reductions in revenue or pressure on the gross profit margins in a given period. The varying nature of our product, customer and geographic mix between periods has materially impacted our net sales and gross profit between periods during certain recessionary times and may lead to difficulties in measuring the potential impact of market, regulatory and other factors on our business. As a result, we may be challenged in our ability to forecast our future operating results.

Unfavorable currency exchange rate fluctuations could adversely affect our results of operations.

The reporting currency for our financial statements is the U.S. dollar. However, in 2020, approximately 74% of our net sales were generated from non-U.S. operations, which means that we have net sales, substantial assets, liabilities and costs denominated in currencies other than U.S. dollars. To prepare our Consolidated Financial Statements, we must translate those sales, assets, liabilities and expenses into U.S. dollars at then-applicable exchange rates. Consequently, increases and decreases in the value of the U.S. dollar versus other currencies will affect the amount of these items in our Consolidated Financial Statements, even if their value has not changed in their original currency. These translations could result in significant changes to our results of operations from period to period. Additionally, volatility in currency exchange rates may adversely impact our financial condition, cash flows and liquidity. Although we employ a variety of techniques to mitigate the impact of exchange rate fluctuations, including foreign currency hedging activities, we cannot guarantee that such risk management strategies will be effective, and our financial condition or results of operations could be adversely impacted.

Changes in the method for determining London Interbank Offered Rate (LIBOR) and/or the replacement of LIBOR, could adversely affect interest expense related to outstanding debt.

Our Credit Agreement uses the London Interbank Offered Rate (LIBOR) as a benchmark for establishing the interest rate. In addition, amounts drawn under our Credit Agreement may bear interest rates in relation to LIBOR, depending on our selection of repayment options. In July 2017, the United Kingdom Financial Conduct Authority (the regulatory authority over LIBOR) announced that it would phase out the use of LIBOR as a benchmark by the end of 2021. Although a newly created index called the Secured Overnight Financing Rate (SOFR) has been presented as the alternative to LIBOR, there can be no guarantee that SOFR will become a widely accepted benchmark in place of LIBOR. We are evaluating the potential impact of the eventual replacement of LIBOR, including the possibility of SOFR as the dominant replacement, on our Credit Agreement and other debt instruments, and at this time, the effect of any discontinuance, modification or other reforms to LIBOR on the Company remain uncertain. The market transition away from LIBOR towards SOFR, or any other alternative rate, is expected to be complicated and the overall financing market may be disrupted as a result of this replacement. Disruption in the financial markets or the inability to renegotiate our Credit Agreement and other debt instruments with favorable terms could have a material adverse effect on interest expense related to our outstanding debt, which in turn may materially impact our financial position.

Our Credit Agreement and other debt agreements contain restrictions that limit our flexibility in operating our business.

The Credit Agreement, the indenture governing the 3.875% USD Notes due 2028 and other debt agreements governing our outstanding debt contain restrictive clauses, which may limit our activities and operational and financial flexibility, including, among other things, our ability to grant liens, pay cash dividends, enter new lines of business, repurchase our shares of common stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. In addition, the Credit

Agreement contains customary remedies, including the right of the lenders to take action with respect to the collateral securing outstanding loans, that would apply should we default or otherwise be unable to satisfy our debt obligations. These covenants may restrict our flexibility in operating our business. We may also not be able to borrow under the Credit Agreement if an event of default under the terms of this agreement occurs. As a result, we may be unable to pursue certain business initiatives or certain transactions that might otherwise be advantageous, meet extraordinary capital needs, finance future operations, plan for or react to market conditions, or otherwise take actions that we believe are in the best interest of our businesses which, in turn, may adversely impact our business prospects, financial condition or results of operations.

In addition, the Credit Agreement requires that we meet certain financial ratios, including a first lien net leverage ratio based on net debt to EBITDA. EBITDA is a non-GAAP measures of liquidity defined in the Credit Agreement. Our ability to meet these financial covenants depends upon the future successful operating performance of our businesses. If we fail to comply with the Credit Agreement covenants, we would be in default under the term loan and revolving credit facility, and the maturity of our outstanding debt could be accelerated unless we were able to obtain waivers from our lenders. If we were found to be in default under the term loan and revolving credit facility, it could adversely impact our results of operations, financial position and cash flows.

We and our subsidiaries may incur significant additional indebtedness in the future, which would result in additional restrictions upon our business and impact our financial condition.

The Credit Agreement provides for senior secured credit facilities in an aggregate initial principal amount of $1.08 billion, consisting of a revolving facility in an aggregate initial principal amount of $330 million maturing in 2024 and a term loan in an aggregate initial principal amount of $750 million maturing in 2026. At December 31, 2020, we had $735 million outstanding under the term loan and full capacity of our unused borrowing capacity of $325 million, net of letters of credit, under the revolving facility.

We and our subsidiaries may incur significant additional indebtedness in the future. Although the Credit Agreement and the indenture governing the 3.875% USD Notes due 2028 contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of significant qualifications and exceptions, and indebtedness incurred in compliance with these restrictions could be substantial. In addition, subject to specified conditions, without the consent of the then-existing lenders, we may add certain incremental term loan or revolving credit facilities, or increase commitments under our revolving credit facility, by up to the sum of (x) the greater of (i) $460 million and (ii) 100% of our consolidated EBITDA, less certain amounts of indebtedness, and (y) an unlimited amount if, on a pro forma basis, (i) in case of incremental facilities that are secured on a pari passu basis with our obligations under the Credit Agreement, our total first lien net leverage ratio does not exceed 3.50 to 1.00, (ii) in case of incremental facilities that are secured on a junior basis, our senior secured net leverage ratio does not exceed 5.00 to 1.00, and (iii) in case of incremental facilities that are unsecured, our fixed charge coverage ratio does not exceed 2.00 to 1.00 (in each case, as defined in the Credit Agreement). Any significant indebtedness incurred by us or our subsidiaries could have the following material consequences:

- require us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows to fund acquisitions, working capital, capital expenditures, dividends, research and development efforts and other general corporate purposes;
- expose us to the risk of increased interest rates as certain of our borrowings include instruments with variable rates of interest;
- increase our cost of borrowing;
- increase our vulnerability to general adverse economic and industry conditions;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
- place us at a competitive disadvantage compared to less-leveraged competitors or competitors with comparable debt governed by more favorable terms.

We may also enter into additional debt transactions or credit facilities, including equipment loans, working capital lines of credit, senior notes and other long-term debt, which may increase our indebtedness and result in additional restrictions upon our businesses. In addition, major debt rating agencies regularly evaluate our debt based on a number of factors, including our degree of leverage. There can be no assurance that we will be able to maintain our existing debt ratings, and failure to do so could adversely affect our cost of funds, liquidity and access to capital markets.

Any future impairment of our tangible or intangible long-lived assets may materially affect our results of operations.

As a result of our historical acquisitions, as of December 31, 2020, we had approximately $3.11 billion of intangible assets and goodwill. Under GAAP, we review our intangible assets and long-lived assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable, which includes a prolonged decline in the value of our stock price. Additionally, goodwill is subject to an impairment test at least annually. Indicators such as under-performance relative to historical or projected future operating results, changes in our strategy for our overall business or use of acquired assets, unexpected negative industry or economic trends, decreased market capitalization relative to net book values, unanticipated competitive activities, change in consumer demand, loss of key personnel and acts by governments and courts may signal that an asset has become impaired. To the extent any of our acquired assets do not perform as anticipated, whether due to internal or external factors, the value of such assets may be negatively affected and we may be required to record impairment charges. Our results of operations and financial position in future periods could be negatively impacted should future impairments of our long-lived assets, including intangible assets or goodwill, occur.

GENERAL RISK FACTORS

We have numerous equity instruments outstanding that could require the future issuance of additional shares of common stock, which issuance could result in significant dilution of ownership interests and have an adverse effect on our stock price.

We have a number of equity instruments outstanding that could require us to issue additional shares of our common stock. Depending on the equity instrument, these additional shares may either be issued for no additional consideration or based on a fixed amount of additional consideration. Specifically, at December 31, 2020, we had outstanding the following:

- 4,374,068 RSUs which were granted to employees under our 2013 Plan with each RSU representing a contingent right to receive one share of our common stock (assuming performance-based RSUs vest at target level) or multiple shares depending upon the Company's performance; and
- 565,620 options which, once vested, are exercisable to purchase shares of our common stock, on a one-for-one basis, at any time at the option of the holder.

At December 31, 2020, we had 6,321,576 shares available under the 2013 Plan (subject to increase in accordance with the terms of the 2013 Plan), net of the outstanding RSUs and options noted above, and 4,479,907 shares available under the ESPP.

Volatility of our stock price could adversely affect us and our stockholders.

Our stock price may experience substantial price volatility as a result of many factors, including, without limitation, coverage or sentiment in the media or the investment community; speculation; announcement of acquisitions or divestitures; quarterly financial results and comparisons to estimates by the investment community or financial outlook provided by us; issuance of additional debt or equity; changes in key personnel or business strategy; material litigation or governmental investigations; and expectations regarding capital allocation, including any future shares repurchases and/or any future dividend payments, or any determination to cease repurchasing stock or paying dividends. General or industry specific market conditions, stock market performance or macroeconomic and geopolitical factors unrelated to our performance may also affect the price of our stock. Further, in the past, market fluctuations and price declines in a company's stock have led to securities class action litigation, which could have a substantial cost and divert management time and resources regardless of their outcome.

Future issuances or sales of our common stock may depress the price of our common stock.

We cannot predict the size of future issuances of our shares of common stock or the effect, if any, that future issuances or sales of our shares will have on the market price of such shares. Sales of substantial amounts of our shares, including sales by our executive officers, directors or significant stockholders, and shares issued in connection with any acquisition, or the perception that such sales or issuance could occur, may adversely affect prevailing market prices for our shares of common stock. Decline in the stock price of our common stock may also make it more difficult for us to finance acquisitions with shares of common stock and/or sell additional equity or equity-related securities in future offerings at a time and price we deem necessary or appropriate.

We may issue preferred stock in the future, and the terms of the preferred stock may reduce the value of our common stock.

Our Board of Directors is authorized to create and issue one or more additional series of preferred stock, and, with respect to each series, to determine the number of shares constituting the series and the designations and the powers, preferences and

rights, and the qualifications, limitations and restrictions thereof, which may include dividend rights, conversion or exchange rights, voting rights, redemption rights and terms and liquidation preferences, without stockholder approval. If we create and issue one or more series of preferred stock, it could affect the rights of our common stockholders or reduce the value of our outstanding common stock. Our Board could, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power of the holders of our common stock and which could have certain anti-takeover effects.

There can be no assurance that we will continue to declare dividends.

Future dividends are subject to declaration by our Board of Directors in its sole discretion. To the extent the Board determines to pay dividends on our common stock in the future, we will pay dividends at the times and in the amounts as the Board determines appropriate. The Board may, however, reduce or discontinue entirely the payment of such dividends at any time. Paying dividends will depend upon many factors, including our financial condition and results of operations, our available cash and current and anticipated cash needs, capital requirements and access to capital markets, covenants associated with the Credit Agreement, the indenture governing the 3.875% USD Notes due 2028 and/or other debt obligations, contractual, legal, tax and regulatory restrictions and other factors that the Board may deem relevant. Therefore, there can be no assurance that we will have the ability and/or sufficient funds to pay dividends or as to the amounts of these dividends, if any.

If we experience a significant disruption in our information technology systems, including security breaches, or if we fail to implement new systems and software successfully, our business operations and financial condition could be adversely affected.

We depend on information technology systems throughout the Company to, among other functions, control our manufacturing processes, process orders and bill, collect and make payments, interact with customers and suppliers, manage inventory and otherwise conduct business. We also depend on these systems to respond to customer inquiries, implement our overall internal control processes, maintain records of our property, plant and equipment and record and pay amounts due to vendors and other creditors. The failure of our information technology systems to perform as we anticipate could disrupt our business and could result in transaction errors, processing inefficiencies and the loss of sales and customers. As we upgrade or change systems, we may also experience interruptions in service, loss of data or reduced functionality and other unforeseen material issues, which could adversely impact our ability to provide quotes, take customer orders and otherwise run our business in a timely manner. In addition, if our new systems fail to provide accurate and increased visibility into pricing and cost structures, it may be difficult to improve or maximize our profit margins. As a result, our results of operations could be adversely affected.

In addition, cyber-attacks or security breaches could compromise confidential, business critical information, cause a disruption in our operations or harm our reputation. Our information technology systems are subject to potential disruptions, including significant network or power outages, cyberattacks, computer viruses, other malicious codes, and/or unauthorized access attempts, any of which, if successful, could result in data leaks or otherwise compromise our confidential or proprietary information and disrupt our operations. Despite our efforts to protect sensitive information and comply with and implement data security measures, there can be no assurance that any controls and procedures that we have in place will be sufficient to protect us. Further, as cyber threats are continually evolving, our controls and procedures may become inadequate and we may be required to devote additional resources to modify or enhance our systems in the future. We may also be required to expend resources to remediate cyber-related incidents or enhance and strengthen our cyber security. Any such disruptions to our information technology systems, breaches or compromises of data, and/or misappropriation of information could result in violation of privacy and other laws, litigation, fines, negative publicity, lost sales or business delays, any of which could have a material adverse effect on our business, financial condition or results of operations.

If we fail to establish and maintain adequate internal controls over financial reporting, we may not be able to report our financial results in a timely and reliable manner, which could harm our business and adversely impact our stock price.

We are required by the SEC to establish and maintain adequate internal control over financial reporting that provides reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with GAAP. We are likewise required, on a quarterly basis, to evaluate the effectiveness of our internal controls and to disclose any material changes and material weaknesses in those internal controls. We have in the past experienced, and in the future may experience again, material weaknesses and potential problems in implementing and maintaining adequate internal controls as required by the SEC. If we fail to achieve and maintain the adequacy of our internal controls, we may not be able to conclude that we have effective internal controls over financial reporting. If we cannot provide financial reports in a timely and reliable manner, or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and our stock price could drop significantly.

We are dependent on cash flows from our operating subsidiaries to fund our debt obligations, capital expenditures and ongoing operations.

We do not have any material assets or operations other than ownership of equity interests of our operating subsidiaries. Our operations are conducted almost entirely through our subsidiaries, and our ability to generate cash to meet our obligations or to pay dividends, if any, is highly dependent on the earnings of, and receipt of funds from, our subsidiaries through dividends or intercompany loans, in particular from MacDermid. As a result, we are dependent on the income generated by our subsidiaries, and to some degree on our ability to repatriate earnings from our foreign operations effectively, to meet our debt service obligations, expenses and operating cash requirements or to pay dividends or repurchase shares of our common stock. For example, the amount of dividends, if any, which may be paid to us by our subsidiaries depends on many factors, including our subsidiaries' results of operations and financial condition, limits on dividends or otherwise under applicable law and their constitutional documents, documents governing their indebtedness, and other factors which may be outside our control. If our subsidiaries are unable to generate sufficient cash flows or if we are unable to repatriate earnings effectively, we may be unable to service our debt obligations, pay our expenses and/or meet our operating cash requirements or to make future dividend payments or shares repurchases, if any.

We are governed by Delaware law, which has anti-takeover implications.

We are governed by Delaware law, the application of which may have the effect of deterring hostile takeover attempts or a change in control. In particular, Section 203 of the Delaware General Corporation Law imposes certain restrictions on merger, business combinations and other transactions between us and holders of 15% or more of our common stock. A Delaware corporation may opt out of that provision either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or by-laws approved by its stockholders. We have not opted out of this provision. Section 203 could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us, which may negatively affect our stock price.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate offices are located in a leased facility in Fort Lauderdale, Florida. At December 31, 2020, our physical presence included 42 manufacturing sites, 9 of which include research facilities, and 7 stand-alone research centers. Of our manufacturing facilities, 9 are located in the U.S. with the remaining international facilities located primarily in Asia and Europe. We own 25 of our manufacturing facilities, 4 of our manufacturing facilities that include research facilities and 4 of our stand-alone research centers. In addition to the remaining manufacturing and research facilities, we lease the majority of our office, warehouse and other physical locations. Among our two business segments, Electronics and Industrial & Specialty utilize 21 and 7 of our manufacturing facilities, respectively, with the remaining 14 manufacturing facilities being shared between the two segments.

We believe that all of our facilities and equipment are in good condition, well-maintained, adequate for our present operations, and utilized for their intended purposes. See Note 7, *Property, Plant and Equipment*, to the Consolidated Financial Statements included in this 2020 Annual Report for amounts invested in land, buildings, machinery, and equipment, and Note 17, *Leases*, to the Consolidated Financial Statements included in this 2020 Annual Report, for information about our operating lease commitments.

Item 3. Legal Proceedings

In the ordinary course of business, we are involved in various legal disputes, investigations and claims and other legal proceedings, including, but not limited to, product liability claims, contractual disputes, premises claims, tax examinations, and employment, environmental, and health and safety matters. Where appropriate, we may establish loss contingencies for such proceedings based on an assessment of whether the risk of loss is remote, reasonably possible or probable. We also maintain insurance to mitigate certain of such risks. Although we cannot predict with certainty the ultimate resolution of our various legal proceedings, investigations and/or claims asserted against us, we believe that the resolution of these claims will not, individually or in the aggregate, have a material adverse effect on our business, financial condition or results of operations. Due to their inherent uncertainty, however, there can be no assurance as to the ultimate outcome of current or future litigation, proceedings, investigations or claims and it is possible that a resolution of one or more such proceedings could result in fines and penalties that could adversely affect our business, financial condition or results of operations.

In addition, we are involved in various claims relating to environmental matters at a number of current and former plant sites and waste management sites. We engage or participate in remedial and other environmental compliance activities at certain of these sites. At other sites, we have been named as a potential responsible party pursuant to the federal Superfund Act and/or state Superfund laws comparable to the federal law for site remediation. Based on currently available information, we do not anticipate any material losses in excess of the liabilities recorded. However, it is possible that, as additional information becomes available, the impact of an adverse determination could have a different effect. For additional information regarding environmental matters and liabilities, see Note 18, *Contingencies, Environmental and Legal Matters*, to the Consolidated Financial Statements included in this 2020 Annual Report.

Item 4. Mine Safety Disclosure

Not applicable.

Part II

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

Market for our Common Stock

Our common stock is traded on the New York Stock Exchange under the symbol "ESI." On February 18, 2021, there were approximately 220 registered holders of record of our common stock, par value $0.01 per share, and the closing price of our common stock was $17.21.

Dividends

On November 9, 2020, our Board of Directors declared a cash dividend of $0.05 per outstanding share of our common stock. The dividend was paid on December 15, 2020 to all stockholders of record at the close of business on November 25, 2020 and totaled approximately $12.4 million.

On February 17, 2021, our Board declared a cash dividend of $0.05 per outstanding share of our common stock. The dividend is expected to be paid on March 15, 2021 to all stockholders of record at the close of business on March 1, 2021.

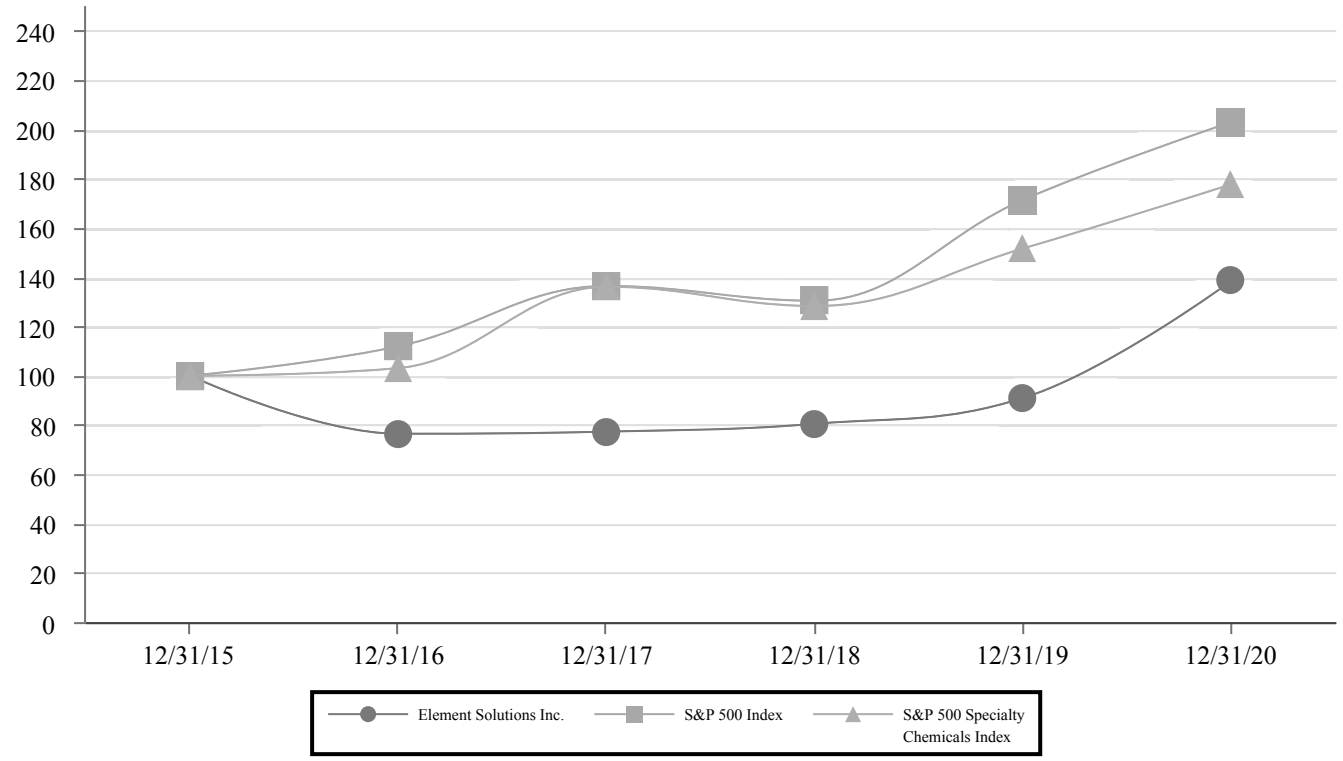
We currently expect to pay a 5 cents per share dividend on a quarterly basis. However, the actual declaration of any cash dividends, as well as their amounts and timing, will be subject to the final determination of our Board of Directors based on factors including our future earnings and cash flow generation.

Prior to their conversion into shares of our common stock on February 25, 2020, the holders of our Series A Preferred Stock were entitled to receive an annual stock dividend on their Series A Preferred Stock in the form of shares of our common stock. For 2020, 2019 and 2018, no stock dividend was declared.

Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any of our prior or future filing under the Securities Act or Exchange Act.

This graph compares cumulative total stockholder return on our common stock from December 31, 2015 through December 31, 2020 with the cumulative total return of (i) the Standard and Poor's 500 Index, and (ii) the S&P 500 Specialty Chemicals Index, assuming a $100 investment made on December 31, 2015. The stock performance shown on this graph is based on historical data and is not indicative of, or intended to forecast, possible future performance of our common stock.



Equity Compensation Plan Information

The information regarding our equity compensation plans will be included in the 2021 Proxy Statement under the heading "Executive Compensation Tables - Equity Compensation Plan Information," and is incorporated by reference into this 2020 Annual Report.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

During the three months ended December 31, 2020, the Company repurchased the following shares of its common stock:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of a Publicly Announced Repurchase Program	Approximate Dollar Value of Shares that May Yet be Purchased Under the Repurchase Program [(1)] *(in millions)*
October 1 - October 31	1,500,000	$ 11.50	1,500,000	$ 190
November 1 - November 30	223,162	$ 11.80	223,162	$ 187
December 1 - December 31	—	$ —	—	$ 187
Total	1,723,162	$ 11.54	1,723,162	$ 187

[(1)] *In July 2018, our Board of Directors authorized a program to repurchase up to $750 million of the Company's common stock, of which approximately $563 million had been utilized as of December 31, 2020. The Company's share repurchase program does not have an expiration date, but may be suspended or terminated by the Board at any time. In addition, this program does not require the repurchase of any specific number of shares, and share repurchases are made opportunistically at the discretion of the Company.*

Item 6. Selected Financial Data

The Company has omitted this Item 6 pursuant to the amendments to Regulation S-K Item 301 which became effective on February 10, 2021.

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations section should be read in conjunction with "Financial Statements and Supplementary Data" included in Part II, Item 8 of this 2020 Annual Report and our audited Consolidated Financial Statements and notes thereto included elsewhere in this 2020 Annual Report. "Business Overview," "COVID-19 Update" and "2020 Highlights" briefly present our business and certain significant events addressed in this section or elsewhere in this 2020 Annual Report. This 2020 Annual Report should be read in its entirety for a complete description of our business and discussion of these events.

Business Overview

Element Solutions Inc, incorporated in Delaware in January 2014, is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Our businesses provide products that, in substantially all cases, are consumed by customers as part of their production process, providing us with reliable and recurring revenue streams as the products are replenished in order to continue production. Our customers use our innovation as competitive advantages, relying on us to help them navigate through fast-paced, high-growth markets. Our product development and product extensions are expected to continue to drive sales growth in both new and existing markets, while expanding margins, through a consistent focus on increasing customer value propositions.

We believe the majority of our businesses hold strong positions in the high-growth markets they serve. Our strategy is based on a balance of operational excellence and prudent capital allocation. Our operating teams focus on the strong execution of customer-led product development, superior technical sales support and continuous supply chain optimization. Our senior leadership aims to foster an environment of accountability and success for our operating teams while also evaluating and executing on high-return capital allocation opportunities that can drive improvements in long-term shareholder value. In the future, we may pursue targeted and opportunistic acquisitions in our existing and adjacent end-markets that strengthen our current businesses, expand and diversify our product offering, and enhance our growth and strategic position.

We generate revenue from the development, formulation and sale of our chemistry solutions globally. Our extensive global teams of specially trained scientists and engineers develop products while our expert sales and service organizations ensure customer needs are met every day. We leverage close relationships with both customers and OEMs to execute our growth strategy and identify opportunities for new products. These new products are developed and created by drawing upon our broad and longstanding intellectual property portfolio and technical expertise. Our specialty chemicals and processes are seen as integral to customer' product performance. We believe that our customers place significant value on the consistency and quality of our brands, which we capitalize on through significant market share, customer loyalty and supply chain access. Lastly, operational risks and switching costs make it difficult for our customers to change suppliers which allows us to retain customers and maintain our market positions.

Our operations are organized into two segments: Electronics and Industrial & Specialty, which are each described below:

Electronics – The Electronics segment researches, formulates and sells specialty chemicals and materials for all types of electronics hardware from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the electronics manufacturing process and the functionality of end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways and its "assembly materials," such as solders, pastes, fluxes and adhesives, join those pathways together. The segment provides specialty chemical solutions through the following businesses: Assembly Solutions, Circuitry Solutions and Semiconductor Solutions.

Industrial & Specialty – The Industrial & Specialty segment researches, formulates and sells specialty chemicals that enhance surfaces or improve industrial processes in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids in offshore energy production. These fully consumable products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end markets. The segment provides specialty chemical solutions through the following businesses: Industrial Solutions, Graphics Solutions and Energy Solutions.

COVID-19 Update

The 2020 COVID-19 pandemic caused a global economic slowdown, significant end-market volatility and business uncertainty. In an effort to contain COVID-19 or slow its spread, governments and businesses around the world undertook significant countermeasures, including business closures, mandated "shelter in place" orders, travel restrictions and other edicts, which have negatively impacted, and continue to negatively impact, business activity around the globe.

Due to the pandemic and these related actions, we experienced weaker demand beginning in April 2020, as compared to the same period in 2019, which trend tapered off during the third quarter of 2020. Overall market conditions improved monthly through the second half of 2020. Our industrially oriented businesses were the most impacted, particularly those serving automotive end-markets.

Our supply chain demonstrated resilience and has remained largely intact in 2020. Our pre-existing business continuity planning exercises helped us with contingencies to support our customers in the event of manufacturing facility shutdowns.

Our top priority has been protecting the health and safety of our employees. To that end, we proactively implemented policies and procedures, including travel restrictions, remote work and heightened sanitary and social distancing policies at our locations around the world. These actions resulted in a general decrease of discretionary expenses in 2020, including travel and entertainment expenses, as health and safety protocols were adopted worldwide. In addition, we implemented certain actions to reduce cost in the event the economic downturn were to be deeper and/or last longer than it actually was or did. These actions included temporary employee salary reductions and furloughs to reduce expenses and preserve margins. However, with a goal of preserving employment, we did not pursue any material restructuring or workforce reductions.

The ultimate extent of the impact of COVID-19 on our business or our future results of operations, financial condition, expected cash flows and/or stock price remains unknown as COVID-19, including its variants, continue to spread. The long-term impact of this pandemic will depend on numerous and evolving factors that are highly uncertain, vary by market and cannot be quantified at this time. These factors include the duration of the pandemic, the efficacy, availability and/or public acceptance of vaccines targeting COVID-19, the impact of variants of COVID-19 that may affect its spread or virulence or the effectiveness of vaccines on the virus, and evolving macroeconomic factors driven by the virus's overall spread and impact.

2020 Highlights

- ***Launch of MacDermid Envio Solutions -*** During the third quarter of 2020, we launched MacDermid Envio Solutions, a new business within our Industrial & Specialty segment which focuses on helping customers reduce their environmental impact through proprietary chemistry as well as equipment for turnkey wastewater treatment and the recovery of metals and other valuable materials.

- ***Senior Notes Refinancing -*** On August 18, 2020, we completed a private offering of $800 million aggregate principal amount of 3.875% USD Notes due 2028 and the subsequent full redemption of our 5.875% USD Notes due 2025. The 200 basis point reduction in interest rate reduces our annual interest payments by $16.0 million starting in 2021. In connection with the redemption, we expensed $45.7 million, consisting of a make-whole premium of $33.6 million and the write-off of debt issuance costs and original issue discount of $12.1 million, which was recorded in "Other (expense) income, net" in the Consolidated Statement of Operations.

- ***Cash Dividend -*** On December 15, 2020, we paid a cash dividend of $0.05 per outstanding share of our common stock to all stockholders of record at the close of business on November 25, 2020. The dividend totaled approximately $12.4 million.

- ***Element Solutions Foundation*** - During the fourth quarter of 2020, we established the ESI Foundation to serve as the Company's charitable giving entity with an initial funding of $5.0 million. The foundation intends to provide monetary grants to qualified charitable organizations in the communities where our employees live and work. The foundation plans to focus on causes important to the environmental and social well-being of these communities.

- ***Repurchases of Common Stock -*** During the year ended December 31, 2020, we repurchased 5.7 million shares of our common stock for $55.7 million, at an average price of approximately $9.74 per share. The remaining authorization under our previously-announced $750 million stock repurchase program was approximately $187 million at December 31, 2020.

Acquisitions

In the future, we may pursue acquisitions in our existing or adjacent end-markets with product offerings that complement our portfolio or geographic footprint. We expect to achieve commercial and distribution efficiencies by expanding into related categories that can be marketed through our existing distribution channels or provide us with new distribution channels for our existing products. To the extent we pursue future acquisitions, we expect that acquisition candidates would demonstrate a combination of attractive margins, strong cash flow characteristics, niche leading positions and consumable products that generate recurring revenue. We believe the diversity of the niche-end markets we serve will enable us to continue our growth and maintain strong cash flow generation throughout economic cycles and mitigate the impact of a downturn in any single market. We will only pursue a candidate when it is deemed to be fiscally prudent and that meets our acquisition criteria. We anticipate that any future acquisitions would be financed through a combination of cash on hand, operating cash flow, availability under our Credit Agreement and/or new debt or equity offerings.

Foreign Currency Exposure

Approximately 74% of our net sales originated outside of the U.S. and were denominated in numerous currencies, including the euro, Chinese yuan, British pound, and Taiwan dollar. Therefore, changes in foreign exchange rates in any given reporting period may positively or negatively impact our financial performance. Foreign exchange translation negatively impacted our 2020 net sales performance by an immaterial amount.

In addition, our foreign subsidiaries are subject to foreign currency risk relating to receipts from customers, payments to suppliers and intercompany transactions that are not in their functional currency, which is typically their local currency. As a result, our foreign subsidiaries can and have entered into foreign exchange hedges to protect against transaction exposures. We actively assess our hedging programs in order to mitigate foreign exchange risk exposures. This includes programs to hedge our foreign currency denominated balance sheet exposures as well as foreign currency anticipated cash flows.

Critical Accounting Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates that may significantly impact our reported financial results and accompanying disclosures. We base our estimates on assumptions and judgments based on historical experience, current conditions as well as other factors that we consider reasonable. Estimates relate to matters that are inherently uncertain and actual results may differ from these estimates and such differences could be material to our financial statements.

We consider the accounting estimates discussed below to be critical to the understanding of our financial statements and involve difficult, subjective or complex judgments that could potentially affect our reported results. See Note 2, *Summary of Significant Accounting Policies*, to the Consolidated Financial Statements included in this 2020 Annual Report for a detailed discussion of the application of these and other accounting policies.

Revenue Recognition

We recognize revenue either upon shipment or delivery of product depending on when it is reasonably assured that both title and the risks and rewards of ownership have been passed on to the customer, our performance obligations have been fulfilled and collectability is probable. Estimates for sales rebates, incentives and discounts, as well as sales returns and allowances, are accounted for as reductions of revenue when the earnings process is complete. Differences between estimated expense and actual costs are typically immaterial and are recognized in earnings in the period such differences are determined.

Most performance obligations relate to contracts with a duration of less than one year, in which we have the right to invoice the customer at the time the performance obligation is satisfied for the amount of revenue recognized at that time. Accordingly, we have elected the practical expedient available under ASC Topic 606, *Revenue from Contracts with Customers*, not to disclose remaining performance obligations under our contracts. We have also elected the practical expedient to expense incremental costs for obtaining contracts with terms of less than one year.

Goodwill

Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired. Our reporting units are determined based upon our organizational structure in place at the date of the goodwill impairment test. The fair value of each reporting unit is determined based equally on market multiples and the present value of discounted future cash flows. The discounted cash flows are prepared based upon

cash flows at the reporting unit level and involve significant judgments related to future growth rates and discount rates, among other considerations, from the vantage point of a market participant.

If the fair value of a reporting unit exceeds the carrying value of the net assets assigned to that reporting unit, goodwill is not impaired and no further testing is required. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, the goodwill impairment loss is calculated as the difference between these amounts, limited to the amount of goodwill allocated to the reporting unit.

As part of our 2020 goodwill impairment test in the fourth quarter of 2020, we determined that the excess of the fair value of the Energy Solutions reporting unit within our Industrial & Specialty segment exceeded its carrying value by less than 20%. Goodwill assigned to the Energy Solutions reporting unit was approximately $245 million as of the assessment date. The estimated fair value of this reporting unit is highly sensitive to changes in these estimates and assumptions; therefore, in some instances, changes in these assumptions may impact whether the fair value of a reporting unit is greater than its carrying value. We performed sensitivity analysis around these assumptions in order to assess the reasonableness of the assumptions and the resulting estimated fair values. Based on a sensitivity analysis performed for the Energy Solutions reporting unit, a 100 basis point increase in the WACC or 100 basis point decrease in the terminal growth rate, without any other changes to the valuation, would not result in the carrying value being greater than the fair value. Future impairments of this reporting units may occur if the business does not achieve its expected cash flows or macroeconomic conditions result in an increase in the WACC used to estimate fair value.

In 2020, we also determined that the fair values of the remaining reporting units were considered substantially in excess of their respective carrying values.

See Note 8, *Goodwill and Intangible Assets*, to the Consolidated Financial Statements included in this 2020 Annual Report for additional information.

Income Taxes

We recognize deferred tax assets and liabilities based on the differences between the financial statement basis and the tax basis of assets, liabilities, net operating losses and tax carryforwards. A valuation allowance is required to be recognized to reduce the recorded deferred tax asset to the amount that will more likely than not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income by jurisdiction during the periods in which those temporary differences become deductible or when carryforwards can be utilized. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in this assessment. If these estimates and related assumptions change in the future, we may be required to record additional valuation allowances against our deferred tax assets resulting in additional income tax expense. We evaluate our valuation allowance conclusions on a quarterly basis based on available evidence and realization of deferred tax assets ultimately depends on the existence of sufficient taxable income in the applicable carryback or carryforward periods. Changes in the Company's estimates of and reliance on such evidence may affect the estimate of the realization of the benefits of tax attribute carryforwards. It is reasonably possible that further adjustments will be made to the valuation allowance for state tax carryforwards.

Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences and carryforwards are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date of such change.

We are subject to income taxes in the U.S. and in various states and foreign jurisdictions. Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes. The first step in evaluating the tax position for recognition is to determine the amount of evidence that supports a favorable conclusion for the tax position upon audit. In order to recognize the tax position, we must determine whether it is more likely than not that the position is sustainable. The final evaluation step is to measure the tax benefit as the largest amount that has a more than 50% chance of being realized upon final settlement. Although we believe that the positions taken on income tax matters are reasonable, we establish tax reserves in recognition that various taxing authorities may challenge certain of those positions taken, potentially resulting in additional tax liabilities.

Recent Accounting Pronouncements

A summary of recent accounting pronouncements is included in Note 3, *Recent Accounting Pronouncements*, to the Consolidated Financial Statements included in this 2020 Annual Report.

Non-GAAP Financial Measures

To supplement our financial results presented in accordance with GAAP in this Management's Discussion and Analysis of Financial Condition and Results of Operations section, we present certain non-GAAP financial measures, such as operating results on a constant currency and organic basis and Adjusted EBITDA. Management internally reviews each of these non-GAAP measures to evaluate performance on a comparative period-to-period basis in terms of absolute performance, trends and expected future performance with respect to our business. We believe these non-GAAP financial measures, which are each further described below, provide investors with an additional perspective on trends and underlying operating results on a period-to-period comparable basis. We also believe that investors find this information helpful in understanding the ongoing performance of our operations separate from items that may have a disproportionate positive or negative impact on our financial results in any particular period or are considered to be associated with our capital structure.

These non-GAAP financial measures, however, have limitations as analytical tools and should not be considered in isolation from, a substitute for, or superior to, the related financial information that we report in accordance with GAAP. The principal limitation of these non-GAAP financial measures is that they exclude significant expenses and income that are required by GAAP to be recorded in our financial statements and may not be comparable to similarly titled measures of other companies due to potential differences in calculation methods. In addition, these measures are subject to inherent limitations as they reflect the exercise of judgment by management about which items are excluded or included in determining these non-GAAP financial measures. Investors are encouraged to review the definitions and reconciliations of these non-GAAP financial measures to their most comparable GAAP financial measures included in this 2020 Annual Report and not to rely on any single financial measure to evaluate our business.

Constant Currency

We disclose operating results, from net sales through operating profit and Adjusted EBITDA, on a constant currency basis by adjusting to exclude the impact of changes due to the translation of foreign currencies of our international locations into U.S. dollars. Management believes this non-GAAP financial information facilitates period-to-period comparison in the analysis of trends in business performance, thereby providing valuable supplemental information regarding our results of operations, consistent with how we internally evaluate our financial results.

The impact of foreign currency translation is calculated by converting our current-period local currency financial results into U.S. dollars using the prior period's exchange rates and comparing these adjusted amounts to our prior period reported results. The difference between actual growth rates and constant currency growth rates represents the estimated impact of foreign currency translation.

Organic Net Sales Growth

Organic net sales growth is defined as net sales excluding the impact of foreign currency translation, changes due to the pass-through pricing of certain metals and acquisitions and/or divestitures, as applicable. Management believes this non-GAAP financial measure provides investors with a more complete understanding of the underlying net sales trends by providing comparable net sales over differing periods on a consistent basis.

For a reconciliation of GAAP net sales growth to organic net sales growth, see "*Net Sales*" within the "Results of Operations" section below.

Adjusted EBITDA

We define Adjusted EBITDA as EBITDA (earnings before interest, provision for income taxes, depreciation and amortization), excluding the impact of additional items included in GAAP earnings which we believe are not representative or indicative of our ongoing business or are considered to be associated with our capital structure. Management believes Adjusted EBITDA provides investors with a more complete understanding of the long-term profitability trends of our business and facilitates comparisons of our profitability to prior and future periods.

For a reconciliation of "Net income (loss) attributable to common stockholders" to Adjusted EBITDA and more information about the adjustments made, see Note 23, *Segment Information*, to the Consolidated Financial Statements included in this 2020 Annual Report.

Results of Operations

(dollars in millions)	2020	2019	Change - 2020 vs 2019 Reported	Constant Currency	Organic	2018	Change - 2019 vs 2018 Reported	Constant Currency	Organic
Net sales	$1,853.7	$1,835.9	1%	1%	(3)%	$1,961.0	(6)%	(4)%	(4)%
Cost of sales	1,067.7	1,047.6	2%	2%		1,123.4	(7)%	(4)%	
Gross profit	786.0	788.3	0%	0%		837.6	(6)%	(3)%	
Gross margin	*42.4 %*	*42.9 %*	*(50) bps*	*(40) bps*		*42.7 %*	*20 bps*	*10 bps*	
Operating expenses	553.3	539.2	3%	3%		589.1	(8)%	(6)%	
Operating profit	232.7	249.1	(7)%	(6)%		248.5	0%	4%	
Operating margin	*12.6 %*	*13.6 %*	*(100) bps*	*(100) bps*		*12.7 %*	*90 bps*	*90 bps*	
Other expense, net	(151.6)	(108.2)	40%			(301.7)	(64)%		
Income tax expense	(4.3)	(61.3)	(93)%			(23.8)	(nm)		
Net income (loss) from continuing operations	76.8	79.6	(4)%			(77.0)	(nm)		
(Loss) income from discontinued operations, net	(1.1)	13.3	(nm)			(242.9)	(nm)		
Net income (loss)	$ 75.7	$ 92.9	(19)%			$(319.9)	(nm)		
Adjusted EBITDA	$422.6	$416.7	1%	2%		$ 420.7	(1)%	3%	
Adjusted EBITDA margin	*22.8 %*	*22.7 %*	*10 bps*	*10 bps*		*21.5 %*	*120 bps*	*140 bps*	

(nm) Calculation not meaningful.

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

Net Sales

Net sales for 2020 increased by 1% on a reported and constant currency basis and declined by 3% on an organic basis. Electronics' consolidated results were positively impacted by $53.6 million of acquisitions and $5.2 million of pass-through metals pricing and Industrial & Specialty's consolidated results were positively impacted by $11.3 million of acquisitions.

The following table reconciles GAAP net sales growth to constant currency and organic net sales growth:

	Year ended December 31,		% Change					
(dollars in millions)	2020	2019	Reported Net Sales Growth	Impact of Currency	Constant Currency	Pass-Through Metals Pricing	Acquisitions	Organic Net Sales Growth
Electronics:								
Assembly Solutions	$ 571.7	$ 545.6	5%	0%	5%	(1)%	(8)%	(4)%
Circuitry Solutions	401.0	377.6	6%	(1)%	5%	—%	—%	5%
Semiconductor Solutions	199.4	162.5	23%	0%	22%	—%	(6)%	17%
Total	$ 1,172.1	$ 1,085.7	8%	0%	8%	0%	(5)%	2%
Industrial & Specialty:								
Industrial Solutions	$ 473.0	$ 521.1	(9)%	1%	(9)%	—%	(2)%	(11)%
Graphics Solutions	143.6	152.0	(5)%	1%	(4)%	—%	—%	(4)%
Energy Solutions	65.0	77.1	(16)%	3%	(13)%	—%	—%	(13)%
Total	$ 681.6	$ 750.2	(9)%	1%	(8)%	—%	(2)%	(10)%
Total	$ 1,853.7	$ 1,835.9	1%	0%	1%	0%	(4)%	(3)%

NOTE: Totals may not sum due to rounding.

Electronics' net sales for 2020 increased by 8% on a reported and constant currency basis and 2% on an organic basis.

- Assembly Solutions: net sales increased by 5% on a reported basis and declined 4% on an organic basis. The Kester Acquisition and pass-through metals pricing had a positive impact on reported net sales of 8% and 1%, respectively. Foreign exchange did not have a material impact on reported net sales. The decrease in organic net sales was primarily due to weak demand related to COVID-19-related production slowdowns in the second quarter of 2020 across all regions we serve, which impacted key end-markets such as automotive and consumer electronics, partially offset by recovery in the same end markets in the fourth quarter of 2020.
- Circuitry Solutions: net sales increased by 6% on a reported basis and 5% on an organic basis. Foreign exchange had a positive impact of 1% on reported net sales. The increase in organic net sales was primarily due to strong demand for high-end smartphones and 5G telecommunication infrastructure, as well as strength from memory disk customers driven by continued growth in data center markets.
- Semiconductor Solutions: net sales increased by 23% on a reported basis and 17% on an organic basis. The Kester Acquisition had a positive impact of 6% on reported net sales. Foreign exchange did not have a material impact on reported net sales. The increase in organic net sales was primarily due to growth in advanced packaging, driven by growth in semiconductor volumes, and increased demand for advanced assembly products, driven by 5G telecommunication infrastructure.

Industrial & Specialty's net sales for 2020 decreased by 9% on a reported basis, 8% on a constant currency basis and 10% on an organic basis.

- Industrial Solutions: net sales declined by 9% on a reported basis and 11% on an organic basis. The DMP Acquisition had a positive impact of 2% on reported net sales. Foreign exchange had a negative impact of 1% on reported net sales. The decrease in organic net sales was primarily driven by automotive production slowdowns due to the COVID-19 pandemic in all regions and demand weakness in construction and general industrial manufacturing markets in the first half of the year, partially offset by sequential recovery in the same end markets.

- Graphic Solutions: net sales declined by 5% on a reported basis and 4% on an organic basis. Foreign exchange had a negative impact of 1% on reported net sales. The decrease in organic net sales was primarily due to lower volumes of ancillary products, such as screen printing and newspaper plates, as well as delayed marketing campaigns by CPG customers.
- Energy Solutions: net sales declined 16% on a reported basis and 13% on an organic basis. Foreign exchange had a negative impact of 3% on reported net sales. The decrease in organic net sales was primarily due to demand weakness related to the COVID-19 pandemic and the subsequent decline in the price of oil which significantly curtailed production and drilling activity globally, as well as the continuing impact of the loss of certain business in the first quarter of 2019, which had a negative impact of approximately 2% on organic net sales growth.

Gross Profit

	Year Ended December 31,		Change	
(dollars in millions)	2020	2019	Reported	Constant Currency
Gross profit:				
Electronics	$ 477.2	$ 447.3	7%	7%
Industrial & Specialty	308.8	341.0	(9)%	(8)%
Total	$ 786.0	$ 788.3	0%	0%
Gross profit margin:				
Electronics	*40.7 %*	*41.2 %*	*(50) bps*	*(50) bps*
Industrial & Specialty	*45.3 %*	*45.4 %*	*(10) bps*	*0 bps*
Total	*42.4 %*	*42.9 %*	*(50) bps*	*(40) bps*

Electronics' gross profit for 2020 increased by 7% on a reported and constant currency basis. The constant currency increase in gross profit for the period was driven by growth in telecom and data storage markets and was partially offset by COVID-19-related production slowdowns in the automotive markets. Gross margin declined modestly due to unfavorable product mix.

Industrial & Specialty's gross profit for 2020 decreased by 9% on a reported basis and 8% on a constant currency basis. The constant currency decrease in gross profit was primarily driven by lower net sales in Industrial Solutions.

Operating Expenses

	Year ended December 31,		Change	
(dollars in millions)	2020	2019	Reported	Constant Currency
Selling, technical, general and administrative (STG&A)	$ 504.7	$ 497.0	2%	2%
Research and development (R&D)	48.6	42.2	15%	16%
Total	$ 553.3	$ 539.2	3%	3%
Operating Expenses as % of Net Sales				
STG&A	*27.2 %*	*27.1 %*	*10 bps*	*20 bps*
R&D	*2.6 %*	*2.3 %*	*30 bps*	*30 bps*
Total	*29.8 %*	*29.4 %*	*40 bps*	*50 bps*

Operating expenses for 2020 increased 3% on a reported and constant currency basis. The constant currency increase was driven primarily by higher incentive compensation accruals, the initial funding of $5.0 million associated with the creation of the Element Solutions Foundation in the fourth quarter of 2020, as well as an increase in research and development expenses related to the acquisition of a new subsea production control fluid within our Energy Solutions business for $6.3 million. See Note 8, *Goodwill and Intangible Assets*, for additional information. This was partially offset by cost containment initiatives across the business to mitigate the impact of COVID-19-related slowdowns, including lower travel expenses, which decreased approximately $15.0 million on a constant currency basis, and lower personnel expenses, including the impact of temporary employee salary reductions and furloughs.

Other (Expense) Income, net

(dollars in millions)	Year Ended December 31, 2020	2019
Interest expense, net	$ (63.4)	$ (90.7)
Foreign exchange (loss) gain	(36.5)	28.7
Other expense, net	(51.7)	(46.2)
Total	$ (151.6)	$ (108.2)

Interest expense, net

Net interest expense decreased $27.3 million primarily due to the pay down of our credit facilities on January 31, 2019 in connection with the Arysta Sale, as well as our private offering of $800 million aggregate principal amount of 3.875% USD Notes due 2028 and subsequent full redemption of our 5.875% USD Notes due 2025 during the third quarter of 2020. This private offering is expected to result in continued significant interest savings in 2021.

Foreign exchange (loss) gain

Foreign exchange loss increased $65.2 million primarily due to the remeasurement of euro- and British pound-denominated intercompany balances.

Other expense, net

Other expense, net for 2020 totaled $51.7 million, of which $45.7 million related to the redemption of our 5.875% USD Notes due 2025. Other expense, net for 2019 totaled $46.2 million, of which $61.0 million was for debt refinancing costs related to paying down our then existing credit facilities at the time of the Arysta Sale, partially offset by a $11.7 million gain on derivative contracts associated with the refinancing of our non-U.S. dollar denominated third-party debt in the first quarter of 2019.

Income Tax

The income tax expense for 2020 totaled $4.3 million, as compared to $61.3 million in 2019. Tax expense changed primarily due to changes in pre-tax income and changes in U.S. tax law. For additional information see Note 11, *Income Taxes*, to the Consolidated Financial Statements included in this 2020 Annual Report.

Other Comprehensive Income (Loss)

Other comprehensive income for 2020 totaled $85.7 million as compared to $517 million in the prior year. The change was driven primarily by realized foreign currency translation losses of $480 million related to the Arysta Sale in 2019, as well as currency translation losses associated with the Brazilian real, partially offset by gains associated with the Chinese yuan and euro.

Segment Adjusted EBITDA Performance

(dollars in millions)	Year Ended December 31, 2020	Year Ended December 31, 2019	Change Reported	Change Constant Currency
Adjusted EBITDA:				
Electronics	$ 277.3	$ 252.9	10%	10%
Industrial & Specialty	145.3	163.8	(11)%	(10)%
Total	$ 422.6	$ 416.7	1%	2%
Adjusted EBITDA margin:				
Electronics	*23.7 %*	*23.3 %*	*40 bps*	*40 bps*
Industrial & Specialty	*21.3 %*	*21.8 %*	*(50) bps*	*(40) bps*
Total	*22.8 %*	*22.7 %*	*10 bps*	*10 bps*

Electronics' Adjusted EBITDA for 2020 increased 10% on a reported and constant currency basis. The constant currency increase was driven primarily by higher gross profit, as well as lower general and administrative expenses.

Industrial & Specialty's Adjusted EBITDA for 2020 decreased 11% on a reported basis and 10% on a constant currency basis. The constant currency decrease was driven primarily by lower gross profit, partially offset by lower general and administrative expenses.

Comparison of Fiscal Years 2019 and 2018

For the comparison of fiscal years 2019 and 2018, see "*Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018*" in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations,* included in our 2019 Annual Report and incorporated by reference into this 2020 Annual Report.

Liquidity and Capital Resources

Our primary source of liquidity during 2020 was available cash generated from operations. Our primary uses of cash and cash equivalents were to fund operations, debt service obligations, $55.7 million of repurchases of our common stock, capital expenditures, working capital and dividend payments. Our first significant debt principal payment of approximately $700 million, related to the maturity of our outstanding USD term loans under the Credit Agreement, is not due until due 2026.

We currently expect to pay a 5 cents per share dividend on a quarterly basis. However, the actual declaration of any cash dividends, as well as their amounts and timing, will be subject to the final determination of our Board of Directors based on factors including our future earnings and cash flow generation.

We believe that our cash and cash equivalents and cash generated from operations, supplemented by our availability under our lines of credit, including our revolving credit facility under the Credit Agreement, will be sufficient to meet our working capital needs, interest payments, capital expenditures, potential dividend payments and other business requirements for at least the next twelve months. However, working capital cycles and/or future repurchases of our common stock and/or acquisitions may require additional funding, which may include future debt and/or equity offerings. Our long-term liquidity may be influenced by our ability to borrow additional funds, renegotiate existing debt and raise equity under terms that are favorable to us.

We may from time to time seek to repurchase our equity and/or to retire or repurchase our outstanding debt through cash purchases and/or exchanges for equity, in open market purchases, privately negotiated transactions or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions, applicable restrictions under our various financing arrangements, and other factors.

During 2020, approximately 74% of our net sales were generated from non-U.S. operations, and we expect a large portion of our net sales to continue to be generated outside of the U.S. As a result, our foreign subsidiaries will likely continue to hold a substantial portion of our cash. We expect to manage our worldwide cash requirements based on available funds among the many subsidiaries through which we conduct business and the cost effectiveness with which those funds can be accessed. We may transfer cash from certain international subsidiaries to U.S. and/or other international subsidiaries when we believe it is cost effective to do so.

We continually review our domestic and foreign cash profile, expected future cash generation and investment opportunities, which support our current designation of a portion of these funds as being indefinitely reinvested, and reassess whether there are demonstrated needs to repatriate a portion of these funds being held internationally. If, as a result of our review, we determine that all or a portion of the funds require repatriation, we may be required to accrue additional taxes. Of our $292 million of cash and cash equivalents at December 31, 2020, $156 million was held by our foreign subsidiaries. In 2020, domestic cash was primarily used for debt service obligations, repurchases of our common stock and dividend payments. See Note 11, *Income Taxes*, to our Consolidated Financial Statements included in this 2020 Annual Report for further discussion of income taxes on remaining undistributed foreign earnings.

The following is a summary of our cash flows used in operating, investing and financing activities of continuing operations during the periods indicated:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Cash provided by (used in) operating activities	$ 276.0	$ 170.9	$ (0.8)
Cash (used in) provided by investing activities	$ (39.9)	$ 4,199.7	$ (23.8)
Cash used in financing activities	$ (123.6)	$ (4,438.9)	$ (1.4)

Year Ended December 31, 2020 compared to the Year Ended December 31, 2019

Operating Activities

The increase in net cash flows provided by operating activities of $105 million was driven primarily by higher cash operating profits (net loss adjusted for non-cash items), including $73.6 million of lower interest payments and the payment of contingent consideration liability in the first quarter of 2019 of $30.9 million, offset by a $5.0 million payment associated with the creation and initial funding of the Element Solutions Foundation in the fourth quarter of 2020.

Investing Activities

The decrease in net cash flows provided by investing activities was primarily driven by the Arysta Sale in 2019, which proceeds totaled $4.28 billion, partially offset by the payment related to the Kester Acquisition in the fourth quarter of 2019.

Financing Activities

During 2020, we used cash on-hand to repurchase shares of our common stock for an aggregate purchase price of $55.7 million, pay dividend payments of $12.4 million and fund $46.2 million of financing fees. The financing fees consisted of a make-whole premium of $33.6 million associated with the full redemption of our 5.875% USD Notes due 2025 and $12.5 million in debt issuance costs associated with our 3.875% USD Notes due 2028. During 2019, cash flows used in financing activities were primarily driven by the pay down of approximately $4.60 billion of then existing debt with a combination of proceeds of the Arysta Sale and the drawdown of a $750 million term loan under the Credit Agreement. These cash inflows were also used to fund repurchases of our common stock for an aggregate purchase price of $507 million. In addition, $40.5 million was used to fund the repurchase and extinguishment fees related to our debt pay down and to fund the debt issuance costs associated with the Credit Agreement. Cash outflows from borrowings under our revolving credit facility were $24.9 million million in 2019.

Pension Plans

We maintain "Domestic Pension Plans," which consist of a non-contributory domestic defined benefit pension plan and Supplemental Executive Retirement Plans (SERPs). These plans are closed to new participants and plan benefits associated with all current participants have been frozen. We also maintain "Foreign Pension Plans" in countries such as Germany and Taiwan, which include a mixture of retirement, death benefit and longevity plans, among others, all of which have been deemed immaterial, individually and in the aggregate.

The expected long-term rate of return on assets assumption is developed with reference to historical returns, forward-looking return expectations, the Domestic and Foreign Pension Plans' investment allocations, and peer comparisons. We used a long-term rate of return on plan assets of 5.1% and 1.7% for our Domestic and Foreign Pension Plans, respectively, to determine our net periodic pension expense for 2020. The discount rate used to value the pension obligation was developed with reference to a number of factors, including the current interest rate environment, benchmark fixed-income yields, peer comparisons and expected future pension benefit payments. Discount rates of 2.5% and 0.7% were established for the Domestic Pension Plan

and Foreign Pension Plans, respectively, at December 31, 2020, compared to rates of 3.3% and 1.0% established for those respective plans at December 31, 2019. We evaluate the Pension Plans' actuarial assumptions on an annual basis, including the expected long-term rate of return on assets and discount rates. A one percent increase in the discount rate would increase the pension plan expense by approximately $1.3 million and decrease the pension benefit obligation by approximately $28.2 million, whereas a one percent decrease in the discount rate would decrease the pension plan expense by approximately $1.7 million and increase pension benefit obligation by approximately $34.1 million.

Our Domestic Pension Plans' investment policies incorporate an asset allocation strategy that emphasizes long-term growth of capital and acceptable asset volatility as long as such volatility remains consistent with the volatility of the indexes of relevant markets. Our investment policies attempt to achieve a mix of approximately 90% of plan investments for liability-matching, 8% for long-term growth, and 2% for near-term benefit payments. The weighted average asset allocation of the Domestic Pension Plan was 55% limited partnership interests and managed equity funds, 34% fixed income holdings, 9% equity securities, and 2% cash at December 31, 2020.

The Domestic Pension Plans were underfunded by $14.2 million at December 31, 2020 compared to $22.0 million at December 31, 2019. The improvement in the funding position was primarily driven by a $28.5 million gain on plan assets partially offset by actuarial losses due to changes in plan assumptions and experience of $14.4 million and $7.2 million of interest costs.

The Foreign Pension Plans were underfunded by $21.5 million at December 31, 2020 compared to $20.6 million at December 31, 2019.

The Company is not required to make any material plan contributions in 2021. While we do not currently anticipate any, additional future material contributions may be required in order to maintain appropriate funding levels within our plans.

Financial Borrowings

Credit Facilities and Senior Notes

At December 31, 2020, we had $1.52 billion of indebtedness, net of unamortized discounts and debt issuance costs of $19.6 million, which primarily included:

- $800 million of 3.875% USD Notes due 2028; and
- $735 million of term debt arrangements outstanding under our term loans.

Availability under our revolving credit facility and various lines of credit and overdraft facilities totaled $349 million at December 31, 2020 (net of $5.5 million of stand-by letters of credit which reduce our borrowing capacity).

Covenants

At December 31, 2020, we were in compliance with the customary affirmative and negative covenants, events of default and other customary provisions of the Credit Agreement, as well as with the covenants included in the indenture governing the 3.875% USD Notes.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Risk

We conduct a significant portion of our business in currencies other than the U.S. dollar, our financial reporting currency. In 2020, approximately 74% of our net sales were generated outside of the U.S. Generally, our foreign subsidiaries use their local currency as their functional currency; the currency in which they incur operating expenses and collect accounts receivable. Our business is exposed to foreign currency risk from changes in the exchange rate primarily between the U.S. dollar and the following currencies: euro, Chinese yuan, British pound, and Taiwan dollar. As a result, our operating results could be affected by foreign currency exchange rate volatility relative to the U.S. dollar. We are not able to project, in any meaningful way, the possible effect of these foreign currency fluctuations on translated amounts or future earnings.

We actively assess our foreign exchange risk exposure and may enter into foreign exchange hedges to mitigate such risk and protect ourselves against transaction exposures. Our hedging programs include strategies to mitigate our foreign currency denominated balance sheet exposures as well as foreign currency anticipated cash flows. At December 31, 2020, the aggregate

U.S. dollar notional amount of foreign currency forward contracts totaled $78.5 million. None of these foreign currency forward contracts were designated as hedges for accounting purposes. Their market value at December 31, 2020 was a $0.5 million net current liability, and net realized and unrealized losses on such contracts for 2020 totaled $3.0 million.

Our policies prohibit us from speculating in financial instruments for profit on exchange rate price fluctuations, from trading in currencies for which there are no underlying exposures and from entering into trades for any currency to intentionally increase the underlying exposure.

Interest Rate Risk

We are exposed to interest rate risk associated with our long-term debt and other financing commitments. At December 31, 2020, we had total debt of $1.52 billion, net of unamortized discounts and debt issuance costs of $19.6 million, including approximately $735 million of variable interest rate debt based on the one-month LIBOR. We entered into a series of pay-fixed, receive-floating interest rate swaps with respect to a portion of our indebtedness. The swaps effectively fixed the floating rate portion of the interest payments of our $750 million term loan under the Credit Agreement. We also entered into cross-currency swaps to effectively convert the $750 million term loan under the Credit Agreement, a U.S. dollar denominated debt obligation, into fixed-rate euro-denominated debt. Under these contracts, we are obligated to make periodic euro-denominated coupon payments to the hedge counterparties on an aggregate initial notional amount of €662 million, in exchange for periodic U.S. dollar-denominated coupon payments from these hedge counterparties on an aggregate initial notional amount of $750 million. The net result of these hedges, which expire in January 2024, is an interest rate of approximately 2.4%, which could vary due to changes in the euro and the U.S. dollar exchange rate.

Counterparty Risk

Outstanding financial derivative instruments expose us to credit loss in the event of non-performance by our counterparties. The credit exposure related to these financial instruments is considered in the fair values of such contracts. We review the credit ratings of our counterparties and adjust our exposure as deemed appropriate on a periodic basis. At December 31, 2020, we believe that our exposure to counterparty risk was immaterial.

Commodity Price Risk

Some raw materials and supplies are subject to price and supply fluctuations caused by market dynamics. Our strategic sourcing initiatives are focused on mitigating the impact of commodity price risk. Although some of our commercial agreements allow us to pass on certain unusual increases in component and raw material costs to our customers in limited situations, we may not be fully compensated for such increased costs. To a lesser extent, we are also exposed to fluctuations in the prices of certain utilities and services, such as electricity, natural gas and freight.

Periodically, we employ forward metals contracts or other financial instruments to hedge commodity price or other price risks. Such contracts are generally designated as normal purchases and accounted for similar to other inventory purchases. We continue to review a full range of business options focused on strategic risk management for all raw material commodities. Any failure by our suppliers to provide acceptable raw materials or supplies could adversely affect our production schedules and contract profitability. We assess qualification of suppliers and continually monitor them to control risk associated with such supply base reliance. At December 31, 2020, the aggregate U.S. dollar notional amount of metals futures contracts, none of which were designated as hedges for accounting purposes, totaled $25.0 million. The market value of the metals forward contracts at December 31, 2020 was a $1.2 million net current liability, and net realized and unrealized losses on such contracts for 2020 totaled $6.0 million.

Item 8. Financial Statements and Supplementary Data

See “Index to Consolidated Financial Statements” in this 2020 Annual 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

As required by Rule 13a-15 under the Exchange Act, management carried out an evaluation, under the supervision and with the participation of our CEO and CFO, of the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) at December 31, 2020. Based on this evaluation, our CEO and CFO have concluded that our disclosure controls and procedures at December 31, 2020 were effective to provide reasonable assurance that the information required to be disclosed by us in the reports we file or submit under the Exchange Act is (1) recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosures.

Management's 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) under the Exchange Act). Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of our financial statements in accordance with GAAP, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our 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. As required by Rule 13a-15 under the Exchange Act, management assessed the effectiveness of our internal control over financial reporting at December 31, 2020. In making this assessment, management used the criteria set forth in the *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on this assessment, the Company's management has concluded that our internal control over financial reporting was effective at December 31, 2020.

The effectiveness of our internal control over financial reporting at December 31, 2020 has been audited by PricewaterhouseCoopers LLP, as stated in their report, which appears in this 2020 Annual Report.

Changes to Internal Control Over Financial Reporting

As required by Rule 13a-15(d) under the Exchange Act, our management, including our CEO and CFO, has evaluated the Company's internal control over financial reporting to determine whether any changes occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item regarding the Company's executive officers, directors and audit committee of the Board will be included in the 2021 Proxy Statement under the headings "Executive Officers of the Company," "Proposal 1 - Election of Directors" and "Corporate Governance," and is incorporated by reference into this 2020 Annual Report.

The Company has adopted a Business Conduct and Ethics Policy applicable to all directors and employees of Element Solutions, including our CEO, CFO and Chief Accounting Officer. The Company has also adopted a Code of Ethics for Senior Financial Officers applicable, more specifically, to our CEO, CFO and Chief Accounting Officer. The Policy and the Code of Ethics are posted on the Company's website at *www.elementsolutionsinc.com* under "Investors – Corporate Governance – Governance Documents." We intend to provide disclosure of any amendment to or waiver of the Policy and/or Code of Ethics on our website within four business days following the date of such amendment or waiver.

Item 11. Executive Compensation

The information required by this item will be included in the 2021 Proxy Statement under the headings "Director Compensation," "Compensation Discussion and Analysis," "Report of the Compensation Committee," "Executive Compensation Tables" and "Corporate Governance - Compensation Committee interlocks and Insider Participation," and is incorporated by reference into this 2020 Annual Report.

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

The information required by this item will be included in the 2021 Proxy Statement under the headings "Security Ownership" and "Executive Compensation Tables - Equity Compensation Plan Information," and is incorporated by reference into this 2020 Annual Report.

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

The information required by this item will be included in the 2021 Proxy Statement under the headings "Corporate Governance - Certain Relationships and Related Transactions" and "Corporate Governance - Director Independence," and is incorporated by reference into this 2020 Annual Report.

Item 14. Principal Accounting Fees and Services

The information required by this item will be included in the 2021 Proxy Statement under the headings "Report of the Audit Committee" and "Proposal 3 - Ratification of Independent Registered Public Accounting Firm for 2021," and is incorporated by reference into this 2020 Annual Report.

Part IV

Item 15. Exhibits, Financial Statement Schedules

(A) Exhibits

Exhibit Nb.	Exhibit Description	Incorporated by Reference				Included in this 2020 Annual Report
		Form	File Nb.	Exhibit Nb.	Filing Date	
2.1**	Stock Purchase Agreement, dated as of July 20, 2018, between Element Solutions and UPL Corporation Ltd.	8-K	001-36272	2.1	7/20/2018	
2.2	Amendment Number One to Stock Purchase Agreement dated as of January 25, 2019 by and among Element Solutions, UPL Corporation Ltd., Arysta, US Purchaser and Merger Sub	8-K	001-36272	2.1	1/28/2019	
3.1(a)	Certificate of Incorporation, dated January 22, 2014	S-4 POS	333-192778	3.1	1/24/2014	
3.1(b)	Certificate of Amendment of Certificate of Incorporation, dated June 12, 2014	8-K	001-36272	3.1	6/13/2014	
3.1(c)	Certificate of Amendment of Certificate of Incorporation, dated January 31, 2019	8-K	001-36272	3.1	2/5/2019	
3.2	Amended and Restated By-laws	8-K	001-36272	3.2	2/5/2019	
4.1	Specimen Common Stock certificate	8-K	001-36272	4.1	2/5/2019	
4.2	Description of Common Stock	10-K	001-36272	4.2	2/28/2020	
4.3	Indenture, dated as of August 18, 2020, among the Company, the guarantors named therein and the Trustee	8-K	001-36272	4.1	8/18/2020	
4.4	Form of 3.875% senior notes due 2028 (Exhibit A)	8-K	001-36272	A to 4.01	8/18/2020	
10.1**	Credit Agreement, dated as of January 31, 2019, by and among, inter alios, the Company, MacDermid, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative agent	8-K	001-36272	10.1	2/5/2019	
10.2**	Amendment No.1 to Credit Agreement, dated November 26, 2019, among, inter alios, the Company, MacDermid, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative agent	8-K	001-36272	10.1	12/3/2019	
10.3**	Pledge and Security Agreement, dated as of January 31, 2019, among the Company, MacDermid and the subsidiaries of the Company from time to time parties thereto in favor of Barclays Bank PLC, as collateral agent	8-K	001-36272	10.2	2/5/2019	
10.4†	Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-Q	001-36272	10.2	8/2/2019	
10.5†	Element Solutions Inc 2014 Employee Stock Purchase Plan	10-Q	001-36272	10.3	8/2/2019	

Exhibit Nb.	Exhibit Description	Incorporated by Reference				Included in this 2020 Annual Report
		Form	File Nb.	Exhibit Nb.	Filing Date	
10.6†	Form of Restricted Stock Unit Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	S-4	333-192778	10.11	1/2/2014	
10.7†	Form of Restricted Stock Unit Agreement (2021) – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan					X
10.8†	Form of Performance-Based Restricted Stock Unit Award Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	8-K	001-36272	10.2	3/25/2016	
10.9†	Form of Performance-Based Restricted Stock Unit Award Agreement (2021) – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan					X
10.10†	Form of Non-Qualified Stock Option Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	8-K	001-36272	10.3	3/25/2016	
10.11†	Form of Incentive Stock Option Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-K	001-36272	10.23	2/28/2019	
10.12†	Form of Director and Officer Indemnification Agreement	S-4/A	333-192778	10.12	1/2/2014	
10.13†	Form of Change in Control Agreement	10-Q	001-36272	10.1	11/7/2019	
10.14	Advisory Services Agreement, dated October 31, 2013, by and between Element Solutions Inc (f/k/a Platform Specialty Products Corporation) and Mariposa Capital, LLC	S-4/A	333-192778	10.15	1/2/2014	
10.15	Letter Agreement, dated July 11, 2016, by and between Element Solutions Inc (f/k/a Platform Specialty Products Corporation) and John P. Connolly, former CFO	8-K	001-36272	10.1	3/28/2019	
10.16	Letter Agreement, dated March 22, 2019, by and between the Company and John P. Connolly, former CFO	8-K	001-36272	10.2	3/28/2019	
10.17	Letter Agreement, dated June 15, 2020, by and between the Company and Scot R. Benson, former President and Chief Operating Officer	8-K	001-36272	10.1	6/19/2020	
14.1	Code of Ethics for Senior Financial Officers	10-K	001-36272	14.1	2/28/2019	
21.1	List of subsidiaries					X
23.1	Consent of PricewaterhouseCoopers LLP					X
24.1	Power of Attorney					X
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X

Exhibit Nb.	Exhibit Description	Incorporated by Reference				Included in this 2020 Annual Report
		Form	File Nb.	Exhibit Nb.	Filing Date	
32.1*	Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.SCH*	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL*	Inline XBRL Extension Calculation Linkbase Document					X
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL documents					X
104*	Cover Page Interactive Data File (formatted as Inline XBRL and included in Exhibit 101)					X

* Furnished herewith.

** Certain schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule or exhibit will be furnished supplementally to the SEC upon request.

† Indicates management contract or compensatory plan.

(B) Financial Statement Schedule

Schedule II — Valuation and Qualifying Accounts and Reserves

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.

ELEMENT SOLUTIONS INC

By: /s/ Michael Russnok
Michael Russnok
Chief Accounting Officer
Date: February 25, 2021

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

Signature	Title	Date
/s/ Benjamin Gliklich Benjamin Gliklich	Director and President and Chief Executive Officer (Principal Executive Officer)	February 25, 2021
/s/ Carey J. Dorman Carey J. Dorman	Executive Vice President, Chief Financial Officer (Principal Financial Officer)	February 25, 2021
/s/ Michael Russnok Michael Russnok	Chief Accounting Officer (Principal Accounting Officer)	February 25, 2021
/s/ Sir Martin E. Franklin Sir Martin E. Franklin	Executive Chairman of the Board	February 25, 2021
/s/ Ian G.H. Ashken Ian G.H. Ashken	Director	February 25, 2021
/s/ Scot R. Benson Scot R. Benson	Director	February 25, 2021
/s/ Christopher T. Fraser Christopher T. Fraser	Director	February 25, 2021
/s/ Michael F. Goss Michael F. Goss	Director	February 25, 2021
/s/ Nichelle Maynard-Elliott Nichelle Maynard-Elliott	Director	February 25, 2021
/s/ E. Stanley O'Neal E. Stanley O'Neal	Director	February 25, 2021

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Element Solutions Inc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Element Solutions Inc and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of operations, of comprehensive income (loss), of changes in stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

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

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

The critical audit matters communicated below are matters 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 (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment Assessment

As described in Notes 2 and 8 to the consolidated financial statements, the Company's consolidated goodwill balance was $2.25 billion as of December 31, 2020. Goodwill is tested for impairment by management at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired. Management tests for impairment by comparing the fair value of each reporting unit to its carrying value. The fair value of each reporting unit is based equally on market multiples and the present value of discounted future cash flows. The cash flow model utilized by management in the goodwill impairment test involves significant judgments related to future growth rates and discount rates, among other considerations, from the vantage point of a market participant.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment is a critical audit matter are (i) the significant judgment by management when developing the fair value measurement of the reporting units; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence relating to management's significant assumptions related to future growth rates and the discount rates; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge. Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others, (i) testing management's process for developing the fair value estimates; (ii) evaluating the appropriateness of the discounted cash flow model; (iii) testing the completeness and accuracy of underlying data used in the model; and (iv) evaluating the significant assumptions used by management related to the future growth rates and the discount rates. Evaluating management's assumptions related to future growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting units; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and the discount rate assumption.

Valuation Allowance Assessment of Deferred Tax Assets

As described in Notes 2 and 11 to the consolidated financial statements, the Company has recorded $193 million of deferred tax assets as of December 31, 2020, net of valuation allowances of $199 million. The Company recognizes deferred tax assets and liabilities based on the differences between the financial statement basis and the tax basis of assets, liabilities, net operating losses and tax carryforwards. A valuation allowance is required to be recognized to reduce the recorded deferred tax asset to the amount that will more likely than not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income by jurisdiction during the periods in which those temporary differences become deductible or when carryforwards can be utilized. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in this assessment.

The principal considerations for our determination that performing procedures relating to the valuation allowance assessment of deferred tax assets is a critical audit matter are the significant judgment by management in determining the realizability of deferred tax assets by jurisdiction, particularly as it relates to estimates of projected future taxable income, expected utilization of net operating losses, and tax carryforwards. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence relating to management's assessment of the realizability of deferred tax assets and assumptions relating to projected future taxable income, expected utilization of net operating losses, and tax carryforwards.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation allowance assessment of deferred tax assets, including controls over the determination of future taxable income by jurisdiction, expected utilization of net operating losses, and tax carryforwards. These procedures also included, among others, testing the completeness and accuracy of underlying data used by management, and evaluating management's assessment of the realizability of deferred tax assets by jurisdiction. This included evaluating the reasonableness of management's assumptions related to projected future taxable income, expected utilization of net operating losses, and tax carryforwards. Evaluating management's assumptions related to projected future taxable income, expected utilization of net operating losses, and tax carryforwards involved evaluating whether the assumptions used by management were reasonable considering the current and past performance of the respective entity and whether the assumptions were consistent with evidence obtained in other areas of the audit.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 25, 2021

We have served as the Company's auditor since 2013.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(dollars in millions, except per share amounts)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net sales	$ 1,853.7	$ 1,835.9	$ 1,961.0
Cost of sales	1,067.7	1,047.6	1,123.4
Gross profit	786.0	788.3	837.6
Operating expenses:			
Selling, technical, general and administrative	504.7	497.0	544.8
Research and development	48.6	42.2	44.3
Total operating expenses	553.3	539.2	589.1
Operating profit	232.7	249.1	248.5
Other (expense) income:			
Interest expense, net	(63.4)	(90.7)	(311.0)
Foreign exchange (loss) gain	(36.5)	28.7	(5.5)
Other (expense) income, net	(51.7)	(46.2)	14.8
Total other expense	(151.6)	(108.2)	(301.7)
Income (loss) before income taxes and non-controlling interests	81.1	140.9	(53.2)
Income tax expense	(4.3)	(61.3)	(23.8)
Net income (loss) from continuing operations	76.8	79.6	(77.0)
(Loss) income from discontinued operations, net of tax	(1.1)	13.3	(242.9)
Net income (loss)	75.7	92.9	(319.9)
Net income attributable to the non-controlling interests	—	(0.7)	(4.5)
Net income (loss) attributable to common stockholders	$ 75.7	$ 92.2	$ (324.4)
Earnings (loss) per share			
Basic from continuing operations	$ 0.31	$ 0.31	$ (0.27)
Basic from discontinued operations	(0.01)	0.05	(0.86)
Basic attributable to common stockholders	$ 0.30	$ 0.36	$ (1.13)
Diluted from continuing operations	$ 0.31	$ 0.30	$ (0.27)
Diluted from discontinued operations	(0.01)	0.05	(0.86)
Diluted attributable to common stockholders	$ 0.30	$ 0.35	$ (1.13)
Weighted average common shares outstanding			
Basic	248.8	257.6	288.2
Diluted	249.9	260.1	288.2

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(dollars in millions)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net income (loss)	$ 75.7	$ 92.9	$ (319.9)
Other comprehensive income (loss)			
Foreign currency translation:			
Other comprehensive income (loss) before reclassifications, net of tax benefit of $15.7 for 2020	107.4	70.5	(378.0)
Reclassifications	—	479.8	—
Total foreign currency translation adjustments	107.4	550.3	(378.0)
Pension and post-retirement plans:			
Other comprehensive income before reclassifications, net of tax expense (benefit) of $1.1, $(0.9) and $(1.6) for 2020, 2019 and 2018, respectively	4.4	0.6	1.8
Reclassifications, net of tax expense of $0.0 for 2019	—	(2.1)	—
Total pension and post-retirement plans	4.4	(1.5)	1.8
Derivative financial instruments:			
Other comprehensive (loss) income before reclassifications, net of tax expense of $1.6 and $1.5 for 2020 and 2018, respectively	(40.2)	(29.2)	6.0
Reclassifications, net of tax expense of $1.5 for 2019	14.1	(3.0)	(0.5)
Total unrealized (loss) gain arising on qualified hedging derivatives	(26.1)	(32.2)	5.5
Other comprehensive income (loss)	85.7	516.6	(370.7)
Comprehensive income (loss)	161.4	609.5	(690.6)
Comprehensive (income) loss attributable to the non-controlling interests	—	(40.9)	30.0
Comprehensive income (loss) attributable to stockholders	$ 161.4	$ 568.6	$ (660.6)

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(dollars in millions)

	December 31,	
	2020	**2019**
Assets		
Cash & cash equivalents	$ 291.9	$ 190.1
Accounts receivable, net of allowance for doubtful accounts of $9.7 and $8.8 at December 31, 2020 and 2019, respectively	403.4	363.9
Inventories	203.1	199.6
Prepaid expenses	24.0	18.3
Other current assets	67.5	50.3
Current assets of discontinued operations	—	11.2
Total current assets	989.9	833.4
Property, plant and equipment, net	240.4	264.8
Goodwill	2,252.7	2,179.6
Intangible assets, net	855.9	944.4
Other assets	141.2	95.7
Non-current assets of discontinued operations	3.3	6.5
Total assets	$ 4,483.4	$ 4,324.4
Liabilities & stockholders' equity		
Accounts payable	$ 95.6	$ 96.8
Current installments of long-term debt	7.4	7.8
Accrued expenses and other current liabilities	204.2	155.1
Current liabilities of discontinued operations	7.1	34.1
Total current liabilities	314.3	293.8
Debt	1,508.1	1,513.2
Pension and post-retirement benefits	43.3	50.8
Deferred income taxes	112.9	119.6
Other liabilities	186.7	127.7
Total liabilities	2,165.3	2,105.1
Commitments and contingencies (Note 18)		
Stockholders' equity		
Preferred stock - Series A	—	—
Common stock, 400.0 shares authorized (2020: 261.3 shares issued; 2019: 258.4 shares issued)	2.6	2.6
Additional paid-in capital	4,122.9	4,114.2
Treasury stock (2020: 14.2 shares; 2019: 8.3 shares)	(137.7)	(78.9)
Accumulated deficit	(1,473.2)	(1,536.5)
Accumulated other comprehensive loss	(194.8)	(280.5)
Total stockholders' equity	2,319.8	2,220.9
Non-controlling interests	(1.7)	(1.6)
Total equity	2,318.1	2,219.3
Total liabilities and stockholders' equity	$ 4,483.4	$ 4,324.4

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(dollars in millions)

	Year Ended December 31,		
	2020	**2019**	**2018**
Cash flows from operating activities:			
Net income (loss)	$ 75.7	$ 92.9	$ (319.9)
(Loss) income from discontinued operations, net of tax	(1.1)	13.3	(242.9)
Net income (loss) from continuing operations	76.8	79.6	(77.0)
Reconciliations of net income (loss) to net cash flows provided by (used in) operating activities:			
Depreciation and amortization	161.4	154.7	156.7
Deferred income taxes	(53.0)	(3.1)	(54.7)
Foreign exchange loss (gain)	29.3	(54.6)	(0.2)
Incentive stock compensation	6.0	11.8	15.4
Other, net	61.3	55.1	(11.4)
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	(27.3)	21.8	0.9
Inventories	1.4	(3.8)	(18.8)
Accounts payable	(5.3)	(7.0)	(5.5)
Accrued expenses	26.1	(57.7)	(10.6)
Prepaid expenses and other current assets	(9.6)	(2.9)	10.5
Other assets and liabilities	8.9	(23.0)	(6.1)
Net cash flows provided by (used in) operating activities of continuing operations	276.0	170.9	(0.8)
Cash flows from investing activities:			
Capital expenditures	(28.8)	(29.7)	(28.4)
Proceeds from disposal of property, plant and equipment	1.7	4.6	4.2
Proceeds from the Arysta Sale (net of cash $148.7 million)	—	4,281.8	—
Proceeds from the sale of equity investment	—	—	25.0
Acquisition of business, net of cash acquired	(9.0)	(63.9)	(28.2)
Other, net	(3.8)	6.9	3.6
Net cash flows (used in) provided by investing activities of continuing operations	(39.9)	4,199.7	(23.8)
Cash flows from financing activities:			
Debt proceeds	800.0	1,493.4	—
Repayments of borrowings	(807.9)	(5,351.4)	(22.5)
Change in lines of credit, net	—	(24.9)	25.0
Repurchases of common stock	(55.7)	(507.1)	—
Dividends	(12.4)	—	—
Payment of financing fees	(46.2)	(40.5)	(1.4)
Other, net	(1.4)	(8.4)	(2.5)
Net cash flows used in financing activities of continuing operations	(123.6)	(4,438.9)	(1.4)
Cash flows from discontinued operations:			
Net cash flows used in operating activities of discontinued operations	(14.7)	(161.7)	(7.9)
Net cash flows used in investing activities of discontinued operations	—	(5.0)	(51.2)
Net cash flows provided by financing activities of discontinued operations	—	4.8	43.8
Net cash flows used in discontinued operations	(14.7)	(161.9)	(15.3)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	4.0	4.8	(27.0)
Net increase (decrease) in cash, cash equivalents and restricted cash	101.8	(225.4)	(68.3)
Cash, cash equivalents and restricted cash at beginning of period [1]	190.1	415.5	483.8
Cash, cash equivalents and restricted cash at end of period [2]	$ 291.9	$ 190.1	$ 415.5
Supplemental disclosure information of continuing operations:			
Cash paid for interest	$ 51.8	$ 125.4	$ 293.4
Cash paid for income taxes	$ 66.5	$ 71.2	$ 78.9

[1] *Includes cash, cash equivalents and restricted cash of discontinued operations of $181.9 million and $225.4 million at December 31, 2018 and 2017, respectively.*

[2] *Includes cash, cash equivalents and restricted cash of discontinued operations of $181.9 million at December 31, 2018.*

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(dollars in millions, except share and per share amounts)

	Preferred Stock		Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity	Non-controlling Interests	Total Equity
	Shares	Amount	Shares	Amount		Shares	Amount					
Balance at December 31, 2019	2,000,000	$ —	258,428,333	$ 2.6	$ 4,114.2	8,277,198	$ (78.9)	$ (1,536.5)	$ (280.5)	$ 2,220.9	$ (1.6)	$ 2,219.3
Net income	—	—	—	—	—	—	—	75.7	—	75.7	—	75.7
Other comprehensive income, net of taxes	—	—	—	—	—	—	—	—	85.7	85.7	—	85.7
Preferred stock conversion	(2,000,000)	—	2,000,000	—	—	—	—	—	—	—	—	—
Issuance of common stock under ESPP	—	—	116,205	—	1.1	—	—	—	—	1.1	—	1.1
Repurchases of common stock	—	—	—	—	—	5,703,279	(55.7)	—	—	(55.7)	—	(55.7)
Dividends ($0.05 per share)	—	—	—	—	—	—	—	(12.4)	—	(12.4)	—	(12.4)
Equity compensation expense	—	—	—	—	5.4	—	—	—	—	5.4	—	5.4
Exercise/ vesting of share based compensation	—	—	785,589	—	2.2	248,803	(3.1)	—	—	(0.9)	—	(0.9)
Changes in non-controlling interests	—	—	—	—	—	—	—	—	—	—	(0.1)	(0.1)
Balance at December 31, 2020	—	$ —	261,330,127	$ 2.6	$ 4,122.9	14,229,280	$ (137.7)	$ (1,473.2)	$ (194.8)	$ 2,319.8	$ (1.7)	$ 2,318.1

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (continued)
(dollars in millions, except share and per share amounts)

	Preferred Stock		Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity	Non-controlling Interests	Total Equity
	Shares	Amount	Shares	Amount		Shares	Amount					
Balance at December 31, 2018	2,000,000	$ —	289,316,170	$ 2.9	$ 4,062.1	341,967	$ (3.5)	$ (1,195.4)	$ (756.9)	$ 2,109.2	$ 71.9	$ 2,181.1
Net income	—	—	—	—	—	—	—	92.2	—	92.2	0.7	92.9
Other comprehensive income, net of taxes	—	—	—	—	—	—	—	—	27.0	27.0	—	27.0
Arysta Sale	—	—	—	—	(5.7)	—	—	—	463.3	457.6	(46.6)	411.0
Conversion of shares of common stock of PDH into common stock	—	—	4,019,710	0.1	41.1	—	—	—	(13.9)	27.3	(27.3)	—
Issuance of common stock under ESPP	—	—	123,982	—	1.1	—	—	—	—	1.1	—	1.1
Repurchases of common stock	—	—	(37,000,000)	(0.4)	—	7,764,242	(73.5)	(433.3)	—	(507.2)	—	(507.2)
Equity compensation expense	—	—	—	—	13.7	—	—	—	—	13.7	—	13.7
Exercise/ vesting of share based compensation	—	—	1,968,471	—	1.9	170,989	(1.9)	—	—	—	—	—
Changes in non-controlling interests	—	—	—	—	—	—	—	—	—	—	(0.3)	(0.3)
Balance at December 31, 2019	2,000,000	$ —	258,428,333	$ 2.6	$ 4,114.2	8,277,198	$ (78.9)	$ (1,536.5)	$ (280.5)	$ 2,220.9	$ (1.6)	$ 2,219.3

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (continued)
(dollars in millions, except share and per share amounts)

	Preferred Stock		Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity	Non-controlling Interests	Total Equity
	Shares	Amount	Shares	Amount		Shares	Amount					
Balance at December 31, 2017	2,000,000	$ —	287,405,939	$ 2.9	$ 4,032.0	6,618	$ (0.1)	$ (869.7)	$ (422.0)	$ 2,743.1	$ 116.9	$ 2,860.0
Impact of ASU 2016-01 adoption	—	—	—	—	—	—	—	(1.3)	1.3	—	—	—
Balance at January 1, 2018	2,000,000	—	287,405,939	2.9	4,032.0	6,618	(0.1)	(871.0)	(420.7)	2,743.1	116.9	2,860.0
Net (loss) income	—	—	—	—	—	—	—	(324.4)	—	(324.4)	4.5	(319.9)
Other comprehensive loss, net of taxes	—	—	—	—	—	—	—	—	(336.2)	(336.2)	(34.5)	(370.7)
Conversion of shares of common stock of PDH into common stock	—	—	793,063	—	9.9	—	—	—	—	9.9	(9.9)	—
Issuance of common stock under ESPP	—	—	128,595	—	1.2	—	—	—	—	1.2	—	1.2
Equity compensation expense	—	—	—	—	18.9	—	—	—	—	18.9	—	18.9
Exercise/ vesting of share based compensation	—	—	988,573	—	0.1	335,349	(3.4)	—	—	(3.3)	—	(3.3)
Changes in non-controlling interests	—	—	—	—	—	—	—	—	—	—	(5.1)	(5.1)
Balance at December 31, 2018	2,000,000	$ —	289,316,170	$ 2.9	$ 4,062.1	341,967	$ (3.5)	$ (1,195.4)	$ (756.9)	$ 2,109.2	$ 71.9	$ 2,181.1

See accompanying notes to consolidated financial statements.

1. BACKGROUND AND BASIS OF PRESENTATION

Background

Element Solutions was incorporated in Delaware in January 2014 and its shares of common stock, par value $0.01 per share, trade on the New York Stock Exchange under the ticker symbol “ESI.”

Element Solutions is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Our businesses provide products that, in substantially all cases, are consumed by customers as part of their production process, providing us with reliable and recurring revenue streams as the products are replenished in order to continue production. Element Solutions delivers its products to customers through its sales and service workforce, regional distributors and manufacturing representatives.

The Company's operations are organized in two reportable segments: Electronics and Industrial & Specialty. The reporting segments represent businesses for which separate financial information is utilized by the chief operating decision maker, or CODM, for purpose of allocating resources and evaluating performance.

Electronics – The Electronics segment researches, formulates and sells specialty chemicals and materials for all types of electronics hardware, from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the manufacturing process and the functionality of their end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways, and its "assembly materials," such as solders, pastes, fluxes and adhesives, join those pathways together. The segment provides specialty chemical solutions through the following businesses: Assembly Solutions, Circuitry Solutions and Semiconductor Solutions.

Industrial & Specialty – The Industrial & Specialty segment researches, formulates and sells specialty chemicals that enhance surfaces in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids for offshore energy production. These fully consumable products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end markets. The segment provides specialty chemical solutions through the following businesses: Industrial Solutions, Graphics Solutions and Energy Solutions.

Basis of Presentation

The accompanying Consolidated Financial Statements have been prepared in accordance with GAAP and include the accounts of Element Solutions and all of its controlled subsidiaries. The Company consolidates the income, expenses, assets, liabilities and cash flows of its subsidiaries from the date it acquires control or becomes the primary beneficiary. All intercompany accounts and transactions have been eliminated upon consolidation.

In preparing the Consolidated Financial Statements in conformity with GAAP, management uses estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. Management applies judgment based on its understanding and analysis of the relevant circumstances, including historical experience and future expectations. These judgments, by their nature, are subject to an inherent degree of uncertainty and, accordingly, actual results could differ significantly from these estimates and assumptions.

Certain prior year amounts have been reclassified to conform to the current year's presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash and Cash Equivalents – The Company considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents.

Receivables and Allowance for Doubtful Accounts – The Company determines its allowance for doubtful accounts associated with expected credit losses using a combination of factors to reduce trade receivable balances to their estimated net realizable amount. The Company maintains and adjusts its allowance for credit losses based on a variety of factors, including the length of time receivables have been past due under the applicable contractual terms, current and future macroeconomic trends and conditions, significant one-time events such as bankruptcy filings or deterioration in the customer's operating results or financial position, historical experience and the financial condition of its customers. Credit risk with respect to accounts receivable is generally diversified due to the large number of entities comprising the Company's customer base and its dispersion across many different geographical regions. At December 31, 2020 and 2019, the Company did not believe it had any significant concentrations of credit risk that could materially impact its results of operations or financial position.

Inventories – Inventories are stated at the lower of cost or net realizable value with cost being determined by the first-in/first-out and average cost methods. The Company regularly reviews inventories for obsolescence and excess quantities and calculates reserves based on historical write-offs, customer demand, age of inventory, product evolution, usage rates and quantities of stock on hand. Additional obsolescence reserves may be required if actual sales are less favorable than those projected or product lifecycles differs from expectations.

Property, Plant and Equipment – Property, plant and equipment is stated at cost less accumulated depreciation. The Company records depreciation on a straight-line basis over the estimated useful life of each asset.

Estimated useful lives by asset class are as follows:

	Average useful life (in years)		
Buildings and building improvements	5	to	20
Machinery, equipment and fixtures	3	to	15
Computer hardware and software	3	to	7
Furniture and automobiles	3	to	7
Leasehold improvements	Lesser of useful life or lease term		

Maintenance and repair costs are expensed as incurred, while renewals and improvements, which significantly extend the useful life of the asset, are capitalized and expensed over its remaining useful life. Costs and accumulated depreciation on assets retired or disposed of are removed from the accounts and any resulting gains or losses are recorded to earnings in the period of disposal.

Business Combinations – The Company allocates the purchase price of acquisitions to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values at the acquisition date. The excess of the acquisition price over those estimated fair values is recorded as goodwill. Changes to the acquisition date provisional fair values prior to the end of the measurement period are recorded as adjustments to the associated goodwill. Acquisition-related expenses and restructuring costs, if any, are expensed as incurred.

Goodwill – Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired. The Company's reporting units are determined based upon its organizational structure in place at the date of the goodwill impairment test.

The Company tests for impairment by comparing the fair value of each reporting unit to its carrying value. The fair value of each reporting unit is based equally on market multiples and the present value of discounted future cash flows. Excluding certain nonrecurring charges, the discounted cash flows are prepared based upon cash flows at the reporting unit level. The cash flow model utilized in the goodwill impairment test involves significant judgments related to future growth rates and discount rates, among other considerations from the vantage point of a market participant. If the fair value of a reporting unit exceeds the carrying value of the net assets assigned to that reporting unit, goodwill is not impaired and no further testing is

required. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, the goodwill impairment loss is calculated as the difference between these amounts, limited to the amount of goodwill allocated to the reporting unit.

The primary components of and assumptions used in the assessment consist of the following:

- *Valuation Techniques* - the Company uses a discounted cash flow analysis, which requires assumptions about short and long-term net cash flows, growth rates and discount rates. Additionally, it considers guideline company and guideline transaction information, where available, to aid in the valuation of the reporting units.
- *Growth Assumptions* - Multi-year financial forecasts are developed for each reporting unit by considering several key business drivers, such as new business initiatives, client service and retention standards, market share changes, historical performance and industry and economic trends, among other considerations.
- *Discount Rate Assumptions* - Discount rates are estimated based on the WACC, which combines the required return on equity and considers the risk-free interest rate, market risk premium, size risk premium and a company specific risk premium, with the cost of debt, based on rated corporate bonds, adjusted using an income tax factor.
- *Estimated Fair Value and Sensitivitie*s - The estimated fair value of each reporting unit is derived from the valuation techniques described above. The estimated fair value of each reporting unit is analyzed in relation to numerous market and historical factors, including current economic and market conditions, company-specific growth opportunities and guideline company information.

Indefinite-Lived Intangible Assets – Indefinite-lived intangible assets are reviewed for potential impairment on an annual basis, in the fourth quarter, or more frequently when events or circumstances indicate that such assets may be impaired, by comparing their estimated fair values to their carrying values. An impairment charge is recognized when the carrying value of an indefinite-lived intangible asset exceeds its estimated fair value. The Company uses the “relief from royalty” method to estimate the fair value of trade name intangible assets for impairment. The primary assumptions used to estimate the present value of cash flows from such assets include sales projections and growth rates being applied to a prevailing market-based royalty rate, the effects of which are then tax effected and discounted using the WACC from the vantage point of a market participant. Assumptions concerning sales projections are impacted by the uncertain nature of global and local economic conditions in the various markets it serves.

Finite-Lived Intangible Assets – Finite-lived intangible assets are amortized on a straight-line basis over their estimated useful lives, which currently range from 8 to 25 years for customer relationships, 3 to 10 years for developed technologies, 5 to 20 years for trade names and up to 5 years for other intangible assets. If circumstances require a long-lived asset group to be tested for possible impairment, the Company first determines if the estimated undiscounted future pre-tax cash flows expected to result from the use of the asset plus net proceeds expected from disposition of the asset, if any, are less than the carrying value of the asset. When an impairment is identified, the carrying value of the asset is reduced to its estimated fair value.

Leases – The Company adopted ASU No. 2016-02, "Leases" on January 1, 2019. This ASU required lessees to recognize most leases in their balance sheets, but to continue to record expenses on their income statements in a manner similar to past accounting. The Company determines if an arrangement is a lease at inception. Right-of-use (or ROU) assets and lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. The interest rate used to determine the present value of future lease payments is the Company's incremental borrowing rate, as the implicit rate in its leases is not readily determinable. The incremental borrowing rate is estimated to approximate the interest rate on a collateralized basis for borrowings with similar terms and payments. The Company's leases may include variable payments such as common area maintenance, insurance, real estate taxes, changes in price indices or other costs, which are expensed as incurred. ROU assets also include any lease payments made prior to commencement and are recorded net of any lease incentives received. The Company’s lease terms may include options to extend or terminate the lease when it is reasonably certain that it will exercise that option. Lease expense for fixed lease payments is recognized on a straight-line basis over the lease term.

Contingencies and Commitments – The Company records accruals for loss contingencies and commitments which are both probable and reasonably estimable. Significant judgment is required to determine both probability and the estimated amount of loss. The Company reviews accruals on a quarterly basis and adjusts, as necessary, to reflect the impact of negotiations, settlements, rulings, advice of legal counsel and other current information. Legal fees are expensed as incurred.

Environmental Matters – The Company accrues for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current laws and existing technologies. Costs related to environmental contamination treatment and cleanup are charged to expense. The accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. Accruals for environmental liabilities are included in the Consolidated Balance Sheets as "Accrued expenses and other current liabilities" and "Other liabilities" at undiscounted amounts. Receivables for related insurance or other third-party recoveries for environmental liabilities are recorded when it is probable that a recovery will be realized and are included in the Consolidated Balance Sheets as "Other current assets" and "Other assets."

Employee Benefits – Amounts recognized in the Company's Consolidated Financial Statements related to pension and other post-retirement benefits are determined from actuarial valuations. Inherent in such valuations are assumptions including expected return on plan assets, discount rates at which the liabilities could be settled, rates of increase in future compensation levels and mortality rates. These assumptions are updated annually and are disclosed in Note 10, *Pension, Post-Retirement and Post-Employment Plans*, to the Consolidated Financial Statements. Actual results that differ from the assumptions are recorded in "Accumulated other comprehensive loss" within Stockholders' Equity and amortized over future periods and, therefore, affect expense recognized.

The Company considers a number of factors in determining and selecting assumptions for the overall expected long-term rate of return on plan assets, including the historical long-term return experience of its plan assets, the current and expected allocation of its plan assets and their expected long-term rates of return. Expected long-term rates of return are derived with the assistance of investment advisors. The Company bases its expected allocation of plan assets on a diversified portfolio consisting of domestic and international equity securities, fixed income securities and alternative asset classes. The measurement date used to determine pension and other post-retirement benefits is December 31.

Derivatives – The Company recognizes all contracts that meet the definition of a derivative as either assets or liabilities in the Consolidated Balance Sheets and measures those instruments at fair value. To designate a derivative for hedge accounting at inception and throughout the hedge period, the Company formally documents the nature and relationships between hedging instrument and hedged item, as well as its risk-management objectives and strategies for undertaking various hedge transactions, and the method of assessing hedge effectiveness. Additionally, for hedges of forecasted transactions, the significant characteristics and expected terms of forecasted transactions are specifically identified, and the likelihood of each forecasted transaction occurring is deemed probable. If it is determined that a forecasted transaction will not occur, a gain or loss is recognized in current earnings. Financial instruments qualifying for hedge accounting must maintain a specified level of effectiveness between the hedging instrument and the item being hedged, both at inception and throughout the hedged period. The Company does not engage in trading or other speculative uses of financial instruments. It is the Company's policy to disclose the fair value of derivative instruments that are subject to master netting arrangements on a gross basis in the Consolidated Balance Sheets.

If hedge accounting is applied, the effective portion of unrealized gains and losses associated with the derivatives are deferred as a component of "Accumulated other comprehensive loss" until the underlying hedged transactions are reported in the Company's Consolidated Statements of Operations. For derivative contracts not designated as hedging instruments, the Company records changes in the net fair value of the such contracts in "Other (expense) income, net" in the Consolidated Statements of Operations.

Financial Instruments – The Company's financial instruments consist primarily of cash and cash equivalents, accounts receivable, investments, accounts payable and debt. The Company believes that the carrying value of the cash and cash equivalents, accounts receivable and accounts payable are representative of their respective fair values because of their short maturities. Available for sale equity investments are carried at fair value. See Note 13, *Financial Instruments*, to the Consolidated Financial Statements.

Foreign Currency Translation – The Company's foreign subsidiaries primarily use their local currency as their functional currency. The assets and liabilities of the Company's foreign subsidiaries are translated into U.S. dollars using foreign currency exchange rates prevailing at the balance sheet dates. The Consolidated Statements of Operations are translated at average foreign currency exchange rates for the periods presented. Cumulative currency translation adjustments are included in the stockholders' equity section of the Consolidated Balance Sheets as "Accumulated other comprehensive loss." Net gains and losses from transactions denominated in currencies other than the functional currency of the entity are included in the Consolidated Statements of Operations as "Foreign exchange (loss) gain."

Revenue Recognition – The Company recognizes revenue either upon shipment or delivery of product depending on when it is reasonably assured that both title and the risks and rewards of ownership have been passed on to the customer, the Company's performance obligations have been fulfilled and collectability is probable. Estimates for sales rebates, incentives and discounts, as well as sales returns and allowances, are accounted for as reductions of revenue when the earnings process is complete. Sales rebates, incentives and discounts are typically earned by customers based on annual sales volume targets. The Company records an estimate for these accruals based on contract terms and its historical experience with similar programs, however, changes to these estimates may be required if the historical data used in the calculation differs from actual experience. Differences between estimated expense and actual costs are typically immaterial and are recognized in earnings in the period such differences are determined. Variable consideration for volume discounts, rebates and returns are recorded as contract liabilities and settled with the customer in accordance with the terms of the applicable contract, typically when program requirements are achieved by the customer.

Most performance obligations relate to contracts with a duration of less than one year, in which the Company has the right to invoice the customer at the time the performance obligation is satisfied for the amount of revenue recognized at that time. The Company expenses incremental costs for obtaining contracts with terms of less than one year.

See Note 23, *Segment Information,* to the Consolidated Financial Statements for a disaggregation of net sales by business unit.

Research and Development – Research and development costs, which primarily relate to internal salaries, are expensed as incurred.

Income Taxes – The Company recognizes deferred tax assets and liabilities based on the differences between the financial statement basis and the tax basis of assets, liabilities, net operating losses and tax carryforwards. A valuation allowance is required to be recognized to reduce the recorded deferred tax asset to the amount that will more likely than not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income by jurisdiction during the periods in which those temporary differences become deductible or when carryforwards can be utilized. The Company considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in this assessment. If these estimates and related assumptions change in the future, the Company may be required to record additional valuation allowances against its deferred tax assets; resulting in additional income tax expense. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences and carryforwards are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date of such change.

The Company is subject to income taxes in the U.S. and in various states and foreign jurisdictions. Significant judgment is required in evaluating uncertain tax positions and determining provisions for income taxes. The first step in evaluating the tax position for recognition is to determine the amount of evidence that supports a favorable conclusion for the tax position upon audit. In order to recognize the tax position, the Company must determine whether it is more likely than not that the position is sustainable. The final evaluation step is to measure the tax benefit as the largest amount that has a more than 50% chance of being realized upon final settlement. Although the Company believes that the positions taken on income tax matters are reasonable, it establishes tax reserves in recognition that various taxing authorities may challenge certain of those positions taken, which may potentially result in additional tax liabilities.

Stock-Based Compensation Plans – Stock-based compensation is recorded in the Consolidated Statements of Operations as "Selling, technical, general and administrative" expense over the requisite service period based on the estimated grant-date fair value of the awards, effected for forfeitures as they occur. The fair value of RSU awards is determined using the closing price of Element Solutions' common stock on the date of grant. The fair value of stock options is determined using the Black-Scholes option pricing model and inputs in the model include assumptions related to stock price volatility, expected dividend yield and award terms.

Compensation costs for awards with performance conditions are only recognized if and when it becomes probable that the performance conditions will be achieved. The probability of vesting is reassessed at the end of each reporting period and the compensation costs are adjusted accordingly, with the cumulative effect of such a change on current and prior periods being recognized in compensation cost in the period of the change.

Earnings (Loss) Per Share – Basic earnings (loss) per share excludes dilution and is computed by dividing net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted

earnings (loss) per share assumes the issuance of all potentially dilutive share equivalents using the if-converted or treasury stock methods, provided that the effects of which are not anti-dilutive. For stock options and RSUs, it is assumed that the proceeds will be used to buy back shares. For stock options, such proceeds equal the average unrecognized compensation plus the assumed exercise of weighted average number of options outstanding. For unvested RSUs, the assumed proceeds equal the average unrecognized compensation expense.

Fair Value Measurements **-** The Company determines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Inputs used in the valuation techniques to derive fair values are classified based on a three-level hierarchy. The basis for fair value measurements for each level within the hierarchy is described below, with Level 1 having the highest priority and Level 3 having the lowest. The three levels of the fair value hierarchy are as follows:

- Level 1 – inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – inputs are quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in non-active markets; and model-derived valuations whose inputs are observable or whose significant valuation drivers are observable.
- Level 3 – inputs to valuation models are unobservable and/or reflect the Company's market assumptions.

The fair value hierarchy is based on maximizing the use of observable inputs and minimizing the use of unobservable inputs when measuring fair value. Classification within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The Company transfers the fair value of an asset or liability between levels of the fair value hierarchy at the end of the reporting period during which a significant change in the inputs used to determine the fair value has occurred.

NAV Practical Expedient is the measure of fair value using the net asset value (or NAV) per share (or its equivalent) as an alternative to the fair value hierarchy discussed above.

3. RECENT ACCOUNTING PRONOUNCEMENTS

Recently Issued Accounting Pronouncements Not Yet Adopted

Income Taxes (Topic 740) - In December 2019, the FASB issued ASU No. 2019-12, *"Simplifying the Accounting for Income Taxes,"* which removes certain exceptions related to the approach for intraperiod tax allocation, the recognition of deferred tax liabilities for outside basis differences and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The guidance is effective as of January 1, 2021, with early adoption permitted. The Company has evaluated ASU No. 2019-12 and the adoption of the guidance is not expected to have a material impact to our Consolidated Financial Statements.

4. ACQUISITIONS

DMP Acquisition

On July 1, 2020, the Company completed the DMP Acquisition, which was not material to its Consolidated Financial Statements for the year ended December 31, 2020 and, therefore, the purchase price allocation, pro forma and post-acquisition results of operations have not been presented. The DMP business, which provides turnkey wastewater treatment and recycle and reuse solutions across multiple manufacturing industries, is included in our Industrial & Specialty business segment. The impact of this acquisition was not material to the Company's Consolidated Financial Statements, therefore, the purchase price allocation, pro forma and post-acquisition results of operations have not been presented.

Kester Acquisition

On December 2, 2019, the Company completed the Kester Acquisition for $63.9 million, net of cash, working capital and certain post-closing adjustments and funded with available liquidity. The Kester business, a global supplier of advanced technology assembly materials used in electronics assembly and semiconductor applications, complements our assembly and semiconductor businesses. The Kester business is included in our Electronics business segment.

The following table summarizes the allocation of the purchase price of the Kester Acquisition to the identified assets acquired and liabilities assumed at the acquisition date:

(dollars in millions)		
Identifiable assets acquired and liabilities assumed		
Accounts receivable	$	7.6
Inventories		8.9
Other current assets		0.4
Property, plant and equipment		8.3
Identifiable intangible assets		36.2
Other assets		2.6
Current liabilities		(3.2)
Long-term liabilities		(4.5)
Total identifiable net assets		56.3
Goodwill		7.6
Total purchase price	$	63.9

The purchase price allocation was finalized, resulting in immaterial adjustments to the preliminary allocation disclosed above.

The excess of the cost of the Kester Acquisition over the net amounts assigned to the fair values of the assets acquired and the liabilities assumed was recorded as goodwill and represented the value of the assembled workforce. The majority of goodwill recorded in connection with the Kester Acquisition is expected to be deductible for tax purposes.

The fair value of the identifiable intangible assets recorded in conjunction with the Kester Acquisition were as follows:

(dollars in millions)		Fair Value	Weighted Average Useful Life *(years)*
Customer relationships	$	35.0	12
Trade name		1.0	5
Developed technology		0.2	3
Total	$	36.2	11.8

The fair value of the identifiable intangible assets was determined primarily using the "income approach," which requires a forecast of all of the expected future cash flows either through the use of the multi-period excess earnings method or the relief-from-royalty method. Some of the more significant assumptions inherent in the development of intangible asset values include: the amount and timing of projected future cash flows, the attrition rate and the discount rate selected to measure the risks inherent in the future cash flows.

The Kester Acquisition was not significant to the Company's Consolidated Financial Statements for the year ended December 31, 2020 and, therefore, pro forma and post-acquisition results of operations have not been presented.

5. DISCONTINUED OPERATIONS

On July 20, 2018, the Company agreed to sell its then Agricultural Solutions business to UPL Corporation Ltd. pursuant to the terms and conditions of a certain stock purchase agreement, as amended. The Arysta Sale was completed on January 31, 2019. In connection with the Arysta Sale, the Company agreed to retain certain liabilities associated with legal and tax proceedings, primarily related to an Arysta subsidiary in Brazil. The Company does not expect to incur a material loss as a result of these proceedings. However, the resolutions of these matters may take several years and, to the extent not covered by insurance, may adversely impact the Company's financial position or results of operations.

The following table details the components comprising net income (loss) from the Company's discontinued operations attributable to common stockholders:

	Year Ended December 31,		
(dollars in millions)	2019 [1]	2018	
Net sales	$ 65.3	$ 1,991.8	
Cost of sales	(45.5)	(1,190.3)	
Selling, technical, general and administrative	(37.2)	(466.4)	
Research and development	(4.6)	(52.4)	
Gain (loss) on Arysta Sale	2.4	(450.0)	[2]
Operating loss	(19.6)	(167.3)	
Other, net	9.0	11.5	
Loss from discontinued operations, before income taxes	(10.6)	(155.8)	
Income tax benefit (expense)	23.9	(87.1)	
Income (loss) from discontinued operations, net of tax	13.3	(242.9)	
Net income from discontinued operations attributable to the non-controlling interests	—	(3.0)	
Net income (loss) from discontinued operations attributable to common stockholders	$ 13.3	$ (245.9)	

[1] *Includes activity through January 31, 2019, when the Arysta Sale was completed, and certain post-closing adjustments relating to, among other things, cash, indebtedness and working capital as of the closing date.*

[2] *Primarily due to reclassification of foreign currency translation adjustments from "Accumulated other comprehensive loss" within Stockholders' Equity into earnings within the Consolidated Statement of Operations.*

Net loss attributable to common stockholders from the Company's discontinued operations was $1.1 million for the year ended December 31, 2020.

The following table details supplemental cash flow disclosure information related to Company's discontinued operations:

	Year Ended December 31,		
(dollars in millions)	2020	2019	2018
Cash paid for interest	$ —	$ —	$ 5.4
Cash paid for income taxes	$ 14.0	$ 25.3	$ 69.5

6. INVENTORIES

The major components of inventories, on a net basis, were as follows:

	December 31,	
(dollars in millions)	2020	2019
Finished goods	$ 119.7	$ 118.5
Work in process	23.0	22.6
Raw materials and supplies	60.4	58.5
Total inventories	$ 203.1	$ 199.6

7. PROPERTY, PLANT AND EQUIPMENT

The major components of property, plant and equipment were as follows:

(dollars in millions)	December 31, 2020	2019
Land and leasehold improvements	$ 53.2	$ 68.6
Buildings and improvements	139.5	113.5
Machinery, equipment, fixtures and software	245.8	220.0
Construction in process	22.3	16.0
Total property, plant and equipment	460.8	418.1
Accumulated depreciation	(220.4)	(153.3)
Property, plant and equipment, net	$ 240.4	$ 264.8

For 2020, 2019 and 2018, the Company recorded depreciation expense of $42.2 million, $41.5 million and $44.6 million, respectively.

During the third quarter of 2020, the Company met the requirements to classify a dormant facility in New Jersey, included in its Electronics business segment, as held for sale. The current assets held for sale represented the net book value of the land of $17.2 million and the building of $2.5 million as of December 31, 2020. No impairment was identified. The Company received initial deposits of $4.6 million, which are included in "Other, net" in the Consolidated Statements of Cash Flows as a cash inflow from investing activities. The sale was completed in January 2021.

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The changes in the carrying amount of goodwill by segment were as follows:

(dollars in millions)	Electronics	Industrial & Specialty	Total
Balance at December 31, 2018	$ 1,226.7	$ 955.9 (1)	$ 2,182.6
Acquisition	7.6	—	7.6
Foreign currency translation and other	(10.9)	0.3	(10.6)
Balance at December 31, 2019	1,223.4	956.2	2,179.6
Acquisition	—	6.8	6.8
Purchase accounting adjustments (2)	(1.6)	—	(1.6)
Foreign currency translation and other	52.2	15.7	67.9
Balance at December 31, 2020	$ 1,274.0	$ 978.7	$ 2,252.7

(1) *Includes accumulated impairment losses of $46.6 million.*

(2) *During the second quarter of 2020, the Company recorded a step-up of fixed assets of $1.4 million related to the Kester Acquisition.*

No impairments of goodwill were identified during the years ended December 31, 2020, 2019 and 2018.

Indefinite-Lived Intangible Assets

The carrying value of indefinite-lived intangible assets, other than goodwill, which consists solely of trade names, was $68 million and $104 million at December 31, 2020 and 2019, respectively. The Company found no indications of impairment related to its indefinite-lived intangible assets as a result of its annual impairment review.

Finite-Lived Intangible Assets

Intangible assets subject to amortization were as follows:

	December 31, 2020			December 31, 2019		
(dollars in millions)	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Customer relationships	$ 984.3	$ (435.4)	$ 548.9	$ 959.1	$ (351.4)	$ 607.7
Developed technology	400.0	(241.5)	158.5	380.5	(194.8)	185.7
Trade names	91.8	(11.3)	80.5	51.5	(4.9)	46.6
Other	1.7	(1.7)	—	1.6	(1.6)	—
Total	$ 1,477.8	$ (689.9)	$ 787.9	$ 1,392.7	$ (552.7)	$ 840.0

For 2020, 2019 and 2018, the Company recorded amortization expense on intangible assets of $119 million, $113 million and $112 million, respectively.

In March 2020, the Company acquired a new subsea production control fluid designed to complement its Energy Solutions business for a purchase price of $6.3 million in cash, subject to an additional $4.5 million of payments upon the achievement of certain milestones associated with the potential certification and marketing of this product. As the acquisition did not meet the accounting definition of a business and this product was still in development with no alternative future use, the amount paid was expensed to research and development in the Consolidated Statements of Operations. In the fourth quarter of 2020, the contingent milestones were achieved or were deemed probable of achievement and $4.5 million was capitalized, with an estimated useful life of 5 years.

Estimated future amortization of intangible assets for each of the next five years is as follows:

(dollars in millions)	Amortization Expense
2021	$ 116.3
2022	102.7
2023	100.2
2024	90.2
2025	83.6

9. LONG-TERM COMPENSATION PLANS

In June 2014, the Company's stockholders adopted the 2013 Plan, which is administered by the compensation committee of the Board of Directors of the Company, except as otherwise expressly provided in the 2013 Plan. The Board approved a maximum of 15,500,000 shares of common stock, which were reserved and made available for issuance under the 2013 Plan.

For 2020, 2019 and 2018, compensation expense associated with the Company's long-term compensation plans was as follows:

	Year Ended December 31,		
(dollars in millions)	2020	2019	2018
Equity classified RSUs	$ 4.2	$ 12.6	$ 13.9
Liability classified RSUs	0.9	(1.0)	0.7
Stock options	0.9	0.2	0.8
Compensation expense from continuing operations	6.0	11.8	15.4
Compensation expense from discontinued operations	—	0.6	3.9
Total	$ 6.0	$ 12.4	$ 19.3
Unrecognized compensation expense for awards expected to vest	$ 9.5		
Weighted average remaining vesting period (months)	18		

At December 31, 2020, a total of 4,238,736 shares of common stock had been issued, and 4,939,688 RSUs and stock options were outstanding under the 2013 Plan.

		RSUs		
	Total	Equity Classified	Liability Classified	Stock Options
Outstanding at December 31, 2019	4,833,766	4,189,660	295,097	349,009
Granted	1,743,117	1,500,783	—	242,334
Exercised/Issued	(785,489)	(647,238)	(118,039)	(20,212)
Cancelled	(123,982)	(118,471)	—	(5,511)
Forfeited	(727,724)	(727,724)	—	—
Outstanding at December 31, 2020	4,939,688	4,197,010	177,058	565,620

The total fair value of RSUs which vested during 2020, 2019 and 2018 was $9.7 million, $18.5 million and $9.9 million respectively, based on vesting date stock price.

Equity Classified RSUs

The Company granted the following equity classified RSUs under the 2013 Plan:

Year of Issuance:	RSUs	Weighted Average Grant Date Fair Value	Weighted Average Vesting Period (months)
2020	1,500,783	$ 11.45	32
2019	3,404,362	$ 11.14	44
2018	1,581,444	$ 10.35	26

Certain of the RSUs granted during the period contain performance vesting conditions in addition to a service vesting condition. RSUs granted with service or performance vesting conditions were valued at the grant date stock price. Certain RSUs with performance vesting conditions also contain provisions for additional share awards in the event certain performance conditions are met at the end of certain applicable measurement periods. These conditions are generally based on Adjusted EBITDA and adjusted earnings per share. The Compensation Committee granted to certain key executives performance-based RSUs with vesting that is subject to the achievement by the Company of a certain performance target in any fiscal year ending on or before December 31, 2022, and continuous service. There were 2.3 million of these RSUs outstanding as of December 31, 2020 with a weighted-average grant date fair value of $25.1 million. The Company is currently not recognizing compensation expense for these awards as the achievement of this performance target is not probable.

At December 31, 2020, the following equity classified RSUs were outstanding:

	December 31, 2020		
Vesting Conditions:	Outstanding	Weighted Average Remaining Vesting Period (months)	Potential Additional Awards
Service-based	451,499	13	—
Performance-based	3,745,511	20	1,049,727
Total	4,197,010	20	1,049,727

For all equity classified RSUs, shares are issued upon satisfaction of vesting conditions.

Liability Classified RSUs

During 2014, the Company granted to certain employees RSUs, which vested on December 31, 2020. These RSUs were subject to an Adjusted EBITDA performance condition and a share price market condition. Additionally, the number of shares of common stock issued was limited to a maximum cash value, requiring these awards to be classified as liabilities. Compensation expense was calculated based on a market value that was remeasured each reporting period.

Stock Options

The Company granted the following qualified and non-qualified stock options under the 2013 Plan:

Year of Issuance:	Stock Options	Weighted Average Strike Price Per Share	Weighted Average Grant Date Fair Value Per Share
2020	242,334	$ 12.25	$ 4.47
2019	229,724	$ 11.28	$ 5.15

Stock options vest ratably over a three-year period and have contractual lives of ten years from the grant date.

The fair value of the grants is calculated using the Black-Scholes option pricing model at the grant date. The following table provides the range of assumptions used in valuing stock options for the years ended December 31, 2020 and 2019, as there were no stock options granted in 2018:

	Year Ended December 31,	
	2020	2019
Weighted average expected term (years) [(1)]	6.0	6.0
Expected volatility [(2)]	35.5%	44.2%
Risk-free rate [(3)]	1.45%	2.48%
Expected dividend yield	—%	—%

[(1)] *Weighted average expected term is calculated based on the simplified method for plain vanilla options.*

[(2)] *Expected volatility is calculated based on a blend of the implied and historical equity volatility of an index of comparable companies over a period equal to the expected term.*

[(3)] *Risk-free rate of return is based on an interpolation of U.S. Treasury rates to reflect an expected term of six years at the date of grant.*

At December 31, 2020, there were no outstanding stock options which were vested and out-of-the-money. There were 184,053 outstanding stock options which were vested and in-the-money, with an aggregate intrinsic value of $1.2 million, and 381,567 outstanding stock options which were unvested, with an aggregate intrinsic value of $2.2 million.

10. PENSION, POST-RETIREMENT AND POST-EMPLOYMENT PLANS

For 2020, 2019 and 2018, the net periodic (benefit)/cost for all plans totaled $(1.8) million, $1.0 million and $0.1 million, respectively.

Domestic Defined Benefit Pension Plan

The domestic non-contributory defined benefit pension plan is closed to new participants. Pursuant to this plan, retirement benefits are provided based upon years of service and compensation levels. An investment committee, appointed by the Board, manages the plan and its assets in accordance with the plan's investment policies. The Company's investment policies incorporate an asset allocation strategy that emphasizes the long-term growth of capital and acceptable asset volatility as long as it is consistent with the volatility of the relevant market indexes. The investment policies attempt to achieve a mix of approximately 90% of plan investments for liability-matching, 8% for long-term growth, and 2% for near-term benefit payments. These allocation targets exclude the market value of equity derivatives. The Company believes this strategy is consistent with the long-term nature of plan liabilities and ultimate cash needs of the plans. Plan assets consist primarily of listed stocks, equity security funds, short-term Treasury bond mutual funds, derivatives and limited partnership interests. The weighted average asset allocation of this pension plan was 55% limited partnership interests and managed funds, 34% fixed income holdings, 9% equity securities, and 2% cash at December 31, 2020.

Actual pension expense and future contributions required to fund this pension plan will depend on future investment performance, changes in future discount rates, the level of Company contributions and various other factors related to the populations participating in this pension plan. The Company evaluates the plan's actuarial assumptions on an annual basis, including the expected long-term rate of return on assets and discount rate, and adjusts the assumptions, as necessary, to ensure proper funding levels are maintained so that the plan can meet obligations as they become due.

At December 31, 2020 and 2019, the projected benefit obligation for this pension plan totaled $230 million and $220 million, respectively.

Supplemental Executive Retirement Plans

The Company sponsors SERPs that entitle certain employees to the difference between the benefits actually paid to them and the benefits they would have received under the pension plan described above were it not for certain restrictions imposed by the Internal Revenue Service Code. Covered compensation under the SERPs includes an employee's annual salary and bonus. At December 31, 2020 and 2019, the projected benefit obligation for the SERPs totaled $8.1 million and $8.0 million, respectively.

Foreign Pension Plans

The Company's international benefit plans are included in the tables presented below. These plans are not significant, individually or in the aggregate, to the Company's consolidated financial position, results of operations or cash flows. At December 31, 2020 and 2019, the projected benefit obligation for these foreign pension plans totaled $26.1 million and $26.6 million, respectively.

Certain other foreign subsidiaries maintain benefit plans that are consistent with statutory practices, but do not meet the criteria for pension or post-retirement accounting and have therefore been excluded from the tables presented below. These benefit plans had obligation balances of $1.4 million and $1.1 million at December 31, 2020 and 2019, respectively, and were recorded in the Consolidated Balance Sheets as "Pension and post-retirement benefits."

Domestic Defined Benefit Post-Retirement Medical and Dental Plan

The Company sponsors defined benefit post-retirement medical and dental plans that covers all of its MacDermid domestic full-time employees, hired prior to April 1, 1997, who retire after age 55, with at least ten to twenty years of service (depending upon the date of hire). Eligible employees receive a subsidy from the Company towards the purchase of their retiree medical benefits based on the date of retirement. The annual increase in the Company's costs for post-retirement medical benefits is subject to a limit of 5%. Retirees are required to contribute to the plan costs in excess of their respective Company limits in addition to their other required contributions. The projected benefit obligation for the post-retirement plan at December 31, 2020 is comprised of 38% retirees, 33% fully eligible active participants and 29% other participants. The actuarial

determination of the Company's accumulated benefit obligation associated with the plan for post-retirement medical benefits assumes annual cost increases of 2% and 4%, based on the date of retirement.

The components of net periodic (benefit)/cost of the Domestic and Foreign Pension Plans and Post-Retirement Medical Benefits were as follows:

	Year Ended December 31,					
	2020		2019		2018	
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Pension and SERP Benefits						
Service cost	$ —	$ 0.7	$ —	$ 0.7	$ —	$ 1.2
Interest cost on the projected benefit obligation	7.2	0.3	8.7	0.3	8.1	0.3
Expected return on plan assets	(10.1)	(0.1)	(9.6)	(0.1)	(10.4)	(0.1)
Amortization of prior service cost	—	—	—	—	—	—
Amortization of actuarial net loss	—	—	—	0.1	—	—
Plan curtailment	—	(0.1)	—	—	0.1	—
Plan settlement	0.1	(0.1)	—	0.2	0.2	0.1
Net periodic (benefit) cost	$ (2.8)	$ 0.7	$ (0.9)	$ 1.2	$ (2.0)	$ 1.5
Post-retirement Medical Benefits						
Service cost	$ —	$ —	$ —	$ 0.1	$ —	$ 0.1
Interest cost on the projected benefit obligation	0.3	—	0.4	0.1	0.4	0.1
Amortization of actuarial net loss	—	—	—	0.1	—	—
Net periodic cost	$ 0.3	$ —	$ 0.4	$ 0.3	$ 0.4	$ 0.2

The weighted average key assumptions used to determine the net periodic (benefit)/cost of the Domestic and Foreign Pension Plans are as follows:

	Year Ended December 31,					
	2020		2019		2018	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Pension and SERP Benefits						
Discount rate	3.3%	1.0%	4.4%	1.5%	3.7%	1.4%
Rate of compensation increase	3.5%	3.1%	3.5%	3.4%	3.5%	3.4%
Interest crediting rate	5.3%	2.6%	5.2%	2.6%	5.2%	2.6%
Long-term rate of return on assets	5.1%	1.7%	5.4%	1.4%	5.4%	1.8%
Post-retirement Medical Benefits						
Discount rate	3.2%	7.3%	4.3%	9.2%	3.7%	9.9%

The expected long-term rate of return on assets assumption is developed with reference to historical returns, forward-looking return expectations, the Domestic and Foreign Pension Plans' investment allocations and peer comparisons.

The following tables summarize changes in benefit obligation, plan assets and funded status of the Company's plans:

	Pension and SERP Benefits				Post-Retirement Medical Benefits			
	2020		2019		2020		2019	
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Change in Projected Benefit Obligation:								
Beginning of period balance	$ 227.9	$ 26.6	$ 206.2	$ 23.3	$ 9.2	$ 0.1	$ 9.0	$ 1.3
Additions	—	—	—	2.7	—	—	—	—
Service cost	—	0.7	—	0.7	—	—	—	0.1
Plan amendments	—	—	—	—	—	—	—	(1.4)
Interest cost	7.2	0.3	8.7	0.3	0.3	—	0.4	0.1
Plan curtailment	—	(0.1)	—	(0.1)	—	—	—	—
Actuarial loss due to assumption change	19.0	0.3	25.6	1.1	—	—	1.0	0.1
Actuarial (gain) loss due to plan experience	(4.6)	(0.2)	(1.1)	1.0	(0.5)	—	(0.6)	(0.1)
Benefits and expenses paid	(11.1)	(0.7)	(11.5)	(0.6)	(0.5)	—	(0.6)	—
Settlement	—	(2.8)	—	(1.6)	—	—	—	—
Foreign currency translation	—	2.0	—	(0.2)	—	—	—	—
End of period balance	$ 238.4	$ 26.1	$ 227.9	$ 26.6	$ 8.5	$ 0.1	$ 9.2	$ 0.1
Change in Plan Assets:								
Beginning of period balance	$ 205.9	$ 6.0	$ 184.7	$ 4.3	$ —	$ —	$ —	$ —
Actual return on plan assets, net of expenses	28.5	0.2	32.2	1.4	—	—	—	—
Employer contributions	0.9	1.5	0.5	2.4	0.5	—	0.5	—
Benefits paid	(11.1)	(0.7)	(11.5)	(0.6)	(0.5)	—	(0.5)	—
Settlement	—	(2.8)	—	(1.6)	—	—	—	—
Foreign currency translation	—	0.4	—	0.1	—	—	—	—
End of period balance	$ 224.2	$ 4.6	$ 205.9	$ 6.0	$ —	$ —	$ —	$ —
Funded Status								
Funded status of plan	$ (14.2)	$ (21.5)	$ (22.0)	$ (20.6)	$ (8.5)	$ (0.1)	$ (9.2)	$ (0.1)
Supplemental Information:								
Accumulated benefit obligation	$ 228.1	$ 23.5	$ 217.1	$ 23.3	$ 8.5	$ 0.1	$ 9.2	$ 0.1
Plans with Accumulated Benefit Obligation in excess of Plan Assets:								
Accumulated benefit obligation	$ 8.1	$ 23.4	$ 217.1	$ 23.2	$ 8.5	$ 0.1	$ 9.2	$ 0.1
Fair value plan assets	$ —	$ 4.3	$ 205.9	$ 5.8	$ —	$ —	$ —	$ —
Plans with Projected Benefit Obligation in excess of Plan Assets:								
Projected benefit obligation	$ 238.4	$ 25.9	$ 227.9	$ 26.5	$ 8.5	$ 0.1	$ 9.2	$ 0.1
Fair value plan assets	$ 224.2	$ 4.3	$ 205.9	$ 5.8	$ —	$ —	$ —	$ —

Weighted average key assumptions used to determine the benefit obligations in the actuarial valuations of the pension and post-retirement benefit liabilities are as follows:

	Pension and SERP Benefits				Post-Retirement Medical Benefits			
	2020		2019		2020		2019	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Discount rate	2.5%	0.7%	3.3%	1.0%	2.5%	7.2%	3.2%	7.3%
Rate of compensation increase	3.0%	2.7%	3.5%	3.1%	N/A	N/A	N/A	N/A
Interest crediting rate	5.3%	2.7%	5.3%	2.6%	N/A	N/A	N/A	N/A

(N/A) Not applicable.

Amounts recognized in the Consolidated Balance Sheets and "Accumulated other comprehensive loss" consist of the following:

	Pension and SERP Benefits				Post-Retirement Medical Benefits			
	2020		2019		2020		2019	
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Balance Sheet								
Accrued expenses and other current liabilities	$ 0.6	$ 0.9	$ 0.6	$ 0.8	$ 0.5	$ —	$ 0.6	$ —
Pension and post-retirement benefits	13.6	20.6	21.4	19.8	8.0	0.1	8.6	0.1
Accumulated Other Comprehensive Loss								
Net actuarial loss	$ (2.8)	$ (2.3)	$ (6.9)	$ (2.1)	$ (0.1)	$ (0.6)	$ (0.6)	$ (0.7)
Prior service costs	—	—	—	—	—	1.0	—	1.4

The following table presents the fair value of plan assets:

		December 31,	
(dollars in millions)	Classification	2020	2019
Asset Category			
Derivatives	Level 2	$ 14.0	$ 9.9
Foreign equities	Level 1	5.8	5.4
Foreign bonds	Level 2	1.6	1.3
Mutual funds holding U.S. Treasury securities	Level 1	30.8	20.3
Mutual funds holding fixed income securities	Level 1	23.5	121.9
U.S. Treasury bonds	Level 2	22.6	36.4
Cash and cash equivalents	Level 1	7.8	6.8
Sub-Total		106.1	202.0
Assets using net asset value (or NAV) as a practical expedient		122.7	9.9
Total		$ 228.8	$ 211.9

Assets using NAV as a practical expedient include limited partnership interests and commingled funds that are not actively traded or whose underlying investments are valued using observable marketplace inputs.

At December 31, 2020, expected future benefit payments related to the Company’s defined benefit plans were as follows:

	Pension and SERP Benefits		Post-Retirement Medical Benefits	Total
(dollars in millions)	Domestic	Foreign		
2021	$ 12.8	$ 1.4	$ 0.5	$ 14.7
2022	13.7	1.2	0.5	15.4
2023	13.0	1.3	0.5	14.8
2024	12.9	1.7	0.5	15.1
2025	13.3	1.2	0.5	15.0
Subsequent five years	64.1	7.2	2.3	73.6
Total	$ 129.8	$ 14.0	$ 4.8	$ 148.6

The measurement date used to determine pension and other post-retirement medical benefits was December 31, 2020, at which time the minimum contribution level for the following year was determined. The Company is not required to make any plan contributions in 2021.

11. INCOME TAXES

Income (loss) before income taxes and non-controlling interests was as follows:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Domestic	$ (11.6)	$ (96.3)	$ (214.7)
Foreign	92.7	237.2	161.5
Total	$ 81.1	$ 140.9	$ (53.2)

Income tax expense consisted of the following:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Current:			
U.S.:			
Federal	$ (0.8)	$ (4.1)	$ 14.9
State and local	1.3	—	0.4
Foreign	56.8	68.5	63.2
Total current	57.3	64.4	78.5
Deferred:			
U.S.:			
Federal	(40.4)	33.2	(35.1)
State and local	1.1	(0.8)	(4.3)
Foreign	(13.7)	(35.5)	(15.3)
Total deferred	(53.0)	(3.1)	(54.7)
Income tax expense	$ 4.3	$ 61.3	$ 23.8

Income tax expense differed from the amounts computed by applying the U.S. federal statutory tax rate to pre-tax loss, as a result of the following:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
U.S. federal statutory tax rate	21 %	21 %	21 %
Taxes computed at U.S. statutory rate	$ 17.0	$ 29.6	$ (11.2)
State income taxes, net of federal benefit	2.1	(0.6)	(3.1)
U.S. tax on foreign operations	8.9	23.7	31.2
Foreign tax on foreign operations	7.0	12.1	11.4
Change in valuation allowances	(4.2)	0.9	27.5
Tax on undistributed foreign earnings	4.3	(3.2)	7.0
Net change in reserve	8.2	(2.1)	(4.9)
Tax rate changes	(1.0)	(0.9)	8.3
Changes to U.S. tax law	(40.4)	—	(41.8)
Other, net	2.4	1.8	(0.6)
Income tax expense	$ 4.3	$ 61.3	$ 23.8
Effective tax rate	5 %	44 %	(45)%

On July 23, 2020, the U.S. Treasury Department released regulations relating to the treatment of income that is subject to a high rate of foreign tax under the U.S. global intangible low-taxed income ("GILTI") and subpart F income regimes, and on July 28, 2020, it released new regulations related to interest expense limitations. The Company has evaluated the impact of these new regulations on its Consolidated Financial Statements and calculated a $40.4 million tax benefit from these regulations related to the 2018 and 2019 tax years producing an increase to the Company's net operating loss carryforwards.

The Company completed its analysis of the impact of the TCJA enactment-date effects and recorded a benefit of $41.8 million in 2018, primarily driven by a release of valuation allowance due to the expected impact of global intangible low-taxed income (or GILTI) law changes of $55.5 million, partially offset by $13.7 million for the finalization of the calculation of the transition tax.

The components of deferred income taxes at December 31, 2020 and 2019 were as follows:

	December 31,	
(dollars in millions)	**2020**	**2019**
Deferred tax assets:		
Net operating losses	$ 150.1	$ 112.7
Interest carryforward	88.4	69.3
Capital loss carryforward	53.6	66.6
Tax credits	28.8	33.8
Employee benefits	21.3	22.2
Research and development costs	21.2	18.4
Unrealized foreign exchange	—	9.9
Accrued liabilities	6.7	5.3
Other	21.7	19.8
Total deferred tax assets	391.8	358.0
Valuation allowances	(199.1)	(219.6)
Total gross deferred tax assets	192.7	138.4
Deferred tax liabilities:		
Intangible assets	179.6	198.0
Property, plant and equipment	21.5	17.9
Undistributed foreign earnings	18.3	9.9
Goodwill	9.0	6.3
Total gross deferred tax liabilities	228.4	232.1
Net deferred tax liability	$ 35.7	$ 93.7

The Company has provided for income and withholding taxes on previously unremitted earnings of certain foreign subsidiaries from 2015 and other foreign subsidiaries from 2016. No additional income taxes have been provided on approximately $130 million of remaining undistributed foreign earnings as these amounts continue to be indefinitely reinvested in the Company's foreign operations. Determining the amount of the unrecognized deferred tax liability related to any remaining undistributed foreign earnings is not practicable due to the complexity of the hypothetical calculation. As of December 31, 2020, the Company is no longer permanently invested in income previously taxed in the U.S., and this change had an immaterial impact on 2020 tax expense. At December 31, 2020, the Company had accrued a deferred tax liability of $17.4 million of income and withholding taxes that would be due upon the distribution of such earnings from non-U.S. subsidiaries to the U.S.

Valuation allowances reflect the Company's assessment that it is more likely than not that certain federal, state and foreign deferred tax assets, primarily net operating losses, will not be realized. The assessment of the need for a valuation allowance requires management to make estimates and assumptions about future earnings, reversal of existing temporary differences and available tax planning strategies. If actual experience differs from these estimates and assumptions, the recorded deferred tax asset may not be fully realized, resulting in an increase to income tax expense in the Company's results of operations. The valuation allowance for deferred tax assets was $199 million and $220 million at December 31, 2020 and 2019, respectively. During 2020, the valuation allowance decreased by $20.5 million primarily due to changes in calculations as a result of the

GILTI and interest limitation regulations discussed above, as well as releases in valuation allowances related to interest carryforwards utilized.

At December 31, 2020, the Company had federal, state and foreign net operating loss carryforwards of approximately $308 million, $743 million and $220 million, respectively. The U.S. federal net operating loss carryforwards expire between 2023 and 2037 or may be carried forward indefinitely. The majority of the state net operating loss carryforwards expire between 2021 and 2036. The foreign tax net operating loss carryforwards expire between 2021 through 2036 or may be carried forward indefinitely. In addition, at December 31, 2020, the Company had approximately $224 million, $25.1 million and $3.6 million of capital loss carryforwards, foreign tax credits, and other tax credits, respectively, available for carryforward. The capital loss carryforwards expire in 2024. The carryforward periods of the remaining tax credits range from ten years to an unlimited period of time. If certain changes in the Company's ownership occur, there could be an annual limitation on the amount of utilizable carryforwards.

Tax Uncertainties

The following table summarizes the activity related to the Company’s unrecognized tax benefits:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Unrecognized tax benefits at beginning of period	$ 71.2	$ 81.4	$ 90.3
Additions based upon prior year tax positions	2.7	1.4	2.7
Additions based on current year tax positions	14.5	3.2	3.1
Reductions for prior period positions	(0.2)	(7.6)	(6.9)
Reductions for settlements and payments	(1.1)	(2.1)	(4.3)
Reductions due to closed statutes	(4.6)	(5.1)	(3.5)
Total unrecognized tax benefits at end of period	$ 82.5	$ 71.2	$ 81.4

At December 31, 2020, the Company had $82.5 million of total unrecognized tax benefits, all of which, if recognized, would impact the Company’s effective tax rate. Due to expected settlements and statute of limitations expirations, the Company estimates that $1.0 million of the total unrecognized benefits will reverse within the next twelve months.

The Company recognizes interest and/or penalties related to income tax matters as part of income tax expense (benefit), which totaled $(2.4) million, $(2.9) million and $0.4 million, for 2020, 2019 and 2018, respectively. The Company's liability for interest and penalties totaled $7.2 million and $9.6 million at December 31, 2020 and 2019, respectively.

At December 31, 2020, the following tax years remained subject to examination by the major tax jurisdictions indicated below:

Major Jurisdictions	**Open Years**	
China	2016	through current
Germany	2013	through current
Taiwan	2013	through current
United Kingdom	2008 and 2015	through current
United States	2015	through current

The Company is subject to taxation in the U.S. and in various states and foreign jurisdictions. With few exceptions, at December 31, 2020, the Company was no longer subject to federal,state and local or foreign examinations by tax authorities for years before 2013. The Company is currently undergoing tax examinations in several foreign jurisdictions. The Company believes it has appropriately accrued for the expected outcome of uncertain tax matters and believes such liabilities represent a reasonable provision for taxes ultimately expected to be paid. However, the Company's liability may need to be adjusted as new information becomes available and as tax examinations continue to progress.

12. DEBT

The Company's debt obligations consisted of the following:

(dollars in millions)	Maturity Date	Interest Rate	December 31, 2020	December 31, 2019
USD Term Loans [1]	2026	LIBOR plus 2.00%	$ 727.5	$ 733.4
Senior Notes - USD 800 million [2]	2028	3.875%	788.0	—
Senior Notes - USD 800 million [3]	2025	5.875%	—	786.7
Other			—	0.9
Total debt			1,515.5	1,521.0
Less: current installments of long-term debt			7.4	7.8
Total long-term debt			$ 1,508.1	$ 1,513.2

[1] *Term loans, net of unamortized discounts and debt issuance costs of $7.6 million and $9.1 million at December 31, 2020 and 2019, respectively. The effective interest rate was 2.4% and 2.2% at December 31, 2020 and 2019, respectively, including the effects of interest rate swaps and net investment hedges. See Note 13, Financial Instruments, to the Consolidated Financial Statements for further information regarding the Company's interest rate swaps and net investment hedges.*

[2] *Senior notes, net of unamortized debt issuance costs of $12.0 million at December 31, 2020. The effective interest rate was 4.1% at December 31, 2020.*

[3] *Senior notes, net of unamortized discounts and debt issuance costs of $13.3 million at December 31, 2019. The effective interest rate was 6.2% at December 31, 2019.*

Minimum future principal payments on long-term debt were as follows:

(dollars in millions)	
2021	$ 7.4
2022	7.4
2023	7.4
2024	7.4
2025	7.4
Thereafter	1,498.1
Total	$ 1,535.1

Credit Agreement

The Company is a party to the Credit Agreement, which provides for senior secured credit facilities in an aggregate initial principal amount of $1.08 billion, consisting of a revolving facility in an aggregate initial principal amount of $330 million maturing in 2024 and a term loan in an aggregate initial principal amount of $750 million maturing in 2026.

Borrowings under the Credit Agreement bear interest at a per annum rate equal to a Base Rate, as defined in the Credit Agreement, plus in each case, an applicable interest rate equal to a spread of 1.00% with respect to Base Rate Loans and a spread of 2.00% with respect to Eurocurrency Rate Loans. The Company is required to pay a commitment fee in respect of any undrawn portion of the revolving credit facility of 0.50% per annum, subject to a stepdown to 0.375% based on the Company's first lien net leverage ratio.

The Company's obligations under the Credit Agreement are guaranteed, jointly and severally, by certain of the Company's domestic subsidiaries and secured by a first-priority security interest in substantially all of the assets of the Company and MacDermid, as borrowers, as well as the assets of the guarantors, including mortgages on material real property, subject to certain exceptions.

Covenants, Events of Default and Provisions

The Credit Agreement contains customary representations and warranties, and affirmative and negative covenants, including limitations on additional indebtedness, dividends, and other distributions, entry into new lines of business, use of loan proceeds, capital expenditures, restricted payments, restrictions on liens on the assets of the borrowers or any guarantor, transactions with

affiliates, amendments to organizational documents, accounting changes, sale and leaseback transactions and dispositions. To the extent the borrowers have total outstanding borrowings under the revolving facility (subject to certain exceptions) greater than 30% of the commitment amount under the revolving facility, the Company's first lien net leverage ratio should not exceed 5.0 to 1.0, subject to a right to cure.

The Credit Agreement requires the borrowers to make mandatory prepayments of borrowings, subject to certain exceptions, as described in the Credit Agreement. In addition, the Credit Agreement contains customary events of default that include, among others, non-payment of principal, interest or fees, violation of covenants, inaccuracy of representations and warranties, failure to make payment on, or defaults with respect to, certain other material indebtedness, bankruptcy and insolvency events, material judgments and change of control provisions. Upon the occurrence of an event of default, and after the expiration of any applicable grace period, payment of any outstanding loans under the Credit Agreement may be accelerated and the lenders could foreclose on their security interests in the assets of the borrowers and the guarantors.

At December 31, 2020, the Company was in compliance with the debt covenants contained in the Credit Agreement and had full availability of its unused borrowing capacity of $325 million, net of letters of credit, under the revolving facility.

Senior Notes

3.875% USD Notes due 2028

On August 18, 2020, the Company completed a private offering of $800 million aggregate principal amount of 3.875% senior notes due 2028. The net proceeds from this offering and cash on hand were used to pay for the full redemption of the Company's $800 million aggregate amount of 5.875% USD Notes due 2025 on September 4, 2020. In connection with the redemption, the Company expensed $45.7 million in "Other (expense) income, net" in the Consolidated Statement of Operations, consisting of a make-whole premium of $33.6 million, which is a cash outflow from financing activities in the Consolidated Statements of Cash Flows, and the write-off of debt issuance costs and original issue discount of $12.1 million.

The indenture governing the 3.875% USD Notes due 2028 provides, among other things, for customary affirmative and negative covenants, events of default and other customary provisions. The notes accrue interest at a rate of 3.875% per annum, payable semi-annually in arrears, on March 1 and September 1 of each year, beginning on March 1, 2021, and will mature on September 1, 2028, unless earlier repurchased or redeemed. Pursuant to the indenture, the Company has the option to redeem the 3.875% USD Notes due 2028 prior to their maturity, subject to, in certain cases, the payment of an applicable make-whole premium. At December 31, 2020, the 3.875% USD Notes due 2028 are fully and unconditionally guaranteed on a senior unsecured basis by generally all of the Company’s domestic subsidiaries that guarantee the obligations of the borrowers under the Credit Agreement.

Lines of Credit and Other Debt Facilities

The Company has access to various revolving lines of credit, short-term debt facilities, and overdraft facilities worldwide which are used to fund short-term cash needs. At December 31, 2020 and 2019, respectively, there were no amounts outstanding under such facilities. The Company had letters of credit outstanding of $6.2 million and $5.7 million at December 31, 2020 and 2019, respectively, of which $5.5 million and $5.3 million at December 31, 2020 and 2019, respectively, reduced the borrowings available under the various facilities. At December 31, 2020 and 2019, the availability under these facilities was approximately $349 million and $351 million, respectively, net of outstanding letters of credit.

13. FINANCIAL INSTRUMENTS

Derivatives and Hedging

In the normal course of business, the Company is exposed to risks relating to changes in foreign currency exchange rates, commodity prices and interest rates. Derivative financial instruments, such as foreign currency exchange forward contracts, commodities futures contracts, interest rate swaps and net investment hedges are used to manage the risks associated with changes in the conditions of those markets. All derivatives are recognized in the Consolidated Balance Sheets at fair value. The counterparties to the Company’s derivative agreements are primarily major international financial institutions. The Company continually monitors its derivative positions and the credit ratings of its counterparties and does not anticipate nonperformance on their part.

Foreign Currency

The Company conducts a significant portion of its business in currencies other than the U.S. dollar and a portion of its business in currencies other than the functional currencies of its subsidiaries. As a result, the Company's operating results are impacted by foreign currency exchange rate volatility.

At December 31, 2020, the Company held foreign currency forward contracts to purchase and sell various currencies to mitigate foreign currency exposure with the U.S. dollar. The Company has not designated any foreign currency exchange forward contracts as eligible for hedge accounting and, as a result, changes in the fair value of foreign currency forward contracts are recorded in the Consolidated Statements of Operations as "Other (expense) income, net." The total notional value of foreign currency exchange forward contracts held at December 31, 2020 and 2019 was approximately $78.5 million and $74.2 million, respectively, with settlement dates generally within one year.

Commodities

As part of its risk management policy, the Company enters into commodity futures contracts for the purpose of mitigating its exposure to fluctuations in prices of certain metals used in the production of its finished goods. The Company held futures contracts to purchase and sell various metals, primarily tin and silver, for a notional amount of $25.0 million and $28.6 million at December 31, 2020 and 2019, respectively. Substantially all contracts outstanding at December 31, 2020 have delivery dates within one year. The Company has not designated these derivatives as hedging instruments and, accordingly, records changes in their fair values in the Consolidated Statements of Operations as "Other (expense) income, net."

Unrealized gains and losses on derivative contracts are accounted for in the Consolidated Statements of Cash Flows as "Operating activities."

Interest Rates and Related Strategies

The Company entered into interest rate swaps to mitigate its exposure to fluctuations in interest rates on its term loan through January 2024. The interest rate swaps effectively fix the floating rate of interest payments associated with the term loan under the Credit Agreement. The Company designated these contracts as cash flow hedges and changes in the fair value are recorded in "Other comprehensive (loss) income" and reclassified into earnings as the underlying hedged item affects earnings. Amounts reclassified into earnings related to interest rate swaps are included in the Consolidated Statements of Operations as "Interest expense, net."

The Company entered into cross-currency swaps to effectively convert the $750 million term loan under the Credit Agreement, a U.S. dollar-denominated debt obligation, into fixed-rate euro-denominated debt through January 2024. The Company is obligated to make periodic euro-denominated coupon payments to the hedge counterparties on an aggregate initial notional amount of €662 million, in exchange for periodic U.S. dollar-denominated coupon payments from these hedge counterparties on an aggregate initial notional amount of $750 million. The Company has designated these contracts as a net investment hedge of the foreign currency exposure of a portion of its net investment in its European operations. Changes in the fair value are recorded in "Foreign currency translation" in "Accumulated other comprehensive loss."

All interest payments to be paid during the last two years preceding the maturity date of the term loan will revert back to a floating rate of interest for both the interest rate swaps and cross-currency swaps. The proceeds from these contracts are reflected as cash flows from Operating Activities on the Consolidated Statement of Cash Flows.

The net result of the above hedges, which expire in January 2024, is an interest rate of approximately 2.4%, which could vary due to changes in the euro and the U.S. dollar exchange rate.

During 2020 and 2019, the Company's interest rate swaps and cross-currency swaps were deemed highly effective. The Company expects to reclassify $17.6 million of expense from "Accumulated other comprehensive loss" to "Interest expense, net" in the Consolidated Statements of Operations during 2021.

Fair Value Measurements

The following table presents the Company's financial assets and liabilities measured at fair value on a recurring basis:

(dollars in millions)	Balance sheet location	Classification	December 31, 2020	December 31, 2019
Asset Category				
Foreign exchange contracts not designated as hedging instruments	Other current assets	Level 2	$ 0.2	$ 0.9
Metals contracts not designated as hedging instruments	Other current assets	Level 2	0.4	0.3
Cross currency swaps designated as net investment hedge	Other current assets	Level 2	16.3	18.4
Available for sale equity securities	Other assets	Level 1	—	0.3
Total			$ 16.9	$ 19.9
Liability Category				
Interest rate swaps designated as cash flow hedging instruments	Accrued expenses and other current liabilities	Level 2	$ 17.6	$ 6.9
Foreign exchange contracts not designated as hedging instruments	Accrued expenses and other current liabilities	Level 2	0.7	0.2
Metals contracts not designated as hedging instruments	Accrued expenses and other current liabilities	Level 2	1.6	0.7
Interest rate swaps designated as cash flow hedging instruments	Other liabilities	Level 2	33.5	19.7
Cross currency swaps designated as net investment hedge	Other Liabilities	Level 2	43.3	0.3
Total			$ 96.7	$ 27.8

The following methods and assumptions were used to estimate the fair value of each class of the Company's financial assets and liabilities:

Derivatives - Derivative assets and liabilities include foreign currency, metals and interest rate derivatives. The values are determined using pricing models based upon observable market inputs, such as market spot and futures prices on over-the-counter derivative instruments, market interest rates and consideration of counterparty credit risk.

Available for sale equity securities - Available for sale equity securities classified as Level 1 assets are measured using quoted market prices at the reporting date multiplied by the quantity held.

There were no significant transfers between the fair value hierarchy levels during 2020.

The carrying value and estimated fair value of the Company's long-term debt totaled $1.52 billion and $1.55 billion, respectively, at December 31, 2020. At December 31, 2019, the carrying value and estimated fair value totaled $1.52 billion and $1.58 billion, respectively. The carrying values noted above include unamortized discounts and debt issuance costs. The estimated fair value of long-term debt is measured using quoted market prices at the reporting date multiplied by the gross carrying amount of the related debt, which excludes unamortized discounts and debt issuance costs. Such instruments are valued using Level 2 inputs.

14. STOCKHOLDERS' EQUITY

Preferred Stock

The Company is authorized to issue 5 million shares of preferred stock. The Board had designated 2 million of those shares as "Series A Preferred Stock." At December 31, 2019, a total of 2 million shares of Series A Preferred Stock were issued and outstanding. All outstanding shares of Series A Preferred Stock were converted into shares of common stock of the Company during the first quarter of 2020 and no shares of Series A Preferred Stock were outstanding at December 31, 2020.

Repurchases of Common Stock

During 2020, as part of its previously-announced $750 million share repurchase program, the Company repurchased approximately 5.7 million shares of its common stock for approximately $55.7 million, at an average price of approximately $9.74 per share. The repurchases were funded from cash on hand and allocated to treasury shares. The remaining authorization under the share repurchase program was approximately $187 million at December 31, 2020.

On February 8, 2019, as part of the Company's previously-announced $750 million stock repurchase program, the Company repurchased 37 million shares of its common stock for a per share purchase price of $11.72, the last sale price reported for the Company's shares as of the 4:00 p.m. (EST) close of trading on the New York Stock Exchange on Friday, February 1, 2019, for an aggregate purchase price of $434 million. These repurchased shares, which represented approximately 13% of the Company's then outstanding common stock, were retired on the repurchase date. The repurchase was funded from cash on hand and borrowings under the Credit Agreement.

During the period from April 1, 2019 through December 31, 2019, the Company also repurchased approximately 7.8 million shares of its common stock under the share repurchase program for approximately $73.5 million, at an average price of $9.45 per share. The repurchases were allocated to treasury shares and were funded from cash on hand.

15. ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME

Changes in each component of "Accumulated other comprehensive (loss) income," net of tax, during 2020, 2019 and 2018 were as follows:

(dollars in millions)	Foreign Currency Translation Adjustments	Pension and Post-retirement Plans	Unrealized Gain (Loss) on Available for Sale Securities	Derivative Financial Instrument Revaluation	Non-Controlling Interests	Accumulated Other Comprehensive (Loss) Income
Balance at December 31, 2017	$ (453.6)	$ (7.9)	$ (1.3)	$ —	$ 40.8	$ (422.0)
Impact of ASU 2016-01 adoption	—	—	1.3	—	—	1.3
Adjusted balance at January 1, 2018	(453.6)	(7.9)	—	—	40.8	(420.7)
Other comprehensive income (loss) before reclassifications, net	(378.0)	1.8	—	6.0	34.5	(335.7)
Reclassifications, pretax	—	—	—	(0.5)	—	(0.5)
Balance at December 31, 2018	(831.6)	(6.1)	—	5.5	75.3	(756.9)
Other comprehensive income (loss) before reclassifications, net	70.5	0.6	—	(29.2)	(25.8)	16.1
Reclassifications, pretax	479.8	(2.1)	—	(4.5)	(14.4)	458.8
Tax expense reclassified	—	—	—	1.5	—	1.5
Balance at December 31, 2019	(281.3)	(7.6)	—	(26.7)	35.1	(280.5)
Other comprehensive income (loss) before reclassifications, net	107.4	4.4	—	(40.2)	—	71.6
Reclassifications, pretax	—	—	—	14.1	—	14.1
Balance at December 31, 2020	$ (173.9)	$ (3.2)	$ —	$ (52.8)	$ 35.1	$ (194.8)

16. EARNINGS (LOSS) PER SHARE

A computation of weighted average shares of common stock outstanding and earnings (loss) per share from continuing operations for 2020, 2019 and 2018 is as follows:

	Year Ended December 31,		
(dollars in millions, except per share amounts)	**2020**	**2019**	**2018**
Net income (loss) from continuing operations	$ 76.8	$ 79.6	$ (77.0)
Net income attributable to the non-controlling interests	—	(0.7)	(1.5)
Net income (loss) from continuing operations attributable to common stockholders	$ 76.8	$ 78.9	$ (78.5)
Basic weighted average common shares outstanding	248.8	257.6	288.2
Denominator adjustments for diluted EPS:			
Number of shares issuable upon conversion of Series A Preferred Stock	0.3	2.0	—
Number of stock options and RSUs	0.8	0.5	—
Denominator adjustments for diluted EPS	1.1	2.5	—
Dilutive weighted average common shares outstanding	249.9	260.1	288.2
Earnings (loss) per share from continuing operations attributable to common stockholders:			
Basic	$ 0.31	$ 0.31	$ (0.27)
Diluted	$ 0.31	$ 0.30	$ (0.27)

For 2020, 2019 and 2018, the following securities were not included in the computation of diluted shares outstanding because the effect would be anti-dilutive, or because performance targets were not yet met for awards contingent upon such measures:

	Year Ended December 31,		
(amounts in millions)	**2020**	**2019**	**2018**
Shares issuable for contingent consideration	—	3.6	7.8
Shares issuable upon conversion of the shares of common stock of PDH	—	—	4.1
Shares issuable upon conversion of Series A Preferred Stock	—	—	2.0
Shares issuable upon vesting of RSUs and exercise of stock options	4.1	4.3	1.7
Total shares excluded	4.1	7.9	15.6

17. LEASES

The Company primarily has operating lease agreements for certain land, office space, warehouse space and equipment.

ROU assets totaled $56.0 million and $61.1 million, current lease liabilities totaled $16.4 million and $16.1 million and non-current lease liabilities totaled $40.1 million and $46.3 million, in each case at December 31, 2020 and 2019, respectively. ROU assets, current lease liabilities and non-current lease liabilities were reported as "Other assets," "Accrued expenses and other current liabilities" and "Other liabilities" in the Consolidated Balance Sheets, respectively.

Operating lease expenses were primarily included in "Selling, technical, general and administrative" in the Consolidated Statements of Operations and totaled $20.9 million, $20.8 million and $21.6 million for 2020, 2019 and 2018, respectively.

	Year Ended December 31,	
(dollars in millions)	**2020**	**2019**
Supplemental Information for Operating Leases		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 19.1	$ 21.2
ROU assets obtained in exchange for operating lease obligations	$ 12.3	$ 9.5
Weighted average remaining lease term	6 years	7 years
Weighted average discount rate	4.8%	4.9%

Maturities of operating lease liabilities at December 31, 2020 were as follows:

(dollars in millions)	
2021	$ 18.7
2022	15.5
2023	10.3
2024	5.4
2025	4.6
Thereafter	10.7
Total future minimum lease payments	65.2
Less: imputed interest	(8.7)
Present value of lease liabilities	$ 56.5

18. CONTINGENCIES, ENVIRONMENTAL AND LEGAL MATTERS

Environmental Matters

The Company is involved in various claims relating to environmental matters at a number of current and former plants and waste management sites. At certain of these sites, the Company engages or participates in remedial and other environmental compliance activities. At other sites, the Company has been named as a potential responsible party pursuant to the federal Superfund Act and/or state Superfund laws comparable to the federal law for site remediation. After analyzing each individual site, considering the number of parties involved, the level of its potential liability or contribution relating to the other parties, the nature and magnitude of the hazardous waste involved, the method and extent of remediation, the potential insurance coverage, the estimated legal and consulting expense with respect to each site and the time period over which any costs would likely be incurred, the Company estimates the clean-up costs and related claims for each site. The estimates are based in part on discussions with other potential responsible parties, governmental agencies and engineering firms.

The Company accrues for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current laws and existing technologies. The accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. The Company's environmental liabilities, which are included in the Consolidated Balance Sheets as "Accrued expenses and other current liabilities" and "Other liabilities," totaled $10.1 million and $12.0 million at December 31, 2020 and 2019, respectively, primarily driven by environmental remediation, clean-up costs and monitoring of sites that were either closed or disposed of in prior years. While uncertainty exists with respect to the amount and timing of its ultimate environmental liabilities, the Company does not currently anticipate any material losses in excess of the amount recorded. However, new information about the sites, such as results of investigations, could make it necessary for the Company to reassess its potential exposure related to these environmental matters.

As of the date hereof, the Company believes it is not practicable to provide an estimated range of reasonably possible environmental losses in excess of its recorded liabilities, and, as a result, the Company is unable to ascertain the ultimate aggregate amount of monetary liability or financial impact that may be associated with these matters.

Legal Matters

From time to time, the Company is involved in various legal proceedings, investigations and/or claims in the normal course of its business. Although it cannot predict with certainty the ultimate resolution of these matters, which involve judgments that are inherently subjective, the Company believes that their resolutions, to the extent not covered by insurance, will not, individually or in the aggregate, have a material adverse effect on its consolidated financial position, results of operations or cash flows.

19. RELATED PARTY TRANSACTIONS

The Company is party to an Advisory Services Agreement with Mariposa Capital, LLC, an affiliate of one of its founder directors, whereby Mariposa Capital, LLC is entitled to receive an annual fee, accrued quarterly and payable in quarterly installments, and reimbursement for expenses. This agreement is automatically renewed for successive one-year terms unless either party notifies the other party in writing of its intention not to renew no later than 90 days prior to the expiration of the applicable term. Effective February 1, 2019, the annual fee increased from $2.0 million to $3.0 million. The annual fee was recorded in the Consolidated Statements of Operations as "Selling, technical, general and administrative" expense.

20. RESTRUCTURING

The Company continuously evaluates its operations in an effort to identify opportunities to improve profitability by leveraging existing infrastructure to reduce operating costs and respond to overall economic conditions.

Restructuring expenses were recorded as follows in each of the Company's business segments:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Electronics	$ 3.1	$ 8.3	$ 4.9
Industrial & Specialty	3.2	5.8	1.4
Total	$ 6.3	$ 14.1	$ 6.3

At December 31, 2020 and 2019, the Company’s restructuring liability was not material.

The restructuring plans primarily relate to headcount reductions associated with continued cost saving opportunities within the businesses, including initiatives associated with the Company's reorganization efforts resulting from the Arysta Sale to consolidate its corporate function with those of its former Performance Solutions segment. There are no material additional costs expected to be incurred related to these discrete restructuring activities.

Restructuring expenses were recorded as follows in the Consolidated Statements of Operations:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Cost of sales	$ —	$ —	$ 0.1
Selling, technical, general and administrative	6.3	14.1	6.2
Total	$ 6.3	$ 14.1	$ 6.3

21. OTHER (EXPENSE) INCOME, NET

"Other (expense) income, net," as reported in the Consolidated Statements of Operations, consisted of the following:

	Year Ended December 31,		
(dollars in millions)	2020	2019	2018
Loss on debt extinguishment	$ (45.7)	$ (60.7)	$ (0.4)
(Loss) gain on derivative contracts	(9.0)	13.4	0.4
Gain on sale of equity investment	—	—	11.3
Other income, net	3.0	1.1	3.5
Total	$ (51.7)	$ (46.2)	$ 14.8

22. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

"Accrued expenses and other current liabilities," as reported in the Consolidated Balance Sheets, consisted of the following:

	December 31,	
(dollars in millions)	2020	2019
Accrued salaries, wages and employee benefits	$ 70.3	$ 47.5
Accrued taxes (income and non-income)	33.3	38.3
Accrued interest	11.8	4.2
Derivative liabilities	19.9	7.8
Lease liabilities	16.4	16.1
Other current liabilities	52.5	41.2
Total	$ 204.2	$ 155.1

23. SEGMENT INFORMATION

The Company's operations are organized into two reportable segments: Electronics and Industrial & Specialty. These segments represent businesses for which separate financial information is utilized by the chief operating decision maker (or CODM) for purposes of allocating resources and evaluating performance.

The Company allocates resources and evaluates the performance of its operating segments based primarily on net sales and Adjusted EBITDA. Adjusted EBITDA for each segment is defined as earnings before interest, taxes, depreciation and amortization, as further adjusted for additional items included in earnings which the Company believes are not representative or indicative of each segment's ongoing business or are considered to be associated with the Company's capital structure. Adjusted EBITDA for each segment also includes an allocation of corporate costs, such as compensation expense and professional fees.

Results of Operations

The following table summarizes financial information regarding each reportable segment's results of operations, including disaggregated external net sales by product category:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Net Sales:			
Electronics			
Assembly Solutions	$ 571.7	$ 545.6	$ 580.0
Circuitry Solutions	401.0	377.6	406.3
Semiconductor Solutions	199.4	162.5	171.2
Total Electronics	1,172.1	1,085.7	1,157.5
Industrial & Specialty			
Industrial Solutions	473.0	521.1	560.7
Graphics Solutions	143.6	152.0	159.1
Energy Solutions	65.0	77.1	83.7
Total Industrial & Specialty	681.6	750.2	803.5
Total net sales	$ 1,853.7	$ 1,835.9	$ 1,961.0
Adjusted EBITDA:			
Electronics	$ 277.3	$ 252.9	$ 248.2
Industrial & Specialty	145.3	163.8	172.5
Total Adjusted EBITDA	$ 422.6	$ 416.7	$ 420.7

The following table reconciles "Net income (loss) attributable to common stockholders" to Adjusted EBITDA:

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
Net income (loss) attributable to common stockholders	$ 75.7	$ 92.2	$ (324.4)
Add (subtract):			
Net income attributable to the non-controlling interests	—	0.7	4.5
Loss (income) from discontinued operations, net of tax	1.1	(13.3)	242.9
Income tax expense	4.3	61.3	23.8
Interest expense, net	63.4	90.7	311.0
Depreciation expense	42.2	41.5	44.6
Amortization expense	119.2	113.2	112.1
EBITDA	305.9	386.3	414.5
Adjustments to reconcile to Adjusted EBITDA:			
Restructuring expense	6.3	14.1	6.3
Amortization of inventory step-up	2.4	0.7	—
Acquisition and integration costs	12.3	1.9	12.1
Foreign exchange loss (gain) on foreign denominated external and internal long-term debt	35.4	(31.9)	6.0
Debt refinancing costs	45.7	62.0	0.5
Foundation contributions	5.0	—	—
Gain on sale of equity investment	—	—	(11.3)
Change in fair value of contingent consideration	—	(17.4)	(21.8)
Other, net	9.6	1.0	14.4
Adjusted EBITDA	$ 422.6	$ 416.7	$ 420.7

Net Sales by Major Country

A major country is defined as one in which total net sales represented 10% or more of the Company's total consolidated net sales in any of the years presented.

	Year Ended December 31,		
(dollars in millions)	**2020**	**2019**	**2018**
United States	$ 485.3	$ 448.7	$ 477.4
China	347.9	328.3	367.4
Other countries	1,020.5	1,058.9	1,116.2
Total	$ 1,853.7	$ 1,835.9	$ 1,961.0

Long-Lived Assets by Major Country

A major country is defined as one with long-lived assets greater than 10% of the Company's total long-lived assets, net in any of the years presented. Long-lived assets represent property, plant and equipment, net.

	December 31,	
(dollars in millions)	**2020**	**2019**
United States	$ 86.4	$ 112.4
China	32.1	31.8
Other countries	121.9	120.6
Total	$ 240.4	$ 264.8

Assets by Reportable Segment

Total assets by reportable segment at December 31, 2020 and 2019 are not presented as they are not utilized by the CODM for purposes of allocating resources and evaluating performance.

Element Solutions Inc

Valuation and Qualifying Accounts and Reserves

(dollars in millions)	Balance at beginning of period	(Charges) Income	Deductions from (increases to) reserves and other [1]	Balance at end of period
Reserves against accounts receivable:				
2020	$ (8.8)	$ (2.0)	$ 1.1	$ (9.7)
2019	(7.7)	(3.1)	2.0	(8.8)
2018	(8.2)	(0.9)	1.4	(7.7)

(dollars in millions)	Balance at beginning of period	(Charges) Income	Deductions from (increases to) reserves and other [1]	Balance at end of period
Valuation allowances against deferred tax assets:				
2020	$ (219.6)	$ 25.2	$ (4.7)	$ (199.1)
2019	(475.2)	257.6	(2.0)	(219.6)
2018	(391.7)	(76.1)	(7.4)	(475.2)

[1] *Other activity consists primarily of currency translation effects.*

DEFINITIONS AND RECONCILIATIONS OF NON-GAAP MEASURES FOR ANNUAL REPORT PAGES 2 TO 6

To supplement the financial measures prepared in accordance with generally accepted accounting principles in the United States ("GAAP"), the Company uses the following non-GAAP financial measures: EBITDA, adjusted EBITDA, adjusted EBITDA growth, adjusted EBITDA margin, adjusted common shares outstanding, adjusted earnings per share (EPS), free cash flow and free cash flow on an adjusted basis, and net debt to adjusted EBITDA ratio. The Company also evaluates and presents its results of operations on a constant currency basis.

Management uses these non-GAAP measures in its analysis of the Company's performance. However, these measures have limitations as analytical tools, and should not be considered in isolation from, a substitute for, or superior to, the related financial information that the Company reports in accordance with GAAP.

CONSTANT CURRENCY

For a definition, see p. 30 of the 2020 Annual Report on Form 10-K.

ADJUSTED EBITDA AND ADJUSTED EBITDA MARGIN

For a definition and reconciliation, see pp. 30-31 and F-38—F-39 of the 2020 Annual Report on Form 10-K.

ADJUSTED EARNINGS PER SHARE (EPS)

Adjusted EPS is a key metric used by management to measure operating performance and trends. In particular, the exclusion of certain expenses in calculating adjusted EPS facilitates operating performance comparisons on a period-to-period basis. Adjusted EPS is defined as net income from continuing operations attributable to common stockholders adjusted to reflect adjustments consistent with the Company's definition of adjusted EBITDA. Additionally, the Company eliminates the amortization associated with intangible assets, incremental depreciation associated with the step-up of fixed assets, and incremental cost of sales associated with the step-up of inventories recognized in purchase accounting for acquisitions. Further, the Company adjusts its effective tax rate to 26% and 27% for the three and twelve months ended December 31, 2020 and 2019, respectively. Lastly, the 2019 adjusted EPS total is based on the Company's current capital structure by assuming that the sale of Agricultural Solutions had closed and the new credit agreement had been in place on January 1, 2019. The resulting adjusted net income is then divided by the Company's adjusted common shares outstanding. Adjusted common shares outstanding represent the shares outstanding as of the balance sheet date for the quarter-to-date period and an average of each quarter for the year-to-date period. Adjusted common shares outstanding consists of common shares outstanding, plus the shares that would be issued if all convertible stock was converted to common stock, stock options were vested and exercised, and equity grants with targets that are considered probable of achievement were vested at target level and issued.

GAAP NET INCOME RECONCILIATION TO ADJUSTED EPS

($ millions, except per share amounts)	FY 2020	FY 2019
NET INCOME ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ 76	$ 92
Net income (loss) from discontinued operations attributable to common stockholders	(1)	13
NET INCOME FROM CONTINUING OPERATIONS ATTRIBUTABLE TO COMMON STOCKHOLDERS	77	79
Reversal of amortization expense	119	113
Adjustment to reverse incremental depreciation expense from acquisitions	8	9
Amortization of inventory step-up	2	1
Adjustment to interest expense	–	20
Restructuring expense	6	14
Acquisition and integration costs	12	2
Foreign exchange (gain) loss on foreign denominated external and internal long-term debt	35	(32)
Debt refinancing costs	46	62
Foundation contributions	5	–
Change in fair value of contingent consideration	–	(17)
Other, net	10	1
Tax effect of pre-tax non-GAAP adjustments	(64)	(47)
Adjustment to estimated effective tax rate	(17)	23
Adjustment to reverse loss attributable to certain non-controlling interests	–	1
ADJUSTED NET INCOME FROM CONTINUING OPERATIONS ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ 241	$ 228
ADJUSTED EARNINGS PER SHARE FROM CONTINUING OPERATIONS	$ 0.96	$ 0.88
ADJUSTED COMMON SHARES OUTSTANDING	251	258

Note: Totals may not sum due to rounding

ADJUSTED COMMON SHARES

(in millions)	FY 2020 (Average)	FY 2019 (Average)
BASIC OUTSTANDING COMMON SHARES	248	254
Number of shares issuable upon conversion of Series A Preferred Stock	–	2
Number of shares issuable upon vesting of granted Equity Awards[1]	3	3
ADJUSTED COMMON SHARES OUTSTANDING	251	258

[1] Equity Awards with targets that are considered probable of achievement vested at target level

FREE CASH FLOW AND FREE CASH FLOW ON AN ADJUSTED BASIS

Free cash flow is defined as net cash flows from operating activities less net capital expenditures. Net capital expenditures include capital expenditures less proceeds from the disposal of property, plant and equipment. Free cash flow on an adjusted basis adjusts one-time cash operating expenses. Management believes that free cash flow, which measures the Company's ability to generate cash from its business operations, is an important financial measure in evaluating the Company's financial performance. However, free cash flow should be considered in addition to, rather than as a substitute for net cash provided by operating activities as a measure of the Company's liquidity.

FREE CASH FLOW

(in millions)	FY 2020	FY 2019
NET CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES	$ 276	$ 171
Capital expenditures	(29)	(30)
Proceeds from disposal of PP&E	2	5
FREE CASH FLOW	$ 249	5
ADJUSTMENTS		
Interest payments—prior capital structure[1]		57
Interest payments—new capital structure[1]		(3)
Other[2]		38
FREE CASH FLOW ON AN ADJUSTED BASIS		$ 238

[1] Adjustments for 2019 interest payments to reflect the Company's current capital structure by assuming that the sale of Arysta LifeScience Inc. (the "Arysta Sale") had closed and its new credit agreement had been in place on January 1, 2019.

[2] Adjustment for the payment of the contingent consideration related to the MacDermid acquisition and payment for employee expenses associated with the Arysta Sale that did not qualify for discontinued operations.

NET DEBT TO ADJUSTED EBITDA RATIO

Net debt to adjusted EBITDA ratio is defined as total debt (current installments of long-term debt, revolving credit facilities and long-term debt), excluding unamortized discounts and debt issuance costs, which totaled $19.6 million at December 31, 2020, less cash divided by adjusted EBITDA.

ELEMENT SOLUTIONS INC

ANNUAL REPORT 2020 CORPORATE INFORMATION

BOARD OF DIRECTORS



SIR MARTIN ELLIS FRANKLIN, KGCN
Executive Chairman
Founder & Chief Executive Officer
Mariposa Capital, LLC



BENJAMIN GLIKLICH
President and Chief Executive Officer
Element Solutions Inc



SCOT R. BENSON
Founder and Chief Executive Officer
Heron Point Partners



IAN G.H. ASHKEN [1][2][3]
Former Vice Chairman & President
Jarden Corporation



CHRISTOPHER T. FRASER [2]
Former Chairman and
Chief Executive Officer
KMG Chemicals Inc.



MICHAEL F. GOSS [1][3]
Independent Lead Director
Former Chief Financial Officer
Condé Nast



NICHELLE MAYNARD-ELLIOTT [1][2]
Former Executive Director,
Mergers & Acquisitions
Praxair, Inc.



E. STANLEY O'NEAL [3]
Former Chairman &
Chief Executive Officer
Merrill Lynch & Co., Inc.

[1] Member of the Audit Committee
[2] Member of the Compensation Committee
[3] Member of the Nominating and Policies Committee

EXECUTIVE OFFICERS

BENJAMIN GLIKLICH
President and Chief
Executive Officer

JOHN E. CAPPS
EVP, General Counsel
and Company Secretary

CAREY J. DORMAN
EVP, Chief
Financial Officer

JOSEPH J. D'AMBRISI
EVP, Head
of Electronics

MICHAEL GORALSKI
EVP, Head of Industrial &
Specialty and Global
Supply Chain

PATRICIA A. MOUNT
VP, Program Management
& Integration

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

PricewaterhouseCoopers LLP
New York, New York

REGISTRAR AND TRANSFER AGENT

Computershare
P.O. Box 30170
College Station, TX 77842

ANNUAL REPORT ON FORM 10-K

This Annual Report and our annual report on Form 10-K for the fiscal year ended December 31, 2020, including our financial statements and the financial statement schedule, are available without charge by written request to:

INVESTOR RELATIONS

Varun Gokarn
Senior Director, Strategy & Finance
Element Solutions Inc
383 Main Avenue, 6th Floor
Norwalk, Connecticut 06851
(561) 406-8465

SECURITIES LISTING

Our shares of common stock are listed on the NYSE. Ticker symbol: ESI

element solutions

elementsolutionsinc com