Sensata Technologies

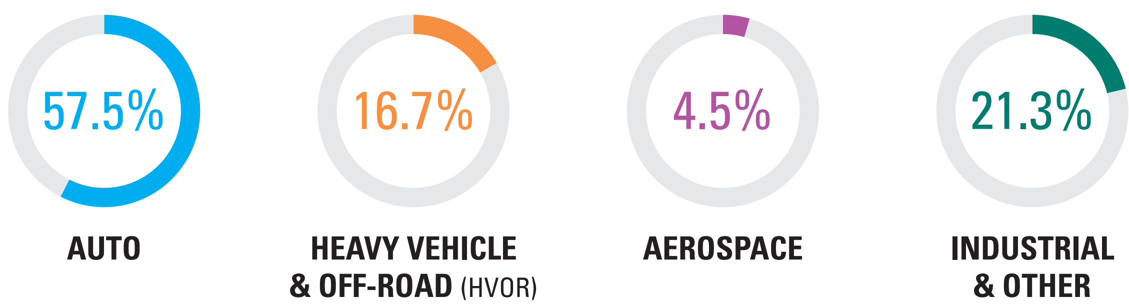
2020 ANNUAL REPORT

Sensor-rich solutions delivering deep insights

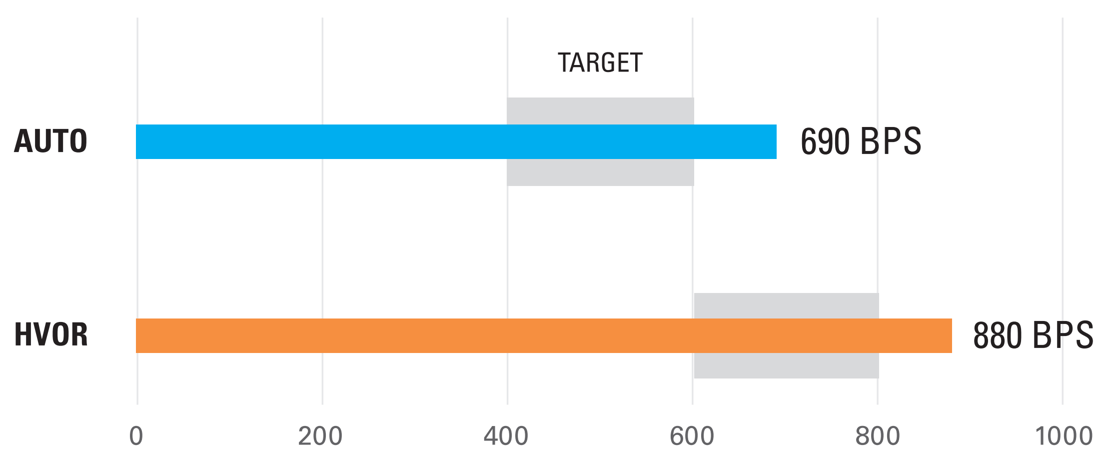
Sensata is a leading industrial technology company that develops sensors and sensor-based, mission-critical solutions to create valuable business insights for customers and end users.

We provide a wide range of customized, sensor-rich solutions that address complex engineering requirements to help customers solve difficult challenges.

2020 REVENUE BY END MARKET



2020 END MARKET OUTGROWTH* VS. LONG-TERM TARGET



* Business unit revenue growth compared to end market unit growth / decline

Sensata is committed to sustainable environmental, social and governance practices

Sensata seeks to be a partner, employer, and neighbor of choice. It is Sensata's vision that our products will enhance the safety, efficiency and comfort for millions of people every day. Sensata focuses on the following areas to enhance Corporate Responsibility and Sustainability in its operations:

ENVIRONMENTAL **E**

SOCIAL **S**

GOVERNANCE **G**

- Energy & Emissions
- Responsible Sourcing & Labor Practices
- Diversity, Equity & Inclusion

Sensata
Diversity, Equity & Inclusion
A SENSE OF BELONGING

> "Our collective success depends on the diversity of our team, including gender, race, age, education, place of birth, and other social identities. Creating an environment where ideas are shared freely is key to ensuring our employees reach their true potential and grants us the ability to innovate."

– Jeff Cote, Chief Executive Officer & President

INVESTED IN **ELECTRIFICATION**

Expanding electrification capabilities and opportunities

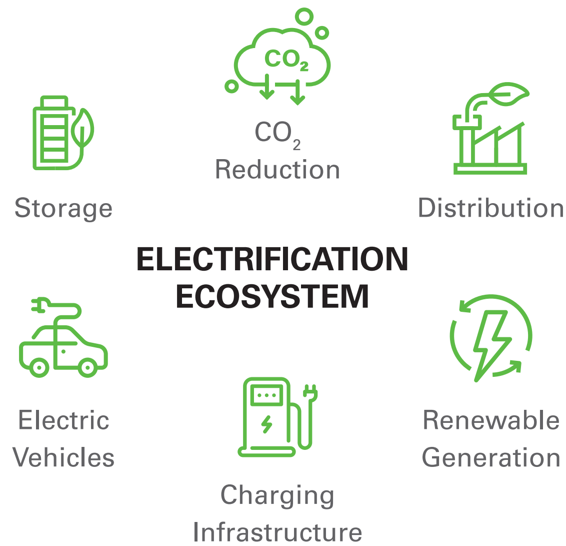
Sensata aims to be a leading provider of mission-critical sensor-rich hardware and software solutions to help customers transition to an Electrified future.

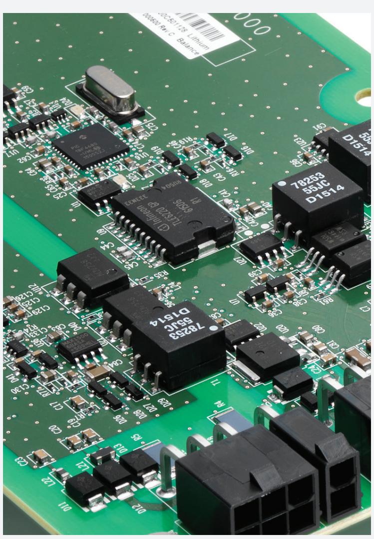
$30 billion

electrification addressable market opportunity by 2030

$180 million

new electrification business wins in 2020





ACQUISITION: **LITHIUM BALANCE**

Lithium Balance further expands Sensata's portfolio to offer more comprehensive battery management solutions to a variety of heavy vehicle OEMs and integrated energy storage solutions to commercial and industrial customers.

$500 million

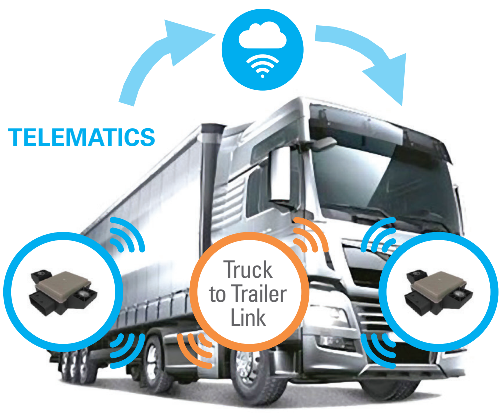
addressable Battery Management System market opportunity by 2030

$6 billion

addressable Battery Energy Storage System market opportunity by 2030

Becoming a data insight provider for broader fleet ecosystem

Sensata is engaging with the broader fleet ecosystem to deliver an enhanced value proposition across the transportation and logistics value chain.



Sensing portfolio collects high-value data (e.g. cargo capacity, tire pressure monitoring system)

Vehicle area network enables truck-to-trailer link and 3rd party system integration (e.g. automatic tire inflation system)

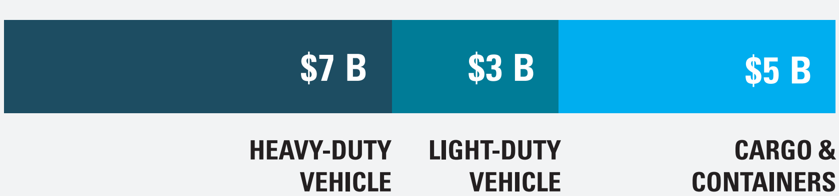
Telematics devices collect vehicle data and transmit/receive to/from the cloud and/or in-cab displays

Cloud platform remotely manages devices while processing and distributing data via APIs to 3rd party solution providers

Fleet managers receive the right actionable data in the right place (e.g. web portal, email notifications, etc.)

ACQUISITION: XIRGO

Xirgo brings complementary capabilities and talent, and accelerates Sensata's strategy to expand beyond OEMs and address the broader fleet ecosystem, including telematics service providers, fleet management solution providers, and fleet operators themselves.



$15 billion

addressable Fleet Management market opportunity by 2030

Letter to our Shareholders

SENSATA CHIEF EXECUTIVE OFFICER
JEFFREY J. COTE

Sensata and the entire world experienced an enormous global health and economic crisis caused by the COVID-19 virus in 2020. From the first shutdowns in China, and then across every geographic region, Sensata's immediate priority became ensuring the safety of our employees while addressing the urgent needs of our partners and customers. While the resulting volatility in the first half of the year greatly affected our customers and markets, and thus our financial results, we took necessary actions quickly, to remain agile and to preserve our financial foundation. As a result, we were well-positioned as end markets began to recover in the third quarter, a trend that accelerated at the end of the year.

Sensata's dedicated employees and the resilience of our business model enabled us to emerge from this worldwide crisis stronger than ever, producing record free cash flow in the fourth quarter. We are deeply grateful to Team Sensata, who overcame myriad difficulties the pandemic posed, as well as our customers, who demonstrated their trust and confidence in us, and indeed, their increased reliance on our mission-critical products and solutions.

2020 FINANCIAL RESULTS

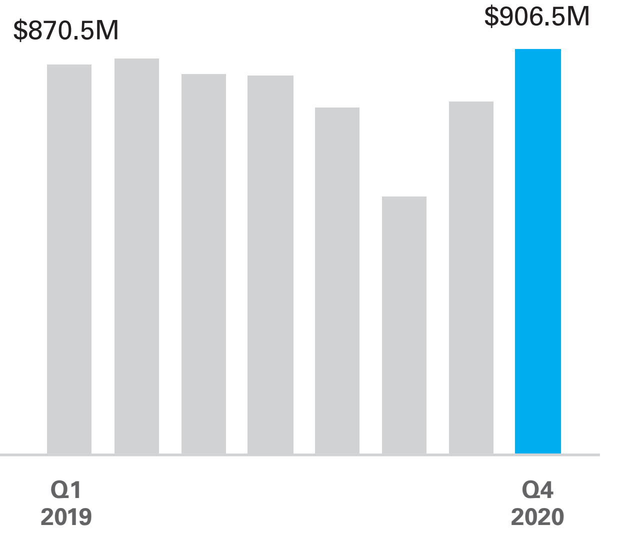
For the full year 2020, Sensata reported revenue of $3.05 billion, an organic revenue decline of 11.9% from 2019, reflecting steep end market declines. Despite those underlying trends, Sensata successfully generated 600 basis points of outgrowth compared to our end markets. In automotive and heavy vehicle & off-road, we outgrew end markets by 690 basis points and 880 basis points, respectively—higher than our long-term targets of 400–600 basis points in automotive and 600–800 basis points in HVOR. I'm pleased with 2020's outgrowth, which speaks to the strength of our resilient business model and the differentiated nature of our products. We also credit our significant new business wins in 2020, totaling more than $465 million, well above our five-year average, including higher Electrification and Smart & Connected wins, setting us up for sustained outgrowth in 2021 and beyond.

Through the depth of the pandemic, we effectively managed our operations and reduced our cost structure through a restructuring program to lower semi-variable operating costs by 10% that we anticipate will produce savings of $60–$65 million annually in 2021. The impact of the pandemic and economic crisis diminished our earnings per share and our adjusted operating income margins in 2020, but we were encouraged by the improvement we delivered in the fourth quarter, with year-over-year growth in revenues and adjusted operating income. For the full year, we sustained investments in opportunities that will position Sensata for future growth, and our free cash flow generation remained strong at $453 million, representing an unusually high conversion rate of 130% of adjusted net income; as a result, at year's end, our net leverage ratio was 3.2x, comfortably within our target range. Lastly, we took advantage of historically low interest rates to strengthen our balance sheet, issuing new debt and repaying higher-interest-bearing debt early.

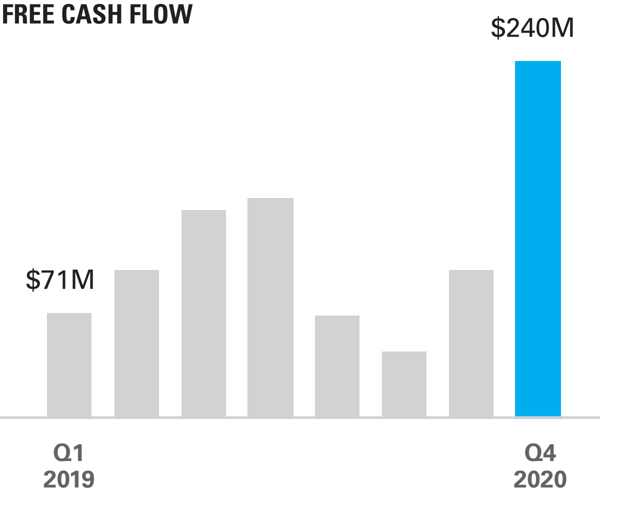
During the first quarter of 2020, we repurchased approximately $35 million of Sensata stock before we paused further action due to the pandemic. Since then, our capital deployment has been focused on M&A and investing in our business, with a focus on our Megatrend areas of Electrification and Smart & Connected and we expect it to remain so in order to deliver significant accretive growth for the Company.

> "Sensata's dedicated employees and the resilience of our business model enabled us to emerge from this worldwide crisis stronger than ever."

NON-GAAP REVENUE



FREE CASH FLOW



EXPANDING MEGATREND INITIATIVES: ELECTRIFICATION

Sensata aims to be a leading provider of mission-critical sensor-rich hardware and software solutions to help customers transition to an Electrified future, and we made great strides in implementing our strategy in this critical area in 2020. We are actively investing in Electrification initiatives holistically across our portfolio, from electric vehicles to e-mobility applications for heavy vehicles, charging infrastructure and industrial grid management, all of which present sizable new opportunities in the billions of dollars in the next 5–10 years. New business wins in Electrification in 2020 reached $180 million, positioning us well to expand our footprint in this high-growth area.

Our Electrification initiative has been driven by both internal research and development and acquisitions. The acquisition of GIGAVAC in 2018 added a leading portfolio of high voltage protection on EVs and charging infrastructure. Our strategy includes expanding energy management expertise and capabilities through joint ventures and acquisitions. More recently, the acquisition of Lithium Balance propels Sensata into Battery Management Solutions and energy storage offerings.

Within our automotive business, we are engaged with nearly all of the world's leading OEMs that are launching battery EVs. Importantly, Sensata contributes 20% higher content to EVs than a comparable internal combustion engine vehicle, and in 2020, when EVs represented about 3% of total global auto production, EV revenues comprised about 5% of our total automotive revenues. Sensata components in EVs are not entirely new: at least 50% carry over from non-EVs, including tire pressure, brake pressure for electronic stability control, and cabin comfort pressure sensors. We see continued growth for our differentiated solutions in this rapid-growth arena that also provides important benefits of cleaner air.

EXPANDING MEGATREND INITIATIVES: SMART & CONNECTED

In late 2020 we reached commercial deployment, a key proof point, in our Smart & Connected initiative, with the initial rollout of our first fleet customer on a new SaaS business model. This represents the first implementation of a full-stack solution for fleets, addressing safety and efficiency, including a vehicle area network, cloud-based data insight delivery solutions, a web portal with data insights, mobile apps, and integrations with third-party telematics service providers. The fleet retrofit portion addresses a further $6 billion market opportunity by 2030. In addition, through the OEM channel, we have won $100 million in new business with truck and trailer OEMs, which represents a $1 billion market opportunity.

Now, with the acquisition of Xirgo Technologies in early 2021, we are strengthening our position as a data insight provider across transportation and logistics end markets and significantly accelerating our growth in Smart & Connected and IoT areas, bringing our total addressable market opportunity to $15 billion by 2030. Xirgo, a leading telematics and data insight provider, expands our offering into light-duty vehicles, cargo, and containers. We've partnered with this high-growth, high-margin business previously, and respect its complementary capabilities, including

> “We are pleased to drive forward into the year with increasing revenues, expanding margins, and strong free cash flow generation, supported by an expanding solution set, market recovery, significant secular growth, and opportunities for meaningful M&A.”

high-value sensing applications and sources of data insights and its customer base of leading channel partners. We believe Xirgo will advance Sensata meaningfully beyond our vehicle OEM customers to a broader fleet ecosystem.

We are enthusiastic about our progress— and the opportunities going forward—for Smart & Connected and Electrification, and believe these important initiatives will further differentiate Sensata.

2021 OUTLOOK

Looking ahead, we anticipate that the accelerated end-market recovery in the fourth quarter will continue in 2021, when all our end markets are forecast to grow year-over-year. We expect strong revenue growth, with differentiated margins, despite the semiconductor chip shortage weighing on many industries in the first half of the year. Sensata's robust global supply chain and early actions to ensure supply position us well to achieve our targeted 10–15% organic revenue growth and 38–55% improvement in adjusted earnings per share, compared to 2020. These estimates do not include any contribution from Xirgo, which is expected to add approximately $100 million in annualized revenue and be accretive to adjusted net income in 2021. We are pleased to drive forward into the year with increasing revenues, expanding margins, and strong free cash flow generation, supported by an expanding solution set, market recovery, significant secular growth, and opportunities for meaningful M&A.

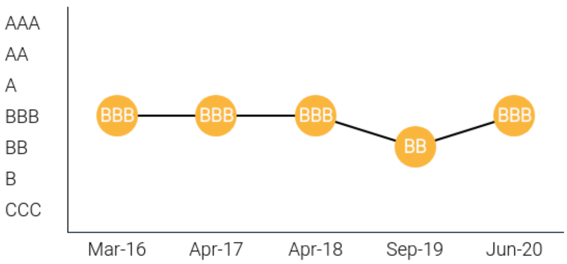
SENSATA FOUNDATION

The Sensata Technologies Foundation contributes to the communities where Sensata operates, focused on fostering passion for STEM (Science, Technology, Engineering, and Mathematics) subjects in local schools.

Throughout Sensata's long history of supporting our communities, we have assisted outreach programs that nurture and aid education, economic development, civic involvement, and diversity. In 2020, despite the pandemic, employee volunteers dedicated time in their communities to service projects at 24 organizations and met emergency requests for face masks, face shields, and other PPE to support COVID responses at local hospitals and medical facilities. The Sensata Foundation committed more than $500,000 in financial grants to 32 deserving organizations for 2021. As informed by our Black Employee Network resource group, the Sensata Foundation also supported the Equal Justice Initiative in 2020. Through all our corporate responsibility efforts, an important aspect of our industry leadership, we are making positive and enduring changes in our communities.

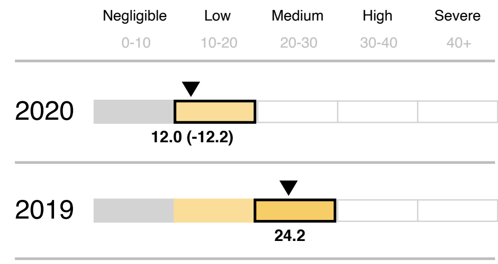
MSCI ESG RATINGS[1]

ESG RATING HISTORY



SUSTAINALYTICS ESG RISK RATING REPORT[2]

RISK RATING MOMENTUM SCORE



ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

Sensata has long focused its product development on applications that foster a greener and cleaner world. These efforts have recently expanded with increased investments in our Smart & Connected and Electrification initiatives. Furthermore, we believe an inclusive culture is vital to Sensata's ability to innovate and collaborate. This past summer we joined the Tech Compact for Social Justice—a commitment to make the tech industry more welcoming and inclusive for black, Latinx, and Indigenous people. We've added valuable and diverse voices and skillsets through the natural evolution of our Board of Directors to build our company for long-term success.

In the past year, Sensata has received improved ratings from both MSCI and Sustainalytics, two major independent ESG ranking firms, placing the company in the "low risk" category. Mitigating ESG risk is becoming important to more institutional investors and Sensata shareholders worldwide, adding a powerful rationale for these activities.

Separately, we are working with third-party advisors on a materiality assessment and the results will be incorporated into our first Sustainability Report that we intend to publish later in 2021.

In closing, I thank our valued customers, my Sensata colleagues, our shareholders, our Board members, and business partners for their support during 2020. While this year's events shook our world during my first full year as Sensata's CEO, I'm extremely proud that our organization and people rose to meet and overcome the challenges in front of them.

I look forward to reporting on our progress in the coming year.

Jeffrey J. Cote
CHIEF EXECUTIVE OFFICER & PRESIDENT

[1] MSCI ESG Ratings for Sensata Technologies Holding PLC (ST), Aug. 25, 2020
[2] SUSTAINALYTICS ESG Risk Rating Report for Sensata Technologies Holding PLC (ST), Aug. 3, 2020

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**

Commission File Number 001-34652

SENSATA TECHNOLOGIES HOLDING PLC

(Exact name of registrant as specified in its charter)

England and Wales	**98-1386780**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

529 Pleasant Street, Attleboro, Massachusetts, 02703, United States
(Address of principal executive offices, including zip code))

+1 **(508) 236 3800**
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Ordinary Shares - nominal value €0.01 per share	ST	New York Stock Exchange

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 aggregate market value of the registrant's ordinary shares held by non-affiliates at June 30, 2020 was approximately $5.8 billion based on the New York Stock Exchange closing price for such shares on that date.

As of January 29, 2021, 157,645,484 ordinary shares were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Report incorporates information from certain portions of the registrant's Definitive Proxy Statement to be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2020.

TABLE OF CONTENTS

Cautionary Statements Concerning Forward-Looking Statements

This Annual Report on Form 10-K (this "Report"), including any documents incorporated by reference herein, includes "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements relate to analyses and other information that are based on forecasts of future results and estimates of amounts not yet determinable. These forward-looking statements also relate to our future prospects, developments, and business strategies. These forward-looking statements may be identified by terminology such as "may," "will," "could," "should," "expect," "anticipate," "believe," "estimate," "predict," "project," "forecast," "continue," "intend," "plan," and similar terms or phrases, or the negative of such terminology, including references to assumptions. However, these terms are not the exclusive means of identifying such statements.

Forward-looking statements contained herein, or in other statements made by us, are made based on management's expectations and beliefs concerning future events impacting us. These statements are subject to uncertainties and other important factors relating to our operations and business environment, all of which are difficult to predict, and many of which are beyond our control, that could cause our actual results to differ materially from those matters expressed or implied by forward-looking statements. Although we believe that our plans, intentions, and expectations reflected in, or suggested by, such forward-looking statements are reasonable, we can give no assurances that any of the events anticipated by these forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition.

We believe that the following important factors, among others (including those described in Item 1A, "Risk Factors," included elsewhere in this Report), could affect our future performance and the liquidity and value of our securities and cause our actual results to differ materially from those expressed or implied by forward-looking statements made by us or on our behalf:

- Future risks and existing uncertainties associated with the coronavirus ("COVID-19") pandemic, which continues to have a significant adverse impact on our business and operations including: (i) full or partial shutdowns of our facilities as mandated by government decrees, (ii) limited ability to adjust certain costs due to government actions, (iii) significant travel restrictions and "work-from-home" orders limiting the availability of our workforce, (iv) supplier constraints and supply-chain interruptions, (v) logistics challenges and limitations, (vi) reduced demand from certain customers, (vi) uncertainties associated with a protracted economic slowdown that could negatively affect the financial condition of our customers and suppliers, and (vii) uncertainties and volatility in the global capital markets;
- instability and changes in the global markets, including regulatory, political, economic, governmental, and military matters, such as the recent exit of the United Kingdom (the "U.K.") from the European Union (the "EU");
- adverse conditions or competition in the industries upon which we are dependent, including the automotive industry;
- losses and costs as a result of intellectual property, product liability, warranty, and recall claims;
- market acceptance of new product introductions and product innovations;
- inability to realize all of the revenue or achieve anticipated gross margins from products subject to existing purchase orders for which we are currently engaged in development;
- supplier interruption or non-performance, limiting our access to manufactured components or raw materials;
- risks related to the acquisition or disposition of businesses, or the restructuring of our business;
- labor disruptions or increased labor costs;
- competitive pressure from customers that could require us to reduce prices or result in reduced demand;
- security breaches, cyber theft of our intellectual property, and other disruptions to our information technology infrastructure, or improper disclosure of confidential, personal, or proprietary data;
- our ability to attract and retain key senior management and qualified technical, sales, and other personnel;
- foreign currency risks, changes in socioeconomic conditions, or changes to monetary and fiscal policies;
- our level of indebtedness, or our inability to meet debt service obligations or comply with the covenants contained in the credit agreement and senior notes indentures;
- changes to current policies, such as trade tariffs, by various governments worldwide;
- risks related to the potential for goodwill impairment;

- the impact of challenges by taxing authorities of our historical and future tax positions or our allocation of taxable income among our subsidiaries, unfavorable developments in taxation sentiments in countries where we do business, and challenges to the sovereign taxation regimes of EU member states by the European Commission and the Organization for Economic Co-operation and Development;
- changes to, or inability to comply with, various regulations, including tax laws, import/export regulations, anti-bribery laws, environmental, health, and safety laws, and other governmental regulations; and
- risks related to our domicile in the U.K.

In addition, the extent to which the COVID-19 pandemic will continue to impact our business and financial results going forward will be dependent on future developments, such as the length and severity of the crisis, the potential resurgence of the crisis, future government actions in response to the crisis and the overall impact of the COVID-19 pandemic on the global economy and capital markets, among many other factors, all of which remain highly uncertain and unpredictable.

All forward-looking statements attributable to us or persons acting on our behalf speak only as of the date of this Report and are expressly qualified in their entirety by the cautionary statements contained in this Report. We undertake no obligation to update or revise forward-looking statements that may be made to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events. We urge readers to review carefully the risk factors described in this Report and in the other documents that we file with the United States Securities and Exchange Commission. You can read these documents at www.sec.gov or on our website at www.sensata.com.

PART I

ITEM 1. BUSINESS

The Company

The reporting company is Sensata Technologies Holding plc, a public limited company incorporated under the laws of England and Wales, and its wholly-owned subsidiaries, collectively referred to as the "Company," "Sensata," "we," "our," and "us."

We are a global industrial technology company that develops, manufactures, and sells sensors, electrical protection products, and other products that are used in mission-critical systems and applications that create valuable business insights for our customers and end users. For more than 100 years, we have been providing a wide range of customized, sensor-rich solutions that address increasingly complex engineering and operating performance requirements to help our customers solve their most difficult challenges in the automotive, heavy vehicle and off-road ("HVOR"), industrial, and aerospace industries. We operate in, and report financial information for, two reportable segments: Performance Sensing and Sensing Solutions.

Original equipment manufacturers ("OEMs") are producing products that are safer, cleaner, more efficient, more electrified, and increasingly more connected. Our sensors are used by our customers to translate a physical parameter, such as pressure, temperature, position, or location of an object, into electronic signals that our customers' products and solutions can act upon. Our electrical protection product portfolio is comprised of various sensors, controllers, receivers, and software, and includes high-voltage contactors and other products embedded within systems to maximize their efficiency and protect them from excessive heat or current.

We have long-standing relationships with a geographically diverse base of leading OEMs and other multinational companies. In geographic and product markets where we lack established relationships with customers, we rely on third-party distributors to sell our products. We have had relationships with our top ten customers for an average of 31 years. Our largest customer accounted for approximately 7% of our net revenue for the year ended December 31, 2020.

Business Strategy

Our business strategy involves leveraging certain new and emerging technology trends, which complement our existing product offerings, to deliver products used in mission-critical systems and applications that create valuable business insights for our customers and end users. Each of these trends, which we refer to as “megatrends,” is expected to significantly transform the industries in which we operate. Refer to *Megatrends* section for additional detailed information on the new and emerging technologies that we consider key to our strategies.

These megatrends are also creating greater secular demand for our products, resulting in growth that exceeds end-market production growth in many of the markets we serve, a defining characteristic of our company. We refer to this as “market outgrowth," which describes the impact of an increasing quantity and value of our products used in customer systems and applications, and is only loosely correlated to normal unit demand fluctuations in the markets we serve.

Our customers are facing ever increasing mandates, due to regulation and consumer demand, to make their products cleaner, more efficient, and safer, while providing more comfort-related features. Our sensors are being used in mission-critical systems and applications that are addressing these demands, including those that help: industrial customers to make more efficient pumps and boilers; automotive customers to meet the standards of emissions and pollution control legislation; and fleet managers to proactively monitor the health of their vehicles, conduct proactive maintenance, optimize fleet operations, and enhance driver safety. We consider these capabilities to be core to our historical success, and will continue to be significant drivers of outgrowth in the future.

We believe the medium- to long-term outlook for internal combustion engine powertrain products will evolve with the advent of more environmentally friendly vehicles that rely more heavily on Electrification (as defined in the *Megatrends* section below) and other adjacent technologies. Accordingly, we are focusing on expanding our market share on electrified platforms, including both sensor and electrical protection products. Many of the components and subsystems that we have historically developed and produced will play a significant role in this expansion, but we will also seek strategic partnerships and acquisitions to accelerate the growth and transformation of our product portfolio. By entering into such relationships, we obtain access to new technologies and solutions, which we can leverage with our existing expertise to optimize and expand our product portfolio. Beyond Electrification, we also recognize the potential market impact of autonomous vehicles and advanced driver-assistance systems ("ADAS"), and are developing sensors to facilitate development of this market by manufacturers of vehicles (light passenger, heavy on and off-road) and material handling equipment.

In addition, in our HVOR business, we are working on integrating our current products with software and services, as well as data collection, analysis, and insight capabilities, that will provide a large opportunity across the market segment. We also believe that adoption of driver assistance technologies, like radar, is a growth area – whether mandated by government legislation (such as the pedestrian safety requirements in the European Union ("EU")) or adopted by OEMs ahead of regulations.

We are also seeking to expand our business and accelerate market share in other areas that we believe will experience high growth in the future, such as deployment of Internet of Things ("IoT") solutions for buildings, factories and warehouses. This is driven by the need for smarter and more connected sensors that collect, analyze, and provide insights into how a particular industrial environment is operating and ultimately make that environment more productive and efficient. We also believe that the industrial markets will see higher adoption of autonomous technologies to enhance productivity resulting in higher demand for our radar solutions.

Megatrends

New and emerging technology trends that are expected to significantly impact our customers and our business strategy include Electrification, Smart & Connected, and Industrial IoT.

Electrification

Our objective with the Electrification initiative is to become a leading and foundational player in solutions that will support a future that is more environmentally-sustainable and efficient, including (1) clean energy transportation systems and components in electrified vehicles, charging stations, and chargers and (2) mission-critical high voltage components and subsystems with high value solutions in advanced smart grid technologies. Electrification provides a significant opportunity for us to expand the use of our sensors and electrical protection products within the automotive, industrial, and HVOR industries. For example, in the automotive industry, as customers seek to extend the range of batteries and improve the efficiency of electric vehicles, they are incorporating electrical subsystems, which require additional sensors to monitor, control, and optimize what is happening within the vehicle. Further, higher voltage battery systems are also driving increased needs for electrical protection. Sensors are also used in thermal management applications to help maintain batteries at optimal temperatures as well as electric motors and heat pumps. We are expanding our capabilities in Electrification, including through third party collaboration, and expect continued material expansion of this initiative within our automotive, HVOR, and industrial businesses.

Smart & Connected

Our objective with the Smart & Connected initiative is to become the leader in delivering diagnostic insight and prognostics to fleet operators and owners. Smart & Connected provides a large market opportunity across heavy, medium, and light vehicles. Leveraging certain of the sensor products and embedded and wireless systems expertise in our existing tire pressure monitoring portfolio, we are developing smart, connected, modular, and full-stack solutions that collect data from wireless sensors or related vehicle system information through a connected vehicle-area network and deliver actionable insight to drivers, maintenance workers and back-office personnel through mobile applications, web portals and via cloud Application Programming Interfaces ("APIs") for integration in other enterprise systems. These solutions allow fleet managers to proactively monitor the health of their vehicles, conduct proactive maintenance, optimize fleet operations and enhance driver safety. We are leveraging our leadership position in tire pressure monitoring systems and know-how of vehicles and use cases within fleet operations to deliver scalable platforms to a variety of players within the connected ecosystem, including Tier 1 suppliers, OEMs, telematics services providers and fleets directly.

Industrial IoT

Our objective in the Industrial IoT/Digitization of Factories & Warehouses initiative is to become a leader in factory smart sensing and edge intelligence with solutions in machine health and materials tracking. The digitization of factories and warehouses represent fast-growing opportunities that we believe will drive new business wins and market outgrowth for our industrial business. Bringing our products to enhance material handling and electrification charging infrastructure represent fast growing opportunities that we believe will drive industrial business content and market outgrowth.

Performance Sensing

The Performance Sensing reportable segment has historically also been an operating segment. As discussed further in Note 20, “Segment Reporting,” of our audited consolidated financial statements and accompanying notes thereto (our "Financial Statements") included elsewhere in this Annual Report on Form 10-K (this "Report"), in the fourth quarter of 2020, we determined, based on various factors, that the Performance Sensing operating segment should be divided into two operating segments, Automotive and HVOR. The Automotive and HVOR operating segments meet the criteria for aggregation into the Performance Sensing reportable segment, and no change was made to the overall components of, or the business conducted by, the Performance Sensing reportable segment. Accordingly, no prior period information has been recast.

Performance Sensing, which accounted for approximately 73% of our net revenue in fiscal year 2020, primarily serves the automotive and HVOR industries through development and manufacture of sensors, high-voltage contactors, and other solutions used in mission-critical systems and applications such as those in subsystems of automobiles, on-road trucks, and off-road equipment (e.g., tire pressure monitoring, thermal management, electrical protection, regenerative braking, powertrain (engine/transmission), and exhaust management). Our products are used in subsystems that, among other things, improve operating performance and efficiency, as well as contribute to environmentally sustainable and safe solutions as the world continues to pivot in those directions.

Customers

Our customers include leading global automotive, on-road truck, construction, and agriculture OEMs, the companies that supply parts directly to these OEMs, which are known as Tier 1 suppliers, and various aftermarket distributors. We believe large OEMs and other multinational companies are increasingly demanding a global presence to supply sensors and electrical protection products for their key platforms worldwide. As our customers develop common global electrified platforms to drive scale and efficiency across their global markets, we are well positioned to serve them with our global manufacturing and technical centers. We provide our customers with the worldwide technical and manufacturing presence to enable their success around the globe.

Markets

The global sensor market is characterized by a broad range of products and applications across a diverse set of market segments. According to an October 2020 report prepared by Strategy Analytics, Inc., the global automotive sensor market was $20.3 billion in 2020, compared to $23.7 billion in 2019 as a result of the global economic impacts caused by the coronavirus ("COVID-19") pandemic.

As the markets we serve continue to drive improved safety, efficiency, and performance we are well positioned to grow in this expanding market opportunity. Our automotive solutions are present in a wide variety of automotive systems and subsystems playing a critical role in ensuring the functionality and safety of the vehicle’s operation. Within the combustion and electrified propulsion architecture we provide various sensor solutions (i.e. electric motor position, gasoline direct injection, oil pressure monitoring, fuel delivery, and various others) that enable superior functionality, efficiency, and optimized performance to reduce environmental impact. Further protecting the environment are our exhaust after-treatment devices used in closed-loop feedback control to reduce emissions of traditional and hybrid powertrains. Our chassis (i.e. tire pressure monitoring systems), thermal management, electrical protection (i.e. high voltage contactors), and safety (i.e. braking and electronic stability control) sensor/product solutions all play critical roles in enabling the safety, improved performance, and increased efficiency and range of electrified vehicles and combustion powertrains.

Applications we serve require close engineering collaboration between us and the OEM or their Tier 1 suppliers. Solutions are designed to meet application-specific requirements with customer specific fit, form, and function. As a result, OEMs and Tier 1 suppliers make significant investments in selecting, integrating, and testing sensors as part of their product development. Once our solutions are designed into an application, we are well positioned as the incumbent supplier for the application due to the high degree of sensor customization and application/vehicle platform certification. This results in high switching costs for automotive and HVOR manufacturers once a sensor is designed into a particular system or platform. We believe this is one of the reasons that sensors are rarely changed during a platform life-cycle, which in the case of the automotive industry typically lasts five to seven years. OEMs and Tier 1 suppliers look to partner with suppliers that have a proven track record of quality, on-time delivery, and performance, as well as the engineering and manufacturing scale/resources to meet their needs over the multi-year lifecycle of these highly engineered vehicles and systems. As electrified and autonomous automobile platforms continue to evolve and grow, we expect OEM and Tier 1 suppliers to require sensing partners that can continue to meet their increasing needs for mission-critical sensors and solutions enabling their global vehicle strategies. We continue to drive investments in new technologies, competencies, and solutions that will enable our customers' success as they pivot toward an electrified world. The automotive industry provides one of the largest markets for sensors, giving participants with a presence in this market significant scale advantages over those participating only in smaller, more niche industrial and medical markets.

Market Trends

Net revenue growth from the automotive and HVOR sensor markets served by Performance Sensing has historically been driven, we believe, by three principal trends, including (1) growth in the number of vehicles produced globally, (2) expansion in the number and type of sensors per vehicle, and (3) efforts toward commercializing higher value sensors. In addition, we believe that the automotive and HVOR sensor markets are and will continue to be substantially impacted in the near term by current megatrends, primarily Electrification, as well as other trends such as connectivity and ADAS.

Light vehicle production: Global production of light vehicles had consistently demonstrated steady annual growth for most of the decade prior to 2019, when it started to plateau. This was demonstrated at the time by the fourth quarter 2019 LMC Automotive "Global Car & Truck Forecast," which showed that the global production of light vehicles in fiscal year 2019 decreased from the prior year by 5.0%. In fiscal year 2020, production was significantly lower according to the fourth quarter 2020 LMC Automotive "Global Car & Truck Forecast," which showed that the global production of light vehicles in fiscal year 2020 further decreased from the prior year by 16.2% to approximately 74.9 million units. We expect global production of light vehicles to see a strong rebound in fiscal year 2021, although not yet back to the level of 2019 production. This increasing trend in light vehicle production is expected to continue beyond 2021 due to population growth and increased usage of cars in emerging markets. Current estimates anticipate global production of light vehicles to approach 100 million units by fiscal year 2028.

On Road Truck Production: Global production of heavy-duty trucks has also demonstrated consistent growth prior to 2019. In fiscal year 2020, global production was approximately 5% lower than fiscal year 2019 according to industry data. We expect production of trucks to improve in North America and Europe in fiscal year 2021. This increasing trend in truck production is expected to continue beyond 2021 due to increased freight loads globally.

Number of sensors per vehicle: We believe that the numbers of sensors used per vehicle will continue to be driven by increasing requirements in vehicle emissions, efficiency, safety, and comfort-related control systems that depend on sensors for proper functioning, such as electronic stability control, tire pressure monitoring, advanced driver assistance, and advanced combustion and exhaust after-treatment applications. For example, government regulation of emissions, including fuel economy standards such as the National Highway Traffic Safety Administration's Corporate Average Fuel Economy requirements in the United States (the "U.S.") and emissions requirements such as "Euro 6d" in Europe, "China National 6" in China, and "Bharat Stage VI" in India require advanced sensors to achieve these performance metrics. Sensors are a key enabler for a vehicle’s systems and sub-systems to meet the ever-increasing requirements in a vehicle’s operation.

Increasing safety requirements and needs for electrification are also key trends driving increased sensor content in vehicles. These trends are driving advanced braking systems as they transition from traditional hydraulic brakes towards electromechanical braking and regenerative braking systems, thus driving additional content in pressure and force sensing. Furthermore, electrified vehicles are driving more sophisticated thermal management systems to control heating and cooling systems throughout the vehicle, and additional content in battery management systems to optimize drive range and safety in electrical protection as battery voltages increase.

Higher value sensors: We believe that our revenue growth has been augmented by a continuing shift away from legacy sensors to more solid-state sensors and related solutions that include controllers, receivers, and software, and will continue to grow as our sensors get "smarter" with more embedded algorithms. As we strive to increase the value we bring to the market and our customers, we are continuously looking to drive increased data-based insights that are derived from our foundational sensing solutions. Our ability to provide our customer with insights into the systems/sub-systems we serve increases the value of our offering and enables improved performance, safety, efficiency, and environmental impacts. Our focus on delivering enhanced value through our solutions to the market positions us to drive profitable revenue growth as the market demands continue to evolve.

New Technology: Automobiles and heavy vehicles continue to evolve with new alternative technologies being developed to make these vehicles more efficient, reliable, financially viable, and safe. We believe that this trend has the potential to drive growth in our business for the foreseeable future, particularly in the areas of Electrification, Smart & Connected, ADAS, and autonomy. Moreover, we believe our broad customer base, global diversification, and evolving portfolio provide the foundation that will allow us to grow with these megatrends across a diverse set of markets.

For example, we expect this growth to include content growth in both hybrid and electric vehicles. Hybrid vehicles require systems and sensors to drive high efficiency across the powertrain, managing better diagnostics, more efficient combustion, and reduced emissions. Also, sensor content on vehicle climate control and thermal management systems, where our market share is high, is increasing. This is driven by the need for high efficiency control of thermal management in battery electric vehicle heating and cooling systems as vehicle manufacturers look to drive increased vehicle range where the thermal loads on the vehicle become critical to manage. As long-range plug-in hybrid and full battery electric vehicles gain market share, multiple instances of efficient thermal management across the battery, electronics, and cabin systems are required to protect and manage the vehicle, which drives additional core Sensata sensor and electrical protection content available in the market today.

Safety and efficiency systems are also evolving on hybrid and electric vehicles. New and emerging energy recuperation technologies, such as regenerative motors, require additional sensing content to manage and efficiently switch between traditional braking systems and regenerative braking. Additionally, semi-automated vehicles containing advanced driver assistance systems benefit from more efficient and faster electromechanical braking systems, driving additional sensor content to control these brakes. Each of these systems enable more efficient use of energy, enabling greater electric vehicle range.

New content in high voltage electrical protection from our fiscal year 2018 acquisition of GIGAVAC, LLC ("GIGAVAC") addresses many of the needs in evolving electric vehicle powertrain systems with higher voltage systems that must be properly controlled and protected as vehicle voltages and electrical currents increase. This protection safeguards the expensive electronics used to power the vehicle and allowing for an increase in power levels to improve charging times.

Emerging Markets: We have a long-standing position in emerging markets, including a presence in China for more than 20 years. With our presence in China, we believe that our automotive and HVOR businesses are well positioned to grow. With sustained vehicle modernization and tightening regulations in China, we expect our content per vehicle in China will continue to increase, moving towards the levels we see in developed markets. In addition to China, we are well positioned to grow in the next wave of emerging markets, such as India, where we will be able to serve the market needs with our vast global sensing solution portfolio and technical/manufacturing capabilities.

Product Categories

The following table presents the key products, solutions, applications, systems, and end markets related to the product categories in Performance Sensing:

Key Products/Solutions	Key Applications/Systems	Key End Markets
Product category: Sensors		
Pressure sensors Speed and position sensors High temperature sensors	Thermal management and air conditioning systems Powertrain Exhaust after-treatment Suspension Braking Tire pressure monitoring Operator controls Radar solutions	Automotive HVOR
Product category: Electrical protection		
High-voltage contactors Battery management system	Electrical protection Electrical powertrain Battery management	Automotive HVOR

The table below sets forth the amount of net revenue generated by our sensor product category in Performance Sensing, reconciled to total segment net revenue, for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
(In thousands)	**2020**	**2019**	**2018**
Net revenue:			
Sensors	$ 2,171,364	$ 2,489,644	$ 2,532,631
Electrical protection [(1)]	35,366	41,273	7,423
Other [(1)]	17,080	15,099	87,597
Performance Sensing net revenue	$ 2,223,810	$ 2,546,016	$ 2,627,651

(1) Beginning in the year ended December 31, 2020, we adjusted our product categories to better reflect how we view our products. The product category we previously referred to as "controls" was renamed to "electrical protection," and our GIGAVAC products, which were previously grouped in "other," have been recast into "electrical protection." The amount of Performance Sensing revenue recast from "other" to "electrical protection" in the years ended December 31, 2019 and 2018 was $41.3 million and $7.4 million, respectively. The "sensors" product category was unchanged.

Competitors

Within each of the principal product categories in Performance Sensing, we compete with a variety of independent suppliers. We believe that the key competitive factors in the markets served by this segment are product performance in mission-critical operating environments, quality, service, reliability, manufacturing footprint, and commercial competitiveness. We believe that our ability to design and produce customized solutions globally, breadth and scale of product offerings, technical expertise and development capability, product service and responsiveness, and a commercially competitive offering, make us well positioned to succeed in these markets. We are experts in the applications we serve, enabling us to provide industry leading solutions to our customers. We take great pride in our ability to be a strategic partner for our customers as we head toward an electrified future where clean energy, safety, and efficiency are of the utmost importance.

Sensing Solutions

Sensing Solutions, which accounted for approximately 27% of our net revenue in fiscal year 2020, primarily serves the industrial and aerospace industries through development and manufacture of a broad portfolio of application-specific sensor and electrical protection products used in a diverse range of industrial markets, including the appliance, heating, ventilation and air conditioning ("HVAC"), semiconductor, material handling, factory automation, and water management markets, as well as the aerospace market.

Some of the products the segment sells include pressure and position sensors, motor and compressor protectors, high-voltage contactors, solid state relays, bimetal electromechanical controls, thermal and magnetic-hydraulic circuit breakers, power inverters, charge controllers, and IoT solutions. Our products perform many functions including prevention of damage from excess heat or electrical current, optimization of system performance, low-power circuit control, and power conversion from direct current ("DC") power to alternating current ("AC") power. We believe that we are a leading supplier of electrical protection products in the majority of the key applications and systems in which we compete.

Customers

Our customers include a wide range of industrial and commercial manufacturers and suppliers across multiple end markets, primarily OEMs in the climate control, appliance, semiconductor, medical, energy and infrastructure, data/telecom, material handling, factory automation, and aerospace industries, as well as Tier 1 aerospace and motor and compressor suppliers.

Markets

Demand for our sensor products is driven by many of the same factors as in the automotive and HVOR sensor markets: regulation of emissions, greater energy efficiency, and safety, as well as consumer demand for new features. Gross Domestic Product ("GDP") growth is a broad indicator for demand for our consolidated industrial markets over the long term. We use Purchasing Managers' Index ("PMI") to gauge short-term trends in the markets we serve.

We continue to focus our efforts on expanding our presence in all global geographies, both emerging and developed and serving our global customers in a highly efficient and cost-effective manner. Our customers include established multinationals as well as local producers in emerging markets such as China, India, Eastern Europe, and Turkey. China continues to remain a priority for us because of its export focus and the increasing domestic consumption of products that use our devices.

Product Categories

The following table presents the significant product categories offered by Sensing Solutions and the corresponding key products, solutions, applications, systems, and end markets:

Key Products/Solutions	Key Applications/Systems	Key End Markets
Product category: Electrical protection devices		
Bimetal electromechanical controls	HVAC/Refrigeration	Aerospace and defense
Motor protectors	Industrial equipment	Industrial
Motor starters	Small/large appliances	HVAC/Refrigeration
Thermostats	Lighting	Automotive
Switches	DC motors	Marine
Circuit breakers	Commercial and military aircraft	Medical
Thermal circuit breakers	Marine/industrial	Energy/solar
Magnetic-hydraulic circuit breakers	Data and telecom equipment	
High-voltage contactors	Medical equipment	
Battery management system	Recreational vehicles	
Product category: Sensors		
Linear and rotary position sensors	HVAC/Refrigeration	Aerospace and defense
Linear variable differential transformers	Air compressors	Industrial automation
Pressure sensors	Hydraulic machinery	HVAC/Refrigeration
Aircraft controls	Motion control systems	Motors
	Pumps and storage tanks	Marine
	Commercial and military aircraft	Energy
	IoT solutions	

The table below sets forth the amount of net revenue generated by our sensors and electrical protection product categories in Sensing Solutions, reconciled to total segment net revenue, for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
(In thousands)	2020	2019	2018
Net revenue:			
Electrical protection [(1)]	$ 468,635	$ 532,358	$ 514,749
Sensors	209,244	223,282	222,649
Other [(1)(2)]	143,889	148,975	156,578
Sensing Solutions net revenue	$ 821,768	$ 904,615	$ 893,976

(1) Beginning in the year ended December 31, 2020, we adjusted our product categories to better reflect how we view our products. The product category we previously referred to as "controls" was renamed to "electrical protection," and our GIGAVAC products, which were previously grouped in "other," have been recast into "electrical protection." The amount of Sensing Solutions revenue recast from "other" to "electrical protection" in the years ended December 31, 2019 and 2018 was $50.6 million and $6.0 million, respectively. The "sensors" product category was unchanged.

(2) Primarily includes thermal management solutions, DC to AC power converters, and brushless DC motors.

Competitors

Within each of the principal product categories in Sensing Solutions, we compete with divisions of large multinational industrial corporations and companies with smaller market share that compete primarily in specific markets, applications, systems, or products. We believe that the key competitive factors in these markets are product performance, quality, and reliability.

Technology and Intellectual Property

We develop products that address increasingly complex engineering and operating performance requirements to help our customers solve their most difficult challenges in the automotive, HVOR, industrial, and aerospace industries. We believe that continued focused investment in research and development ("R&D") is critical to our future growth and maintaining our leadership positions in the markets we serve. Our R&D efforts are directly related to timely development of new and enhanced products that are central to our business strategy. We continuously develop our technologies to meet an evolving set of customer requirements and new product introductions. We conduct such activities in areas that we believe will increase our long-term revenue growth. Our development expense is typically associated with engineering core technology platforms to specific applications and engineering major upgrades that improve the functionality or reduce the cost of existing products. As discussed in the Megatrends section above, one of the areas we are focusing on is Smart & Connected. This initiative will be based on many of our current products and technology (associated with embedded and wireless systems), but will involve more complex software, systems, and solutions. In addition, we continually consider new technologies where we may have expertise for potential investment or acquisition.

An increasing portion of our R&D activities are being directed towards technologies and megatrends that we believe have the potential for significant future growth, but relate to products that are not currently within our core business or include new features and capabilities for existing products. Expenses related to these activities are less likely to result in increased near-term revenue than our more mainstream development activities.

We benefit from many development opportunities at an early stage for several reasons: (1) we are the incumbent in many systems for our key customers; (2) we have strong design and service capability; and (3) our global engineering teams are located in close proximity to key customers in regional business centers. We work closely with our customers to deliver solutions that meet their needs. As a result of the long development lead times and embedded nature of our products, we collaborate closely with our customers throughout the design and development phase of their products. Systems development by our customers typically requires significant multi-year investment for certification and qualification, which are often government or customer mandated. We believe the capital commitment and time required for this process significantly increases the switching costs once a customer has designed and installed a particular sensor into a system.

We rely primarily on patents, trade secrets, manufacturing know-how, confidentiality procedures, and licensing arrangements to maintain and protect our intellectual property rights. While we consider our patents to be valuable assets, we do not believe that our overall competitive position is dependent on patent protection or that our overall business is dependent upon any single patent or group of related patents. Many of our patents protect specific functionality in our products, and others consist of processes or techniques that result in reduced manufacturing costs.

The following table presents information on our patents and patent applications as of December 31, 2020:

	U.S.	Non-U.S.
Patents	313	483
Pending patent applications, filed within the last five years	120	283

Our patents have expiration dates ranging from 2020 to 2042. We also own a portfolio of trademarks and license various patents and trademarks. "Sensata" and our logo are trademarks.

We use licensing arrangements with respect to certain technology provided in our sensor and electrical protection products. In 2006, we entered into a perpetual, royalty-free cross-license agreement with our former owner, Texas Instruments Incorporated, which permits each party to use specified technology owned by the other party in its business. No license may be terminated under the agreement, even in the event of a material breach.

Raw Materials

We use a broad range of manufactured components, subassemblies, and raw materials in the manufacture of our products in both our Performance Sensing and Sensing Solutions segments, including those containing certain commodities, resins, and rare earth metals, which may experience significant volatility in their price and availability due to, among other things, new laws or regulations, including the impact of tariffs, trade barriers, and disputes, and global economic or political events including government actions, labor strikes, suppliers' allocations to other purchasers, interruptions in production by suppliers, changes in foreign currency exchange rates, and prevailing price levels. It is generally difficult to pass increased prices for manufactured components and raw materials through to our customers in the form of price increases. Therefore, a significant increase in the price or a decrease in the availability of these items could materially increase our operating costs and materially and adversely affect our business and results of operations.

The automotive industry supply chain is currently facing a global shortage of semiconductors, the technology used to make microchips, resulting in paused production on certain vehicles and increased costs to procure microchips. As discussed in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included elsewhere in this Report (the "MD&A"), we believe this shortage will have an adverse impact on our operating costs in fiscal year 2021. If the impacts of this shortage are more severe than we expect, it could result in further deterioration of our results, potentially for a longer period than currently anticipated.

Seasonality

Because of the diverse global nature of the markets in which we operate, our net revenue is only moderately impacted by seasonality. However, Sensing Solutions experiences some seasonality, specifically in its air conditioning and refrigeration products, which tend to peak in the first two quarters of the year as inventory is built up for spring and summer sales. In addition, Performance Sensing net revenue tends to be weaker in the third quarter of the year as automotive OEMs retool production lines for the coming model year.

Human Capital Resources

As of December 31, 2020, we had approximately 19,200 employees, of whom approximately 8% were located in the U.S. As of December 31, 2020, less than 100 of our employees were covered by collective bargaining agreements. In addition, in various countries, local law requires our participation in works councils. As of December 31, 2020, approximately 56% of our employees were female. We also engage contract workers in multiple locations, primarily to cost-effectively manage variations in manufacturing volume, but also to perform engineering and other general services. As of December 31, 2020, we had approximately 2,600 contract workers on a worldwide basis. We believe that our relations with our employees are good.

Our employees, whom we refer to as Team Sensata, are responsible for upholding our purpose – to help our customers and partners safely deliver a cleaner, more efficient, electrified, and connected world – and embody our values in all aspects of daily work. Our corporate values are the essence of our identity, provide a level-set foundation, and are a key way we are able to improve our culture. Our values are passion, excellence, integrity, flexibility and "OneSensata."

Diversity, Equity, and Inclusion

We believe in treating all people with respect and dignity. We strive to create and foster a supportive and understanding environment in which all individuals realize their maximum potential within the Company, regardless of their differences. Each employee has the personal responsibility to maintain a respectful and inclusive workplace.

We believe that each person brings unique and valuable skills and perspectives due to their varying backgrounds and experiences. An inclusive culture is fundamental to innovation and problem-solving. It is the policy and practice of Sensata to hire and employ individuals without regard to age, color, disability, ethnicity, family or marital status, gender identity or expression, language, national origin, political affiliation, race, religion, sexual orientation, socio-economic status, and veteran status or other characteristics that make our employees unique. This policy applies to all terms and conditions of employment including recruitment and selection; compensation and benefits; professional development and training; promotions; transfers; social and recreational programs; reductions in force; terminations, and the ongoing development of a work environment built on the premise of gender and diversity, equity, and inclusion.

Our employee resource groups (“ERGs”) are company-sponsored groups of employees that support the inclusion, diversity and equity goals and objectives that are determined by the Company. Sensata ERGs exist to benefit and advance their group members by working strategically, both internally and externally. They also help contribute to Sensata's market success. As of December 31, 2020, we had 11 ERGs globally focused on the following areas — women’s empowerment and career growth; cultural awareness; Black and Hispanic Heritage; and emerging professionals.

Learning and Development

We believe that we will continue to be successful in executing on our business strategy by providing a broad range of learning and development programs and opportunities. In 2017, we launched our online global learning management system, Sensata Learning, that enables employees to access instructor-led classroom, virtual classes, or self-paced lessons. As of December 31, 2020, we delivered 63,000 hours of training spanning various required learning, professional development and many courses specifically on diversity, inclusion, and ethics. We have a robust talent and succession planning process and have established specialized programs to support the development of our talent pipeline for critical roles in management, engineering, and operations. On an annual basis, we conduct a leadership review process with our chief executive officer, our chief human resources officer and our business and functional leaders.

Social and Human Rights Matters

We have policies related to our position on various social and human rights matters, including child labor, forced labor, human trafficking, health and safety, non-discrimination, and environmental matters. Each of these policies can be found on our website at www.sensata.com. Sensata’s human rights expectations apply to all of our personnel, business partners and other parties directly linked to our operations, products or services; as such, Sensata is committed to respecting the United Nations Guiding Principles for Business and Human Rights (2011) and its principles within our operations and supply chains.

Sensata is committed to responsible corporate practices in the area of human rights and working conditions and aligns with practices recommended by industry standards such as the Global Automotive Sustainability Practical Guidance and the RBA Code of Conduct, which incorporates the International Bill of Human Rights, namely the Universal Convention of Human Rights (1948), the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights and its two Optional Protocols (1966).

Sensata also adheres to the principles set forth in the fundamental International Labor Organization ("ILO") Conventions, namely the Forced Labor Convention (1930), the Minimum Age Convention (1973), the Worst Forms of Child Labor Convention (1999) and ILO Declaration on Fundamental Principles and Rights at Work (1998). The working conditions of our employees are, at minimum, in compliance with internationally recognized labor standards and the laws of the countries we operate in. When national law directly conflicts with international human rights standards or does not fully comply with them, Sensata will seek ways to respect internationally recognized human rights.

Employee Engagement

Our long-term success is dependent on hiring, retaining, training, rewarding, and engaging employees for the long-term. We strive to retain and engage employees by providing competitive pay and benefits packages and a challenging and rewarding work experience. We want our employees to feel connected to the business and company strategy, our purpose and what we are doing to add value to them, our customers, and our investors. Our ability to create an environment where ideas are shared freely is fundamental to ensuring our employees reach their true potential, which grants us the ability to innovate. Each person brings unique value no matter their gender, race, age, education or place of birth. We believe an inclusive culture is vital.

Ethics

We have adopted a Code of Business Conduct and Ethics governing the conduct of our personnel, including our principal executive officer, principal financial officer, principal accounting officer, and controller, and persons performing similar functions. In addition, we have adopted a Code of Ethics for Senior Financial Employees. Copies of the current Code of Business Conduct and Ethics and Code of Ethics for Senior Financial Employees are available on the investor relations page of our website at www.sensata.com under Corporate Governance. We have annual required training on Sensata Learning, our online global learning management system.

We believe our management team has the experience necessary to effectively execute our strategy and advance our product and technology leadership. Our chief executive officer and business leaders average approximately 25 years of industry experience. They are supported by an experienced and talented management team who is dedicated to maintaining and expanding our position as a global leader in the industry. For discussion of the risks relating to the attraction and retention of management and executive management employees, see Item 1A, "Risk Factors," included elsewhere in this Report.

Environmental and Governmental Regulations

Our operations and facilities are subject to numerous environmental, health, and safety laws and regulations, both domestic and foreign, including those governing air emissions, chemical usage, water discharges, the management and disposal of hazardous substances and wastes, and the cleanup of contaminated sites. We are, however, not aware of any threatened or pending material environmental investigations, lawsuits, or claims involving us or our operations.

Many of our products are governed by material content restrictions and reporting requirements, examples of which include: EU regulations, such as Registration, Evaluation, Authorization, and Restriction of Chemicals ("REACH"), Restriction of Hazardous Substances ("RoHS"), and End of Life Vehicle ("ELV"); U.S. regulations, such as the conflict minerals requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act; and similar regulations in other countries. Further, numerous customers, across all end markets, are requiring us to provide declarations of compliance or, in some cases, extra material content documentation as a requirement of doing business with them.

We are subject to compliance with laws and regulations controlling the import and export of goods and services. Certain of our products are subject to International Traffic in Arms Regulation ("ITAR"). The export of many such ITAR-controlled products requires an individual validated license from the U.S. State Department's Directorate of Defense Trade Controls. The State Department makes licensing decisions based on type of product, destination of end use, end user, national security, and foreign policy. We have a trade compliance team and other systems in place to apply for licenses and otherwise comply with import and export regulations. Any failure to maintain compliance with domestic and foreign trade regulations could limit our ability to import or export raw material and finished goods across various jurisdictions. These laws and regulations are subject to change, and any such change may require us to change technology or incur expenditures to comply with such laws and regulations.

Compliance with environmental and governmental regulations and meeting customer requirements has increased our cost of doing business in a variety of ways and may continue to do so in the future. We do not currently expect any material capital expenditures during fiscal year 2021 for environmental control facilities. We also do not believe that existing or pending legislation, regulation, or international treaties or accords, whether related to environmental or other government regulations, are reasonably likely to have a material adverse effect in the foreseeable future on our business or the markets we serve, nor on our results of operations, capital expenditures, earnings, competitive position, or financial standing.

Available Information

We make available free of charge on our Internet website (www.sensata.com) our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission (the "SEC"). Our website and the information contained or incorporated therein are not intended to be incorporated into this Report.

The SEC maintains an Internet site that contains reports, proxy, and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. The contents on, or accessible through, this website or our website are not incorporated into this filing. Further, our references to the URLs for the SEC's website and our website are intended to be inactive textual references only.

ITEM 1A. RISK FACTORS

The following are important factors that could cause actual results or events to differ materially from those contained in any forward-looking statements made by us or on our behalf. Investors should carefully consider these risks and all other information in this Report before investing in our securities. The risks and uncertainties described below are not the only ones we face. Our business is also subject to general risks that affect many other companies. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business, operations, liquidity, and financial condition. Many of the risks listed below are, and will be, exacerbated by the COVID-19 pandemic and any worsening of the economic environment.

If actions taken by management to limit, monitor or control enterprise risk exposures are not successful, our business and consolidated financial statements could be materially adversely affected. In such case, the trading price of our common stock and debt securities could decline and investors may lose all or part of their investment.

Business and Operational Risks

We are subject to various risks related to public health crises, including the COVID-19 pandemic, which have had, and may in the future have, material and adverse impacts on our business, financial condition, liquidity and results of operations.

Any outbreaks of contagious diseases and other adverse public health developments in countries where we operate could have a material and adverse impact on our business, financial condition, liquidity and results of operations. For example, the COVID-19 pandemic has caused widespread disruptions to our business in fiscal year 2020. During the first quarter of 2020, these disruptions were primarily limited to our manufacturing operations in China, portions of which were closed during the end of January and first half of February due to government mandates. As the virus spread to the rest of the world beginning in March, all of our other operations outside of China also were impacted. These impacts have continued to varying degrees throughout fiscal year 2020, as regions have had varying levels of success mitigating the impacts of the virus, resulting in varying degrees of reopening. As of December 31, 2020, we were still experiencing disruptions, which include, depending on the specific location, partial shutdowns of our facilities as mandated by government decree, government actions limiting our ability to adjust certain costs, significant travel restrictions, "work-from-home" orders, limited availability of our workforce, supplier constraints, supply-chain interruptions, logistics challenges and limitations, and reduced demand from certain customers.

In addition, in these challenging and dynamic circumstances, we are working to protect our employees, maintain business continuity and sustain our operations, including ensuring the safety and protection of our people who work in our plants and distribution centers across the world, many of whom support the manufacturing and delivery of products deemed part of the critical infrastructure or essential businesses by the applicable local or country governments. The extent to which the COVID-19 pandemic will continue to impact our business and financial results going forward will be dependent on future developments such as the length and severity of the crisis, the potential resurgence of the crisis, future government actions in response to the crisis and the overall impact of the COVID-19 pandemic on the global economy and capital markets, among many other factors, all of which remain highly uncertain and unpredictable.

In addition, the COVID-19 pandemic increases the likelihood and potential severity of other risks discussed elsewhere in this Item 1A, "Risk Factors." These include, but are not limited to, the following:

- A protracted economic downturn could negatively affect the financial condition of the industries and customers we serve, which may result in an increase in bankruptcies or insolvencies, a delay in payments, and decreased sales.
- A scarcity of resources or other hardships caused by the COVID-19 pandemic may result in increased nationalism, protectionism and political tensions which may cause governments and/or other entities to take actions that may have a significant negative impact on the ability of us, our suppliers, and our customers to conduct business.
- The impact of the COVID-19 pandemic may cause us to further restructure our business or divest some of our businesses or product lines in the future, which may have a material adverse effect on our results of operations, financial condition, and cash flows.
- To mitigate the spread of COVID-19, we have transitioned a significant subset of our employee population to a remote work environment, which may exacerbate various cybersecurity risks to our business, including an increased demand for information technology ("IT") resources, an increased risk of phishing and other cybersecurity attacks, and an increased risk of unauthorized dissemination of sensitive personal information or proprietary or confidential information.
- The COVID-19 pandemic has disrupted the supply chain, and we may experience increased difficulties in obtaining a consistent supply of materials at stable pricing levels.
- If the financial performance of our businesses were to decline significantly as a result of the COVID-19 pandemic, we could incur a material non-cash charge to our income statement for the impairment of goodwill and other intangible assets.
- The continued global spread of COVID-19 has led to disruption and volatility in the global capital markets, which may increase the cost of, and adversely impact access to, capital.
- If the financial performance of our businesses were to decline significantly for an extended period of time as a result of the COVID-19 pandemic, we may face challenges to comply with the covenants contained in our credit arrangements.

Our business is subject to numerous global risks, including regulatory, political, economic, governmental, and military concerns and instability.

Our business, including our employees, customers, and suppliers, are located throughout the world. We employ approximately 92% of our workforce outside of the U.S. Our customers are located throughout the world, and we have many manufacturing, administrative, and sales facilities outside of the U.S. Our subsidiaries located outside of the U.S. generated approximately 64% of our net revenue in fiscal year 2020, with approximately 21% in China, and we expect sales from non-U.S. markets to continue to represent a significant portion of our total net revenue. International sales and operations are subject to changes in local government regulations and policies, including those related to tariffs and trade barriers, investments, taxation, exchange controls, and repatriation of earnings.

As a result, we are exposed to numerous global, regional, and local risks that could decrease revenue and/or increase expenses, and therefore decrease our profitability. Such risks may result from instability in economic or political conditions, inflation, recession, and/or actual or anticipated military or political conflicts, and include, without limitation: trade regulations, including customs, import, and export matters, tariffs, trade barriers, and disputes; local employment costs, regulations, and conditions; difficulties with, and costs for, protecting our intellectual property; challenges in collecting accounts receivable; tax laws and regulatory changes, including examinations by taxing authorities, variations in tax laws from country to country, changes to the terms of income tax treaties, and difficulties in the tax-efficient repatriation of earnings generated or held in a number of jurisdictions; natural disasters; instability in economic or political conditions, inflation, recession, actual or anticipated military or political conflicts, and potential impact due to the upcoming withdrawal of the United Kingdom (the "U.K.") from the EU ("Brexit"); and the impact of each of the foregoing on our business operations, manufacturing, and supply chain.

In addition, other risks are inherent in our non-U.S. operations, including the potential for changes in socio-economic conditions and/or monetary and fiscal policies, intellectual property protection difficulties and disputes, the settlement of legal disputes through certain foreign legal systems, the collection of receivables, exposure to possible expropriation or other government actions, unsettled political conditions, and possible terrorist attacks. These and other factors may have a material adverse effect on our non-U.S. operations and, therefore, on our business and results of operations.

Brexit was completed on January 31, 2020. On December 24, 2020, the EU and the U.K. reached an agreement on their future trading relationship, the Trade and Cooperation Agreement. We are incorporated in the U.K., and we have significant operations and a substantial workforce therein and therefore enjoy certain benefits based on the U.K.'s membership in the EU. The terms of the Trade and Cooperation Agreement, particularly those around financial laws and regulations, tax and free trade agreements, immigration laws, and employment laws, may impact our business and operations. Additionally, there is a risk that other countries may decide to leave the EU. Despite the progress made on reaching the Trade and Cooperation Agreement, there is still uncertainty surrounding Brexit, not only related to the potential affects of our business in the U.K. and the EU, but also on global economic conditions and the stability of global financial markets, which in turn could have a material adverse effect on our business, financial condition, and results of operations.

We have sizable operations in China, including two principal manufacturing sites. Economic and political conditions in China have been and may continue to be volatile and uncertain, especially as the U.S. and China continue to discuss and have differences in trade policies. As discussed in the MD&A, increased tariff costs have increased our cost of revenue as a percentage of net revenue in fiscal year 2020. In addition, the legal and regulatory system in China is still developing and is subject to change. Our operations and transactions with customers in China could continue to be adversely affected by increased tariffs and could be otherwise adversely affected by other changes to market conditions, changes to the regulatory environment, or interpretation of Chinese law.

Adverse conditions in the industries upon which we are dependent, including the automotive industry, have had, and may in the future have, adverse effects on our business.

We are dependent on market dynamics to sell our products, and our operating results could be adversely affected by cyclical and reduced demand in these markets. Periodic downturns in our customers' industries could significantly reduce demand for certain of our products, which could have a material adverse effect on our results of operations, financial condition, and cash flows.

Much of our business depends on, and is directly affected by, the global automobile industry. Sales in our automotive end markets accounted for approximately 58% of our total net revenue in fiscal year 2020. As discussed in the MD&A, demand in the automotive end market we serve has declined from the prior year. Continued declines in demand such as discussed above, and other adverse developments like those we have seen in past years in the automotive industry, including but not limited to customer bankruptcies and increased demands on us for lower prices, could have adverse effects on our results of operations and could impact our liquidity and our ability to meet restrictive debt covenants. In addition, these same conditions could adversely impact certain of our vendors' financial solvency, resulting in potential liabilities or additional costs to us to ensure uninterrupted supply to our customers.

We may incur material losses and costs as a result of product liability, warranty, and recall claims that may be brought against us.

We have been, and will continue to be, exposed to product liability and warranty claims in the event that our products actually or allegedly fail to perform as expected, or the use of our products results, or is alleged to result, in death, bodily injury, and/or property damage. Accordingly, we could experience material warranty or product liability losses in the future and incur significant costs to defend these claims. In addition, if any of our products are, or are alleged to be, defective, we may be required to participate in a recall of the underlying end product, particularly if the defect or the alleged defect relates to product safety. Depending on the terms under which we supply products, an OEM may hold us responsible for some or all of the repair or replacement costs of these products under warranty when the product supplied did not perform as represented. In addition, a product recall could generate substantial negative publicity about our business and interfere with our manufacturing plans and product delivery obligations as we seek to repair affected products. Our costs associated with product liability, warranty, and recall claims could be material.

We are dependent on market acceptance of our new product introductions and product innovations for future revenue and we may not realize all of the revenue or achieve anticipated gross margins from products subject to existing awards or for which we are currently engaged in development.

Substantially all markets in which we operate are impacted by technological change or change in consumer tastes and preferences, which are rapid in certain markets. Our operating results depend substantially upon our ability to continually design, develop, introduce, and sell new and innovative products; to modify existing products; and to customize products to meet customer requirements driven by such change. There are numerous risks inherent in these processes, including the risk that we will be unable to anticipate the direction of technological change; that we will be unable to develop and market profitable new products and applications before our competitors or in time to satisfy customer demands; the possibility that investment of significant time and resources will not be successful; the possibility that the marketplace does not accept our products or services; that we are unable to retain customers that adopt our new products or services; and the risk of additional liabilities associated with these efforts.

Our ability to generate revenue from products pending customer awards is subject to a number of important risks and uncertainties, many of which are beyond our control, including the number of products our customers will actually produce, as well as the timing of such production. Many of our customer agreements provide for the supply of a certain share of the customer's requirements for a particular application or platform, rather than for a specific quantity of products. In some cases, we have no remedy if a customer chooses to purchase less than we expect. In cases where customers do make minimum volume commitments to us, our remedy for their failure to meet those minimum volumes may be limited to increased pricing on those products that the customer does purchase from us or renegotiating other contract terms. There is no assurance that such price increases or new terms will offset a shortfall in expected revenue. In addition, some of our customers may have the right to discontinue a program or replace us with another supplier under certain circumstances. As a result, products for which we are currently incurring development expenses may not be manufactured by our customers at all, or may be manufactured in smaller amounts than currently anticipated. Therefore, our anticipated future revenue from products relating to existing customer awards or product development relationships may not result in firm orders from customers for the originally contracted amount. We also incur capital expenditures and other costs and price our products based on estimated production volumes. If actual production volumes were significantly lower than estimated, our anticipated revenue and gross margin from those new products would be adversely affected. We cannot predict the ultimate demand for our customers' products, nor can we predict the extent to which we would be able to pass through unanticipated per-unit cost increases to our customers.

Increasing costs for, or limitations on the supply of or access to, manufactured components and raw materials may adversely affect our business and results of operations.

We use a broad range of manufactured components, subassemblies, and raw materials in the manufacture of our products in both our Performance Sensing and Sensing Solutions segments, including those containing certain commodities, resins, and rare earth metals, which may experience significant volatility in their price and availability due to, among other things, new laws or regulations, including the impact of tariffs, trade barriers, and disputes, and global economic or political events including government actions, labor strikes, suppliers' allocations to other purchasers, interruptions in production by suppliers, changes in foreign currency exchange rates, and prevailing price levels. It is generally difficult to pass increased prices for manufactured components and raw materials through to our customers in the form of price increases. Therefore, a significant increase in the price or a decrease in the availability of these items could materially increase our operating costs and materially and adversely affect our business and results of operations. We have entered into hedge arrangements for certain metals used in our products in an attempt to minimize commodity pricing volatility and may continue to do so from time to time in the future. Such hedges might not be economically successful. In addition, these hedges do not qualify as accounting hedges in accordance with U.S. generally accepted accounting principles. Accordingly, the change in fair value of these hedges is recognized in earnings immediately, which could cause volatility in our results of operations from quarter to quarter.

The automotive industry supply chain is currently facing a global shortage of semiconductors, the technology used to make microchips, resulting in paused production on certain vehicles and increased costs to procure microchips. As discussed in the MD&A, we believe this shortage will have an adverse impact on our operating costs in fiscal year 2021. If the impacts of this shortage are more severe than we expect, it could result in further deterioration of our results, potentially for a longer period than currently anticipated.

In connection with the implementation of our corporate strategies, we face risks associated with the acquisition of businesses, the integration of acquired businesses, and the growth and development of these businesses.

In pursuing our corporate strategy, we often acquire other businesses. The success of this strategy is dependent upon our ability to identify appropriate acquisition targets, negotiate transactions on favorable terms, complete transactions, and successfully integrate them into our existing businesses. There can be no assurance that we will realize the anticipated synergies or cost savings related to acquisitions, including, but not limited to, revenue growth and operational efficiencies, or that they will be achieved in our estimated timeframe. We may not be able to successfully integrate and streamline overlapping functions from future acquisitions, and integration may be more costly to accomplish than we expect. In addition, we could encounter difficulties in managing our combined company due to its increased size and scope.

Subject to the terms of our indebtedness, we may finance future acquisitions with cash from operations, additional indebtedness, and/or by issuing additional equity securities. In addition, we could face financial risks associated with incurring additional indebtedness such as reducing our liquidity, limiting our access to financing markets, and increasing the amount of service on our debt. The availability of debt to finance future acquisitions may be restricted, and our ability to make future acquisitions may be limited. Refer to separate risk factor for additional information on risks related to our level of indebtedness.

In addition, many of the businesses that we acquire and develop will likely have significantly smaller scales of operations prior to the implementation of our growth strategy. If we are not able to manage the growing complexity of these businesses, including improving, refining, or revising our systems and operational practices, and enlarging the scale and scope of the businesses, our business may be adversely affected. Other risks include developing knowledge of and experience in the new business, integrating the acquired business into our systems and culture, recruiting professionals, and developing and capitalizing on new relationships with experienced market participants. External factors, such as compliance with new or revised regulations, competitive alternatives, and shifting market preferences may also impact the successful implementation of a new line of business. Failure to manage these risks in the acquisition or development of new businesses could materially and adversely affect our business, results of operations, and financial condition.

Restructuring our business or divesting some of our businesses or product lines in the future may have a material adverse effect on our results of operations, financial condition, and cash flows.

In pursuing our corporate strategy, we continue to evaluate the strategic fit of specific businesses and products and occasionally dispose of or exit businesses and products. The success of this strategy is dependent upon our ability to identify appropriate disposition targets, negotiate transactions on favorable terms, and complete transactions. Any divestitures may result in significant write-offs, including those related to goodwill and other intangible assets, which could have a material adverse effect on our results of operations and financial condition. Divestitures could involve additional risks, including difficulties in the separation of operations, services, products, and personnel; the diversion of management's attention from other business concerns; the disruption of our business; and the potential loss of key employees. There can be no assurance that we will be successful in addressing these or any other significant risks encountered.

We also may seek to restructure our business in the future by relocating operations, disposing of certain assets, or consolidating operations. There can be no assurance that any restructuring of our business will not adversely affect our financial condition, leverage, or results of operations. In addition, any significant restructuring of our business will require significant managerial attention, which may be diverted from our other operations.

Labor disruptions or increased labor costs have had, and may in the future have, adverse impacts on our business.

A material labor disruption or work stoppage at one or more of our manufacturing or business facilities could have a material adverse effect on our business. In addition, work stoppages occur relatively frequently in the industries in which many of our customers operate, such as the automotive industry. If one or more of our larger customers were to experience a material work stoppage for any reason, that customer may halt or limit the purchase of our products. This could cause us to reduce production levels or shut down production facilities relating to those products, which could have a material adverse effect on our business, results of operations, and/or financial condition.

We operate in markets that are highly competitive and competitive pressures could require us to lower our prices or result in reduced demand for our products.

We operate in markets that are highly competitive, and we compete on the basis of product performance in mission-critical operating environments, quality, service, reliability, manufacturing footprint, and commercial competitiveness across the industries and end markets we serve. A significant element of our competitive strategy is to design and manufacture high-quality products that meet the needs of our customers at a commercially competitive price, particularly in markets where low-cost, country-based suppliers, primarily in China with respect to the Sensing Solutions segment, have entered the markets or increased their per-unit sales in these markets by delivering products at low cost to local OEMs. In addition, certain of our competitors in the automotive sensor market are influenced or controlled by major OEMs or suppliers, thereby limiting our access to these customers. Many of our customers also rely on us as their sole source of supply for many of the products that we have historically sold to them. These customers may choose to develop relationships with additional suppliers or elect to produce some or all of these products internally, primarily to reduce risk of delivery interruptions or as a means of extracting more value from us. Certain of our customers currently have, or may develop in the future, the capability to internally produce the products that we sell to them and may compete with us with respect to those and other products and with respect to other customers.

Many of our customers, including automotive manufacturers and other industrial and commercial OEMs, demand annual price reductions. If we are not able to offset continued price reductions through improved operating efficiencies and reduced expenditures, these price reductions may have a material adverse effect on our results of operations and cash flows. In addition, our customers occasionally require engineering, design, or production changes. In some circumstances, we may be unable to cover the costs of these changes with price increases. Further, as our customers grow larger, they may increasingly require us to provide them with our products on an exclusive basis, which could limit sales, cause an increase in the number of products we must carry and, consequently, increase our inventory levels and working capital requirements. Certain of our customers, particularly in the automotive industry, are increasingly requiring their suppliers to agree to their standard purchasing terms without deviation as a condition to engage in future business transactions, many of which are increasing warranty requirements. As a result, we may find it difficult to enter into agreements with such customers on terms that are commercially reasonable to us.

Security breaches and other disruptions to our IT infrastructure could interfere with our operations, compromise confidential information, and expose us to liability, which could materially adversely impact our business and reputation.

In the ordinary course of business, we rely on IT networks and systems, some of which are managed by third parties, to process, transmit, and store electronic information, and to manage or support a variety of business processes and activities.

We are at risk of attack by a growing list of adversaries through increasingly sophisticated methods. Because the techniques used to obtain unauthorized access or sabotage systems change frequently, we may be unable to anticipate these techniques or implement adequate preventative measures. In addition, we may not be able to detect breaches in our IT systems or assess the severity or impact of a breach in a timely manner. We regularly experience attacks to our systems and networks and have from time to time experienced cybersecurity breaches, such as computer viruses and malware, unauthorized parties gaining access to our IT systems, and similar incidents, which to date have not had a material impact on our business. If we are unable to efficiently and effectively maintain and upgrade our system safeguards, we may incur unexpected costs and certain of our systems may become more vulnerable to unauthorized access. While we select our third party vendors carefully, problems with the IT systems of our vendors, including breakdowns or other disruptions in communication services provided by a vendor, failure of a vendor to handle current or higher volumes, cyber-attacks, and security breaches at a vendor could adversely affect our ability to deliver products and services to our customers and otherwise conduct our business. Additionally, we are an acquisitive organization and the process of integrating the information systems of the businesses we acquire is complex and exposes us to additional risk as we might not adequately identify weaknesses in the targets' information systems, which could expose us to unexpected liabilities or make our own systems more vulnerable to attack.

Despite our cybersecurity measures (including employee and third-party training, monitoring of networks and systems, maintenance of backup and protective systems, and maintenance of cybersecurity insurance), our IT networks and infrastructure may still be vulnerable to damage, disruptions, or shutdowns due to attacks by hackers, breaches, employee error or malfeasance, power outages, computer viruses, malware, and ransomware, telecommunication or utility failures, systems failures, natural disasters, or other catastrophic events. We also face the challenge of supporting our older systems and implementing necessary upgrades.

Moreover, as we continue to develop products containing complex IT systems designed to support today's increasingly connected vehicles, these systems also could be susceptible to similar interruptions, including the possibility of unauthorized access. Further, as we transition to offering more cloud-based solutions that are dependent on the Internet or other networks to operate with increased users, we may become a greater target for cyber threats, such as malware, denial of service, external adversaries or insider threats.

These types of incidents affecting us or our third-party vendors could result in intellectual property or other confidential information being lost or stolen, including client, employee, or company data. Any such events could result in legal claims or proceedings, liability or penalties under privacy laws, disruption in operations, and damage to our reputation, which could materially adversely affect our business. Further, to the extent that any disruption or security breach results in a loss of, or damage to, our data, or an inappropriate disclosure of confidential information, it could cause significant damage to our reputation, affect our relationships with our customers, lead to claims against us, and ultimately harm our business, financial condition, and/or results of operations.

Improper disclosure of confidential, personal, or proprietary data could result in regulatory scrutiny, legal liability, or harm to our reputation. Changes to data protection laws, new customer requirements and changes to international data transfer rules could impose new burdens. New developments in smart vehicles changes our risk profile as Sensata creates new classes of personal data with its products and insights.

One of our significant responsibilities is to maintain the security and privacy of our employees' and customers' confidential and proprietary information. We maintain policies, procedures, and technological safeguards designed to protect the security and privacy of this information and regularly review compliance changes in the states where Sensata operates. Nevertheless, we cannot eliminate the risk of human error, employee or vendor malfeasance, or cyber-attacks that could result in improper access to or disclosure or transfer of confidential, personal, or proprietary information by Sensata or our supply chain. Such access transfers could harm our reputation and subject us to liability under our contracts and the laws and regulations that protect personal data, resulting in increased costs, loss of revenue, and loss of customers. The release of confidential information could also lead to litigation or other proceedings against us by affected individuals, business partners, or by regulators, and the outcome of such proceedings, which could include penalties or fines, could have a significant negative impact on our business.

In many jurisdictions we are subject to laws and regulations relating to the use of this information. These are becoming increasingly complex and can conflict across the jurisdictions in which we operate. Our failure to adhere to processes in response to changing regulatory requirements could result in legal liability, significant regulator penalties and fines or impair our reputation in the marketplace.

The technological capabilities we are developing in our Smart & Connected initiative bring new risks to our company. Laws and regulations for smart vehicles are expected to continue to evolve in numerous jurisdictions globally, which could affect our product portfolio and operations. Further, managing and securing personal data that our products, as well as our partners' products, gather is a new and evolving risk for us. We must also prepare and adjust for rapid design philosophies associated with building these new solutions.

Our future success depends in part on our ability to attract and retain key senior management and qualified technical, sales, and other personnel

Our future success depends in part on our continued ability to retain key executives and our ability to attract and retain qualified technical, sales, and other personnel. Significant competition exists for such personnel and we cannot assure the retention of our key executives, technical and sales personnel or our ability to attract, integrate and retain other such personnel that may be required in the future. We cannot assure that employees will not leave and subsequently compete against us. If we are unable to attract and retain key personnel, our business, financial condition and results of operations could be adversely affected.

Financial Risks

We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows.

A portion of our net revenue, expenses, receivables, and payables are denominated in currencies other than the U.S. dollar (the "USD"). We, therefore, face exposure to adverse movements in exchange rates of currencies other than the USD, which may change over time and could affect our financial results and cash flows. For financial reporting purposes, we, and each of our subsidiaries, operate under a USD functional currency because of the significant influence of the USD on our operations. In certain instances, we enter into transactions that are denominated in a currency other than the USD. At the date that such transaction is recognized, each asset, liability, revenue, expense, gain, or loss arising from the transaction is measured and recorded in USD using the exchange rate in effect at that date. At each balance sheet date, recognized monetary balances denominated in a currency other than the USD are adjusted to USD using the exchange rate at the balance sheet date, with gains or losses recognized in other, net in the consolidated statements of operations. During times of a weakening USD, our revenue recognized in currencies other than the USD may increase because the non-U.S. currency will translate into more USD. Conversely, during times of a strengthening USD, our revenue recognized in currencies other than the USD may decrease because the local currency will translate into fewer USD.

Our level of indebtedness could adversely affect our financial condition and our ability to operate our business, including our ability to service our debt and/or comply with the related covenants.

The credit agreement governing our secured credit facility (as amended, the "Credit Agreement") provides for senior secured credit facilities (the "Senior Secured Credit Facilities") consisting of a term loan facility (the "Term Loan"), a $420.0 million revolving credit facility (the "Revolving Credit Facility"), and incremental availability (the "Accordion") under which additional secured credit facilities could be issued under certain circumstances. As of December 31, 2020, we had $4,036.6 million of gross outstanding indebtedness, including various tranches of senior notes (the “Senior Notes”). Refer to Note 14, "Debt," of our Financial Statements for additional information related to our outstanding indebtedness.

Our substantial indebtedness could have important consequences. For example, it could make it more difficult for us to satisfy our debt obligations; restrict us from making strategic acquisitions; limit our ability to repurchase shares; limit our flexibility in planning for, or reacting to, changes in our business and future business opportunities, thereby placing us at a competitive disadvantage if our competitors are not as highly-leveraged; increase our vulnerability to general adverse economic and market conditions; or require us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness if we do not maintain specified financial ratios or are not able to refinance our indebtedness as it comes due, thereby reducing the availability of our cash flows for other purposes.

In addition, the Accordion permits us to incur additional secured credit facilities in certain circumstances in the future, subject to certain limitations as defined in the indentures under which the Senior Notes were issued. This could allow us to issue additional secured debt or increase the capacity of the Revolving Credit Facility. If we increase our indebtedness by borrowing under the Revolving Credit Facility or incur other new indebtedness under the Accordion, the risks described above would increase.

We cannot guarantee that we will be able to obtain enough capital to service our debt and fund our planned capital expenditures and business plan. If we complete additional acquisitions, our debt service requirements could also increase. If we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity investments, or reducing or delaying capital expenditures, strategic acquisitions, investments, and alliances, any of which could have a material adverse effect on our operations. Additionally, we may not be able to effect such actions, if necessary, on commercially reasonable terms, or at all.

If we experience an event of default under any of our debt instruments that is not cured or waived, the holders of the defaulted debt could cause all amounts outstanding with respect to the debt to become due and payable immediately, which, in turn, would result in cross-defaults under our other debt instruments. Our assets and cash flows may not be sufficient to fully repay borrowings if accelerated upon an event of default.

If, when required, we are unable to repay, refinance, or restructure our indebtedness under, or amend the covenants contained in, the Credit Agreement, or if a default otherwise occurs, the lenders under the Senior Secured Credit Facilities could: elect to terminate their commitments thereunder; cease making further loans; declare all borrowings outstanding, together with accrued interest and other fees, to be immediately due and payable; institute foreclosure proceedings against those assets that secure the borrowings under the Senior Secured Credit Facilities; and prevent us from making payments on the Senior Notes. Any such actions could force us into bankruptcy or liquidation, and we might not be able to repay our obligations in such an event.

Changes in government trade policies, including the imposition of tariffs, may have a material impact on our results of operations.

We evaluate all trade policies that impact us, and adjust our operational strategies to mitigate the impact of these policies. However, trade policies, including quotas, duties, tariffs, taxes or other similar restrictions upon the import or export of our products, are subject to change, and we cannot ensure that any mitigation strategies employed will remain available in the future or that we will be able to offset tariff-related costs or maintain competitive pricing of our products. The adoption and expansion of trade restrictions, the occurrence of a trade war, or other governmental action related to tariffs or trade agreements or policies has the potential to adversely impact demand for our products, our costs, our customers, our suppliers, and the global economy, which in turn could have a material adverse effect on our business, operating results and financial condition.

Existing free trade laws and regulations, such as the United States-Mexico-Canada Agreement, provide certain beneficial duties and tariffs for qualifying imports and exports, subject to compliance with the applicable classification and other requirements. Changes in laws or policies governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where we manufacture products, such as China and Mexico, could have a material adverse effect on our business and financial results. As discussed in the MD&A, increased tariff costs have increased our cost of revenue as a percentage of net revenue in fiscal year 2020. In addition, most of our facilities in Mexico operate under the Mexican Maquiladora program. This program provides for reduced tariffs and eased import regulations; we could be adversely affected by changes in such program, or by our failure to comply with its requirements.

Further tariffs may be imposed on other imports of our products or our business may be further impacted by retaliatory trade measures taken by China or other countries in response to existing or future U.S. tariffs. We may raise our prices on products subject to such tariffs to share the cost with our customers, which could harm our operating performance or cause our customers to seek alternative suppliers. In addition, we may seek to shift some of our China manufacturing to other countries, which could result in additional costs and disruption to our operations. We also sell our products globally and, therefore, our export sales could be impacted by the tariffs. Any material reduction in sales may have a material adverse effect on our results of operations.

We have recorded a significant amount of goodwill and other identifiable intangible assets, and we may be required to recognize goodwill or intangible asset impairments, which would reduce our earnings.

We have recorded a significant amount of goodwill and other identifiable intangible assets. Goodwill and other intangible assets, net totaled approximately $3.8 billion as of December 31, 2020, or 48% of our total assets. Goodwill, which represents the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized, was approximately $3.1 billion as of December 31, 2020, or 40% of our total assets. Goodwill and other identifiable intangible assets were recognized at fair value as of the corresponding acquisition date. Impairment of goodwill and other identifiable intangible assets may result from, among other things, deterioration in our performance, adverse market conditions, adverse changes in laws or regulations, significant unexpected or planned changes in the use of assets, and a variety of other factors. We consider a combination of quantitative and qualitative factors to determine whether a reporting unit is at risk of failing Step 1 of the goodwill impairment test, including: the timing of our most recent quantitative impairment tests and the relative amount by which a reporting unit's fair value exceeded its then carrying value, the inputs and assumptions underlying our valuation models and the sensitivity of our fair value measurements to those inputs and assumptions, the impact that adverse economic or market conditions may have on the degree of uncertainty inherent in our long-term operating forecasts, and changes in the carrying value of a reporting unit's net assets from the time of our most recent goodwill impairment test.

The amount of any quantified impairment must be expensed immediately as a charge that is included in operating income, which may impact our ability to raise capital. Should certain assumptions used in the development of the fair value of our reporting units change, we may be required to recognize goodwill or other intangible asset impairments. Refer to Note 11, "Goodwill and Other Intangible Assets, Net," of our Financial Statements for additional information related to our goodwill and other identifiable intangible assets. Refer to *Critical Accounting Policies and Estimates*, included in the MD&A for additional information related to the assumptions used in the development of the fair value of our reporting units.

Our global effective tax rate is subject to a variety of different factors that could create volatility in that tax rate, expose us to greater than anticipated tax liabilities, or cause us to adjust previously recognized tax assets and liabilities.

We are subject to income taxes in the U.K., China, Mexico, the U.S., and many other jurisdictions. As a result, our global effective tax rate from period to period can be affected by many factors, including changes in tax legislation, changes in tax rates and tax laws, our jurisdictional mix of earnings, the use of global funding structures, the tax characteristics of our income, the effects on our revenues and costs of complying with transfer pricing requirements under differing laws of various countries, consequences of acquisitions and dispositions of businesses and business segments, the generation of sufficient future taxable income to realize our deferred tax assets, and the taxation of subsidiary income in the jurisdiction of its parent company regardless of whether or not distributed. Significant judgment is required in determining our worldwide provision for (or benefit from) income taxes, and our determination of the amount of our tax liability is always subject to review by applicable tax authorities. Refer to Note 7, "Income Taxes," of our Financial Statements for additional information related to our accounting for income taxes.

We cannot provide any assurances as to what our tax rate will be in any period because of, among other things, uncertainty regarding the nature and extent of our business activities in any particular jurisdiction in the future and the tax laws of such jurisdictions, as well as changes in U.S. and other tax laws, treaties, and regulations, in particular related to proposed tax laws by the U.S. government as a result of seating of a new administration, which could increase our tax liabilities. Our actual global tax rate may vary from our expectation and that variance may be material. We continuously monitor all global regulatory developments and consider alternatives to limit their detrimental impacts. However, not all unfavorable developments can be moderated and we may consequently experience adverse effects on our effective tax rate and cash flows. Therefore, we cannot provide any assurances as to what our tax rate will be in any future period.

For example, the European Commission (“EC”) has been conducting investigations of state aid and have focused on whether EU sovereign country laws or rulings provide favorable treatment to taxpayers conflicting with its interpretation of EU law. EC findings may have retroactive effect and can cause increases in tax liabilities where we considered ourselves in full compliance with local legislation. Furthermore, the Organization for Economic Co-operation and Development (“OECD”), representing a number of jurisdictions where we conduct business, is recommending changes to long-accepted tax principles applied by most multinational corporations. As currently drafted, OECD guidelines would precipitate incremental future tax liabilities to Sensata. However, the OECD guidelines’ timing and impact to us remains unclear. We continue to monitor developments and shall react accordingly.

We could be subject to future audits conducted by these foreign and domestic tax authorities, and the resolution of such audits could impact our tax rate in future periods, as would any reclassification or other changes (such as those in applicable accounting rules) that increases the amounts we have provided for income taxes in our consolidated financial statements. There can be no assurance that we would be successful in attempting to mitigate the adverse impacts resulting from any changes in law, audits and other matters. Our inability to mitigate the negative consequences of any changes in the law, audits and other matters could cause our global tax rate to increase, our use of cash to increase and our financial condition and results of operations to suffer.

We are a holding company and, therefore, may not be able to receive dividends or other payments in needed amounts from our subsidiaries.

We are organized as a holding company, a legal entity separate and distinct from our operating entities. As a holding company without significant operations of its own, our principal assets are the shares of capital stock of our subsidiaries. We rely on dividends, interest, and other payments from these subsidiaries to meet our obligations for paying principal and interest on outstanding debt, repurchasing ordinary shares, and corporate expenses. Certain of our subsidiaries are subject to regulatory requirements of the jurisdictions in which they operate or other restrictions that may limit the amounts that subsidiaries can pay in dividends or other payments to us. No assurance can be given that there will not be further changes in law, regulatory actions, or other circumstances that could restrict the ability of our subsidiaries to pay dividends or otherwise make payments to us. Furthermore, no assurance can be given that our subsidiaries may be able to make timely payments to us in order for us to meet our obligations.

Legal and Regulatory Risks

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act (the "FCPA"), the U.K.'s Bribery Act, and similar worldwide anti-bribery laws.

The U.S. FCPA, the U.K.'s Bribery Act, and similar worldwide anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws. We operate in many parts of the world that have experienced governmental corruption to some degree, and in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. Despite our training and compliance program, we cannot provide assurance that our internal control policies and procedures will protect us from reckless or criminal acts committed by our employees or agents. Violations of these laws, or allegations of such violations, could disrupt our business and result in a material adverse effect on our results of operations, financial condition, and/or cash flows.

Export of our products is subject to various export control regulations and may require a license from the U.S. Department of State, the U.S. Department of Commerce, or the U.S. Department of the Treasury. Any failure to comply with such regulations could result in governmental enforcement actions, fines, penalties, or other remedies, which could have a material adverse effect on our business, results of operations, and financial condition.

Certain of our products require us to comply with the U.S. Export Administration Regulations, ITAR, and the sanctions, regulations, and embargoes administered by the Office of Foreign Assets Control ("OFAC"). Our products that have military applications are on the munitions list of ITAR and require an individual validated license in order to be exported to certain jurisdictions. These restrictions also apply to technical data for design, development, production, use, repair, and maintenance of such ITAR-controlled products. The export of ITAR-controlled products or technical data requires an individual validated license from the U.S. State Department's Directorate of Defense Trade Controls.

We also export products that are subject to other export regulations. Any changes in these export regulations may further restrict the export of our products, and we may cease to be able to procure export licenses for our products under existing regulations. This area remains fluid in terms of regulatory developments. Should we need an export license under existing regulations, the length of time required by the licensing process can vary, potentially delaying the shipment of products and the recognition of the corresponding revenue. We have no control over the time it takes to process an export license. Any restriction on the export of a significant product line or a significant amount of our products could cause a significant reduction in revenue.

We have discovered in the past, and may discover in the future, deficiencies in our OFAC and ITAR compliance programs. Although we continue to enhance these compliance programs, we cannot assure you that any such enhancements will ensure that we are in compliance with applicable laws and regulations at all times, or that applicable authorities will not raise compliance concerns or perform audits to confirm our compliance with applicable laws and regulations. Any failure by us to comply with applicable laws and regulations could result in governmental enforcement actions, fines or penalties, criminal and/or civil proceedings, or other remedies, any of which could have a material adverse effect on our business, results of operations, and/or financial condition.

Changes in existing environmental or safety laws, regulations, and programs could reduce demand for our products, which could cause our revenue to decline.

A significant amount of our business is generated either directly or indirectly as a result of existing laws, regulations, and programs related to environmental protection, fuel economy, energy efficiency, and safety regulation. Accordingly, a relaxation or repeal of these laws and regulations, or changes in governmental policies regarding the funding, implementation, or enforcement of these programs, could result in a decline in demand for environmental and/or safety products, which may have a material adverse effect on our revenue.

Our operations expose us to the risk of material environmental liabilities, litigation, government enforcement actions, and reputational risk.

We are subject to numerous federal, state, and local environmental protection and health and safety laws and regulations in the various countries where we operate and where our products are sold. These laws and regulations govern, among other things, the generation, storage, use, and transportation of hazardous materials; emissions or discharges of substances into the environment; investigation and remediation of hazardous substances or materials at various sites; greenhouse gas emissions; product hazardous material content; and the health and safety of our employees.

We may not have been, or we may not always be, in compliance with all environmental and health and safety laws and regulations. If we violate these laws, we could be fined, criminally charged, or otherwise sanctioned by regulators. In addition, environmental and health and safety laws are becoming more stringent, resulting in increased costs and compliance burdens.

Certain environmental laws assess liability on current or previous owners or operators of real property for the costs of investigation, removal, and remediation of hazardous substances or materials at their properties or properties at which they have disposed of hazardous substances. Liability for investigation, removal, and remediation costs under certain federal and state laws is retroactive, strict, and joint and several. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances.

We cannot provide assurance that our costs of complying with current or future environmental protection and health and safety laws, or our liabilities arising from past or future releases of, or exposures to, hazardous substances will not exceed our estimates or adversely affect our results of operations, financial condition, and cash flows, or that we will not be subject to additional environmental claims for personal injury, property damage, and/or cleanup in the future based on our past, present, or future business activities.

In addition, our products are subject to various requirements related to chemical usage, hazardous material content, and recycling. The EU, China, and other jurisdictions in which our products are sold have enacted or are proposing to enact laws addressing environmental and other impacts from product disposal, use of hazardous materials in products, use of chemicals in manufacturing, recycling of products at the end of their useful life, and other related matters. These laws include but are not limited to the EU RoHS, ELV, and Waste Electrical and Electronic Equipment Directives; the EU REACH regulation; and the China law on Management Methods for Controlling Pollution by Electronic Information Products. These laws prohibit the use of certain substances in the manufacture of our products and directly and indirectly impose a variety of requirements for modification of manufacturing processes, registration, chemical testing, labeling, and other matters. These laws continue to proliferate and expand in these and other jurisdictions to address other materials and aspects of our product manufacturing and sale. These laws could make the manufacture or sale of our products more expensive or impossible, could limit our ability to sell our products in certain jurisdictions, and could result in liability for product recalls, penalties, or other claims.

Our ability to compete effectively depends, in part, on our ability to maintain the proprietary nature of our products and technology.

The electronics industry is characterized by litigation regarding patent and other intellectual property rights. Within this industry, companies have become more aggressive in asserting and defending patent claims against competitors. There can be no assurance that we will not be subject to future litigation alleging infringement or invalidity of certain of our intellectual property rights, or that we will not have to pursue litigation to protect our property rights. Depending on the importance of the technology, product, patent, trademark, or trade secret in question, an unfavorable outcome regarding one of these matters may have a material adverse effect on our results of operations, financial condition, and/or cash flows.

We may be subject to claims that our products or processes infringe on the intellectual property rights of others, which may cause us to pay unexpected litigation costs or damages, modify our products or processes, or prevent us from selling our products.

Third parties may claim that our processes and products infringe their intellectual property rights. Whether or not these claims have merit, we may be subject to costly and time consuming legal proceedings, and this could divert management’s attention from operating our business. If these claims are successfully asserted against us, we could be required to pay substantial damages, make future royalty payments, and/or could be prevented from selling some or all of our products. We also may be obligated to indemnify our business partners or customers in any such litigation. Furthermore, we may need to obtain licenses from these third parties or substantially re-engineer or rename our products in order to avoid infringement. In addition, we might not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer or rename our products successfully. If we are prevented from selling some or all of our products, our sales could be materially adversely affected.

We are a defendant to a variety of litigation in the course of our business that could cause a material adverse effect on our results of operations, financial condition, and/or cash flows.

In the normal course of business, we are, from time to time, a defendant in litigation, including litigation alleging the infringement of intellectual property rights, anti-competitive behavior, product liability, breach of contract, and employment-related claims. In certain circumstances, patent infringement and antitrust laws permit successful plaintiffs to recover treble damages. The defense of these lawsuits may divert our management's attention, and we may incur significant expenses in defending these lawsuits. In addition, we may be required to pay damage awards or settlements, or become subject to injunctions or other equitable remedies, that could cause a material adverse effect on our results of operations, financial condition, and/or cash flows.

U.K. Domicile Risks

As a public limited company incorporated under the laws of England and Wales, we may have less flexibility with respect to certain aspects of capital management.

English law imposes additional restrictions on certain corporate actions. For example, English law provides that a board of directors may only allot, or issue, securities with the prior authorization of shareholders, such authorization being up to the aggregate nominal amount of shares and for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. English law also generally provides shareholders with preemptive rights when new shares are issued for cash; however, it is possible for the articles of association, or shareholders at a general meeting, to exclude preemptive rights. Such an exclusion of preemptive rights may be for a maximum period of up to five years as specified in the articles of association or relevant shareholder resolution. We currently only have authorization to issue shares under our equity plan excluding preemptive rights until our next annual general meeting. This authorization and exclusion needs to be renewed by our shareholders periodically and we intend to renew the authorization and exclusion at each annual general meeting.

English law also requires us to have available "distributable reserves" to make share repurchases or pay dividends to shareholders. Distributable reserves may be created through the earnings of the U.K. parent company or other actions. While we intend to maintain a sufficient level of distributable reserves, there is no assurance that we will continue to generate sufficient earnings in order to maintain the necessary level of distributable reserves to make share repurchases or pay dividends.

English law also generally prohibits a company from repurchasing its own shares by way of "off-market purchases" without the prior approval of our shareholders. Such approval lasts for a maximum period of up to five years. Our shares are traded on the New York Stock Exchange, which is not a recognized investment exchange in the U.K. Consequently, any repurchase of our shares is currently considered an "off-market purchase." Our current authorization expires on May 28, 2025, and we intend to renew this authorization periodically.

As a public limited company incorporated under the laws of England and Wales, the enforcement of civil liabilities against us may be more difficult.

Because we are a public limited company incorporated under the laws of England and Wales, investors could experience more difficulty enforcing judgments obtained against us in U.S. courts than would have been the case for a U.S. company. In addition, it may be more difficult (or impossible) to bring some types of claims against us in courts in England than it would be to bring similar claims against a U.S. company in a U.S. court.

As a public limited company incorporated under the laws of England and Wales, it may not be possible to effect service of process upon us within the U.S. to enforce judgments of U.S. courts against us based on the civil liability provisions of the U.S. federal securities laws.

There is doubt as to the enforceability in England and Wales, in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities solely based on the U.S. federal securities laws. The English courts will, however, treat any amount payable by us under U.S. judgment as a debt and new proceedings can be commenced in the English courts to enforce this debt against us. The following criteria must be satisfied for the English court to enforce the debt created by the U.S. judgment: (1) the U.S. court having had jurisdiction over the original proceedings according to English conflicts of laws principles and rules of English private international law at the time when proceedings were initiated; (2) the U.S. proceedings not having been brought in breach of a jurisdiction or arbitration clause except with the agreement of the defendant or the defendant’s subsequent submission to the jurisdiction of the court; (3) the U.S. judgment being final and conclusive on the merits in the sense of being final and unalterable in the court which pronounced it and being for a definite sum of money; (4) the recognition or enforcement, as the case may be, of the U.S. judgment not contravening English public policy in a sufficiently significant way or contravening the Human Rights Act 1998 (or any subordinate legislation made thereunder, to the extent applicable); (5) the U.S. judgment not being for a sum payable in respect of taxes, or other charges of a like nature, or in respect of a penalty or fine, or otherwise based on a U.S. law that an English court considers to be a penal or revenue law; (6) the U.S. judgment not having been arrived at by doubling, trebling or otherwise multiplying a sum assessed as compensation for the loss or damages sustained, and not otherwise being a judgment contrary to section 5 of the Protection of Trading Interests Act 1980 or is a judgment based on measures designated by the Secretary of State under Section 1 of that Act; (7) the U.S. judgment not having been obtained by fraud or in breach of English principles of natural justice; (8) the U.S. judgment not being a judgment on a matter previously determined by an English court, or another court whose judgment is entitled to recognition (or enforcement as the case may be) in England, in proceedings involving the same parties that conflicts with an earlier judgment of such court; (9) the party seeking enforcement (being a party who is not ordinarily resident in some part of the U.K. or resident in an EU Member State) providing security for costs, if ordered to do so by the English courts; and (10) the English enforcement proceedings being commenced within the relevant limitation period.

If an English court gives judgment for the sum payable under a U.S. judgment, the English judgment will be enforceable by methods generally available for this purpose. These methods generally permit the English court discretion to prescribe the manner of enforcement. In addition, in any enforcement proceedings, the judgment debtor may raise any counterclaim that could have been brought if the action had been originally brought in England unless the subject of the counterclaim was in issue and denied in the U.S. proceedings.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2020, we occupied principal manufacturing facilities and business centers in the following locations:

		Reportable Segment		Approximate Square Footage (in thousands)	
Country	Location	Performance Sensing	Sensing Solutions	Owned	Leased
Bulgaria	Botevgrad	X		169	—
Bulgaria	Plovdiv	X		125	—
Bulgaria	Sofia	X		—	121
China	Baoying [1]	X	X	296	385
China	Changzhou	X	X	335	256
Malaysia	Subang Jaya	X		138	—
Mexico	Aguascalientes	X	X	489	—
Mexico	Tijuana	X	X	—	235
Netherlands	Hengelo	X	X	—	94
United Kingdom	Antrim	X		—	137
United Kingdom	Swindon [2]	X		—	34
United States	Attleboro, MA [3]	X	X	—	443
United States	Carpinteria, CA	X	X	—	50
United States	Thousand Oaks, CA	X	X	—	115
				1,552	1,870

(1) The owned portion of the properties in this location serves the Sensing Solutions segment only.

(2) Our U.K. headquarters is located in this facility.

(3) Our U.S. headquarters is located in this facility.

These facilities are primarily devoted to research, development, engineering, manufacturing, and assembly. In addition to these principal facilities, we occupy other manufacturing, engineering, warehousing, administrative, and sales facilities worldwide, which are primarily leased.

We consider our manufacturing facilities sufficient to meet our current operational requirements. An increase in demand for our products may require us to expand our production capacity, which could require us to identify and acquire or lease additional manufacturing facilities. We believe that suitable additional or substitute facilities will be available as required; however, if we are unable to acquire, integrate, and move into production the facilities, equipment, and personnel necessary to meet such an increase in demand, our customer relationships, results of operations, and/or financial condition may suffer materially. Leases covering our currently occupied principal leased facilities expire at varying dates within the next 16 years. We do not anticipate difficulty in retaining occupancy through lease renewals, month-to-month occupancy, or by replacing the leased facilities with equivalent facilities.

A significant portion of our owned properties and equipment is subject to a lien under the Senior Secured Credit Facilities. Refer to Note 14, "Debt," of our Financial Statements for additional information related to the Senior Secured Credit Facilities.

ITEM 3. LEGAL PROCEEDINGS

We are regularly involved in a number of claims and litigation matters that arise in the ordinary course of business. Although it is not feasible to predict the outcome of these matters, based upon our experience and current information known to us, we do not expect the outcome of these matters, either individually or in the aggregate, to have a material adverse effect on our results of operations, financial condition, or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

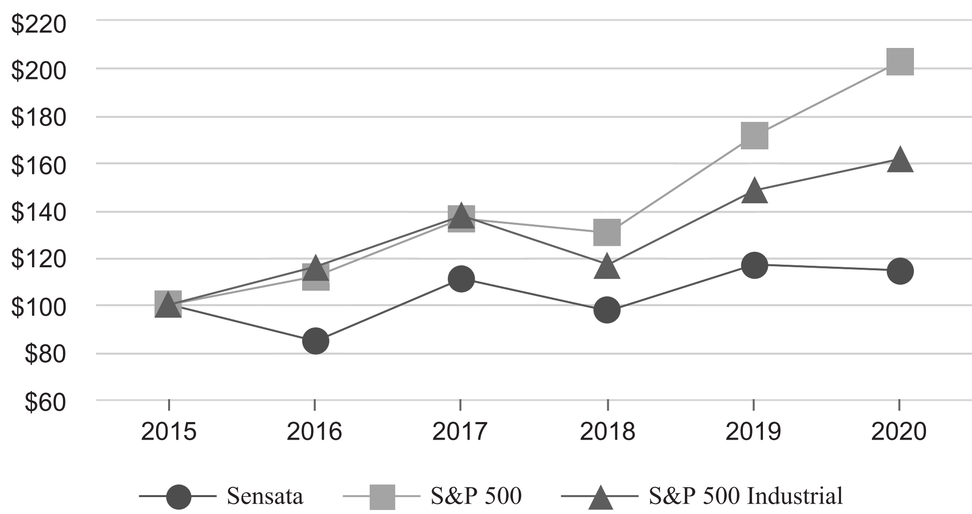
ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our ordinary shares trade on the New York Stock Exchange under the symbol "ST."

Performance Graph

The following graph compares the total shareholder return of our ordinary shares since December 31, 2015 to the total shareholder return since that date of the Standard & Poor's ("S&P") 500 Stock Index and the S&P 500 Industrial Index. The graph assumes that the value of the investment in our ordinary shares and each index was $100.00 on December 31, 2015.



Total Shareholder Return of $100.00 Investment from December 31, 2015

	As of December 31,					
	2015	2016	2017	2018	2019	2020
Sensata	$ 100.00	$ 84.56	$ 110.96	$ 97.35	$ 116.96	$ 114.50
S&P 500	$ 100.00	$ 111.96	$ 136.40	$ 130.42	$ 171.49	$ 203.04
S&P 500 Industrial	$ 100.00	$ 116.08	$ 137.60	$ 116.96	$ 148.34	$ 161.70

The information in the graph and table above is not "soliciting material," is not deemed "filed" with the United States (the "U.S.") Securities and Exchange Commission, and is not to be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K (this "Report"), except to the extent that we specifically incorporate such information by reference. The total shareholder return shown on the graph represents past performance and should not be considered an indication of future price performance.

Stockholders

As of January 29, 2021, there were three holders of record of our ordinary shares, primarily Cede & Co. (which acts as nominee shareholder for the Depository Trust Company).

Dividends

We have never declared or paid any dividends on our ordinary shares, and we currently do not plan to declare any such dividends in the foreseeable future. Because we are a holding company, our ability to pay cash dividends on our ordinary shares may be limited by restrictions on our ability to obtain sufficient funds through dividends from our subsidiaries, including restrictions under the terms of the agreements governing our indebtedness. In that regard, our indirect, wholly-owned subsidiary, Sensata Technologies B.V. ("STBV"), may be limited in its ability to pay dividends or otherwise make distributions to its immediate parent company and, ultimately, to us. Refer to Note 14, "Debt," of our audited consolidated financial statements and accompanying notes thereto (our "Financial Statements") included elsewhere in this Report for additional information related to our dividend restrictions.

Additionally, certain of our subsidiaries may be limited in their ability to pay dividends or make other distributions to the extent that the shareholders' equity of such subsidiary exceeds the reserves required to be maintained by law or under its articles of association. Under the laws of England and Wales, we are able to declare dividends, make distributions, or repurchase shares only out of distributable reserves on our statutory balance sheet. Distributable reserves are a company's accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made. Realized reserves are determined in accordance with generally accepted accounting principles at the time the relevant accounts are prepared. We are not permitted to make a distribution if, at the time, the amount of our net assets is less than the aggregate of our issued and paid-up share capital and undistributable reserves or to the extent that the distribution will reduce our net assets below such amount. Subject to these limitations, the payment of cash dividends in the future, if any, will depend upon such factors as earnings levels, capital requirements, contractual restrictions, our overall financial condition, and any other factors deemed relevant by our shareholders and Board of Directors.

Under current United Kingdom ("U.K.") tax legislation, any future dividends paid by us will not be subject to withholding or deduction on account of U.K. tax, irrespective of the tax residence or the individual circumstances of the recipient shareholder. Shareholders should consult their tax advisors regarding their particular tax situation and the income tax consequences on any potential dividend income received from us.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased *(in shares)* [(1)]	Weighted-Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan or Programs *(in millions)*
October 1 through October 31, 2020	—	$ —	—	$ 302.3
November 1 through November 30, 2020	10,499	$ 43.71	—	$ 302.3
December 1 through December 31, 2020	2,301	$ 50.97	—	$ 302.3
Quarter total	12,800	$ 45.02	—	$ 302.3

(1) The number of ordinary shares presented were withheld upon the vesting of restricted securities to cover payment of employee withholding tax. These withholdings took place outside of a publicly announced repurchase plan.

ITEM 6. SELECTED FINANCIAL DATA

We have derived the selected consolidated statements of operations and other financial data for the years ended December 31, 2020, 2019, and 2018 and the selected consolidated balance sheet data as of December 31, 2020 and 2019 from our Financial Statements. We have derived the selected consolidated statements of operations and other financial data for the years ended December 31, 2017 and 2016 and the selected consolidated balance sheet data as of December 31, 2018, 2017, and 2016 from audited consolidated financial statements not included in this Report.

You should read the following information in conjunction with our Financial Statements and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included elsewhere in this Report (the "MD&A"). Our historical results are not necessarily indicative of the results to be expected in any future period.

	Sensata Technologies Holding plc (Consolidated) [(a)]				
	For the year ended December 31,				
(In thousands, except per share data)	2020	2019	2018	2017	2016
Statement of operations data: [(b)]					
Net revenue	$ 3,045,578	$ 3,450,631	$ 3,521,627	$ 3,306,733	$ 3,202,288
Operating costs and expenses:					
Cost of revenue	2,119,044	2,267,433	2,266,863	2,138,898	2,084,159
Research and development	131,429	148,425	147,279	130,127	126,656
Selling, general and administrative	294,725	281,442	305,558	301,896	293,506
Amortization of intangible assets	129,549	142,886	139,326	161,050	201,498
Restructuring and other charges, net [(c)]	33,094	53,560	(47,818)	18,975	4,113
Total operating costs and expenses	2,707,841	2,893,746	2,811,208	2,750,946	2,709,932
Operating income	337,737	556,885	710,419	555,787	492,356
Interest expense, net	(171,757)	(158,554)	(153,679)	(159,761)	(165,818)
Other, net[(d)]	(339)	(7,908)	(30,365)	6,415	(5,093)
Income before taxes	165,641	390,423	526,375	402,441	321,445
Provision for/(benefit from) income taxes [(e)]	1,355	107,709	(72,620)	(5,916)	59,011
Net income	$ 164,286	$ 282,714	$ 598,995	$ 408,357	$ 262,434
Basic net income per share	$ 1.04	$ 1.76	$ 3.55	$ 2.39	$ 1.54
Diluted net income per share	$ 1.04	$ 1.75	$ 3.53	$ 2.37	$ 1.53
Weighted-average ordinary shares outstanding—basic	157,373	160,946	168,570	171,165	170,709
Weighted-average ordinary shares outstanding—diluted	158,134	161,968	169,859	172,169	171,460
Other financial data: [(b)]					
Net cash provided by/(used in):					
Operating activities	$ 559,775	$ 619,562	$ 620,563	$ 557,646	$ 521,525
Investing activities	$ (182,092)	$ (208,777)	$ (237,606)	$ (140,722)	$ (174,778)
Financing activities	$ 710,178	$ (366,499)	$ (406,213)	$ (15,263)	$ (337,582)
Additions to property, plant and equipment and capitalized software	$ (106,719)	$ (161,259)	$ (159,787)	$ (144,584)	$ (130,217)

	As of December 31,				
(In thousands)	2020	2019	2018	2017	2016
Balance sheet data: [(b)]					
Cash and cash equivalents	$ 1,861,980	$ 774,119	$ 729,833	$ 753,089	$ 351,428
Working capital [(f)]	$ 1,484,815	$ 1,330,906	$ 1,277,211	$ 1,218,796	$ 758,189
Total assets	$ 7,844,202	$ 6,834,519	$ 6,797,687	$ 6,641,525	$ 6,240,976
Total debt, net including finance lease and other financing obligations	$ 3,998,883	$ 3,255,613	$ 3,264,941	$ 3,270,269	$ 3,273,594
Total shareholders' equity	$ 2,705,486	$ 2,573,755	$ 2,608,434	$ 2,345,626	$ 1,942,007

(a) On March 28, 2018, the cross-border merger of Sensata Technologies Holding N.V. ("Sensata N.V.") and Sensata Technologies Holding plc ("Sensata plc") was completed, with Sensata plc being the surviving entity (the "Merger"). On the date of the Merger, Sensata plc became the publicly-traded parent of the subsidiary companies that were previously controlled by Sensata N.V., with no changes made to the business being conducted by Sensata N.V. prior to the Merger. Due to the various legal aspects of the Merger, Sensata plc retains the historical data of Sensata N.V., and no recasting or adjustment is required as a result of the Merger.

(b) We acquired GIGAVAC, LLC ("GIGAVAC") in fiscal year 2018. Pro forma amounts are not shown. We sold the capital stock of Schrader Bridgeport International, Inc. and August France Holding Company SAS (collectively, the "Valves Business") in fiscal year 2018. Prior year amounts have not been recast.

(c) Restructuring and other charges, net for the years ended December 31, 2020, 2019, 2018, 2017, and 2016 consisted of the following (refer also to Note 5, "Restructuring and Other Charges, Net," of our Financial Statements):

	For the year ended December 31,				
(In thousands)	**2020**	**2019**	**2018**	**2017**	**2016**
Q2 2020 Global Restructure Program [(i)]	$ 24,458	$ —	$ —	$ —	$ —
Other restructuring charges					
Severance costs, net [(i)(ii)]	3,042	29,240	7,566	11,125	813
Facility and other exit costs [(iii)]	1,323	808	877	7,850	3,300
Gain on sale of Valves Business [(i)]	—	—	(64,423)	—	—
Other [(i)]	4,271	23,512	8,162	—	—
Restructuring and other charges, net	$ 33,094	$ 53,560	$ (47,818)	$ 18,975	$ 4,113

(i) Refer to Note 5, "Restructuring and Other Charges, Net," of our Financial Statements for additional information regarding amounts recognized in each of the years ended December 31, 2020, 2019, and 2018.

(ii) For the year ended December 31, 2017, included $8.4 million of charges related to the closure of our facility in Minden, Germany, a site we obtained in connection with the acquisition of certain subsidiaries of Custom Sensors & Technologies Ltd. ("CST") in fiscal year 2015.

(iii) For the year ended December 31, 2017, these amounts included $3.2 million of costs related to the closure of our facility in Minden, Germany and $3.1 million of costs associated with the consolidation of two other manufacturing sites in Europe. For the year ended December 31, 2016 these amounts primarily related to the relocation of manufacturing lines from our facility in the Dominican Republic to a manufacturing facility in Mexico.

(d) Other, net for the years ended December 31, 2020, 2019, 2018, 2017, and 2016 consisted of the following:

	For the year ended December 31,				
(In thousands)	**2020**	**2019**	**2018**	**2017**	**2016**
Gain/(loss) related to foreign currency exchange rates [(i)]	$ 4,071	$ (4,577)	$ (16,835)	$ 2,423	$ (12,471)
Gain/(loss) on commodity forward contracts	10,027	4,888	(8,481)	9,989	7,399
Loss on debt financing	—	(4,364)	(2,350)	(2,670)	—
Net periodic benefit cost, excluding service cost	(9,980)	(3,186)	(3,585)	(3,402)	(192)
Other	(4,457)	(669)	886	75	171
Other, net	$ (339)	$ (7,908)	$ (30,365)	$ 6,415	$ (5,093)

(i) Includes net losses and gains on foreign currency remeasurement and foreign currency forward contracts. Refer to Note 6, "Other, Net," of our Financial Statements for additional information.

(e) In the year ended December 31, 2020, we completed the transfer of intangible property which resulted in a $54.2 million deferred tax benefit. For the year ended December 31, 2018, this amount included an income tax benefit of $122.1 million related to the realization of U.S. deferred tax assets previously offset by a valuation allowance. Refer to Note 7, "Income Taxes," of our Financial Statements for additional information. For the year ended December 31, 2017, this amount included an income tax benefit of $73.7 million related to the enactment of U.S. tax legislation in the fourth quarter of 2017.

(f) We define working capital as current assets less current liabilities.

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

The following discussion and analysis is intended to help the reader understand our business, financial condition, results of operations, and liquidity and capital resources. You should read the following discussion in conjunction with Item 1, "Business," Item 6, "Selected Financial Data," and our Financial Statements included elsewhere in this Report.

The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity and capital resources, and other non-historical statements are forward-looking statements. These forward-looking statements are subject to numerous risks and uncertainties including, but not limited to, the risks and uncertainties described in Item 1A, "Risk Factors," included elsewhere in this Report. Our actual results may differ materially from those contained in or implied by any forward-looking statements.

Overview

Sensata Technologies Holding plc, the successor issuer to Sensata N.V. and its wholly-owned subsidiaries, collectively referred to as the "Company," "Sensata," "we," "our," and "us," is a global industrial technology company that develops, manufactures, and sells sensors, electrical protection products, and other products that are used in mission-critical systems and applications that create valuable business insights for our customers and end users.

Original equipment manufacturers ("OEMs") are producing products that are safer, cleaner, more efficient, more electrified, and increasingly more connected. Our sensors are used by our customers to translate a physical parameter, such as pressure, temperature, position, or location of an object, into electronic signals that our customers' products and solutions can act upon. Our electrical protection product portfolio is comprised of various sensors, controllers, receivers, and software, and include high-voltage contactors and other products embedded within systems to maximize their efficiency and protect them from excessive heat or current.

Our business strategy involves leveraging certain new and emerging technology trends, which complement our existing product offerings, to deliver products used in mission-critical systems and applications that create valuable business insights for our customers and end users. Each of these trends, which we refer to as "megatrends," is expected to significantly transform the industries in which we operate. These megatrends are also creating greater secular demand for our products, resulting in growth that exceeds end-market production growth in many of the markets we serve, a defining characteristic of our company. We refer to this as "market outgrowth," which describes the impact of an increasing quantity and value of our products used in customer systems and applications, and is only loosely correlated to normal unit demand fluctuations in the markets we serve. Refer to Item 1, "Business," included elsewhere in this Report for additional information related to our business strategy and megatrends.

Our customers are facing ever increasing mandates, due to regulation and consumer demand, to make their products cleaner, more efficient, and safer, while providing more comfort-related features. Our sensors are being used in mission-critical systems and applications that are addressing these demands, including those that help: industrial customers to make more efficient pumps and boilers; automotive customers to meet the standards of emissions and pollution control legislation; and fleet managers to proactively monitor the health of their vehicles, conduct proactive maintenance, optimize fleet operations, and enhance driver safety. We believe regulatory requirements for safer vehicles, higher fuel efficiency, and lower emissions, such as the National Highway Traffic Safety Administration's Corporate Average Fuel Economy requirements in the U.S., "Euro 6d" requirements in Europe, "China National 6" requirements in China, and "Bharat Stage VI" requirements in India, as well as customer demand for operator productivity and convenience, drive the need for advancements in powertrain management, efficiency, safety, and operator controls. These advancements lead to sensor growth rates that we expect to exceed underlying demand in many of our key end markets, which we expect will continue to offer us significant growth opportunities.

However, in our automotive business, we believe the medium- to long-term outlook for internal combustion engine powertrain products will evolve with the advent of more environmentally friendly vehicles that rely more heavily on Electrification and other adjacent technologies. Refer to the Megatrends section of Item 1, "Business," for additional information on our Electrification megatrend initiative. Accordingly, we are focusing on expanding our market share on electrified platforms, including both sensor and electrical protection products. Many of the components and subsystems that we have historically developed and produced will play a significant role in this expansion, but we will also seek strategic partnerships and acquisitions to accelerate the growth and transformation of our product portfolio. By entering into such relationships, we obtain access to new technologies and solutions, which we can leverage with our existing expertise to optimize and expand our product portfolio. Beyond Electrification, we also recognize the potential market impact of autonomous vehicles and advanced driver-assistance systems, and are developing sensors to facilitate development of this market by manufacturers of vehicles (light passenger, heavy on and off-road) and material handling equipment.

The technology-driven, highly-customized, and integrated nature of our products requires customers to invest heavily in certification and qualification to ensure proper functioning of the systems in which our products are embedded. We believe the capital commitment and time required for this process significantly increases the switching costs for our customers once a particular sensor has been designed and installed in a system. As a result, our sensors are rarely substituted during a product lifecycle, which in the case of the traditional automotive market historically lasts five to seven years. We focus on new applications that will help us secure new business, drive long-term growth, and provide an opportunity to define a leading application technology in collaboration with our customers.

Our strategies of leveraging core technology platforms and focusing on high-volume applications enable us to provide our customers with highly-customized products at a relatively low cost, as compared to the costs of the systems in which our products are embedded. We have achieved our current cost position through a continuous process of migration and transformation to best-cost manufacturing locations, global best-cost sourcing, product design improvements, and ongoing productivity-enhancing initiatives.

COVID-19

The coronavirus ("COVID-19") pandemic has caused widespread disruptions to our Company, employees, customers, suppliers, and communities since the first quarter of 2020. We recognized the global impact of the COVID-19 pandemic early, and took a wide range of actions across our organization, designed to benefit the health and safety of employees, while also enabling us to respond to customer needs and enhance our financial flexibility during the pandemic. We are continuing to work with local, state, and federal governmental health agencies in many countries, implementing measures to help protect employees and minimize the spread of COVID-19 in our communities.

In the third and fourth quarters of 2020, the global economy continued to rebound following a period of commercial lockdowns and quarantines instituted by governments around the world in response to the spread of COVID-19 earlier in the year. Our response to that rebound has enabled our revenue to grow sequentially in the second half of fiscal year 2020, as we continue to deliver strong market outgrowth. For fiscal year 2020, we delivered 880 basis points of market outgrowth in our heavy vehicle and off-road ("HVOR") business and 690 basis points of market outgrowth in our automotive business. We continue to monitor all of our end markets and customers to ensure that our resources are balanced against forecasts and prioritized against critical growth opportunities.

Due in part to large-scale shutdowns early in 2020 caused by the COVID-19 pandemic, the automotive industry supply chain is currently facing a global shortage of semiconductors, the technology used to make microchips, resulting in paused production on certain vehicles and increased costs to procure microchips. We believe this shortage will have an adverse impact on our operating costs in fiscal year 2021. If the impacts of this shortage are more severe than we expect, it could result in further deterioration of our results, potentially for a longer period than currently anticipated.

New Business Wins

During fiscal year 2020, we closed $465 million in new business wins ("NBOs"), including $180 million in Electrification wins, higher than our average over the past five years. We define NBOs as incremental revenue to our current base of business that is expected to be recognized on average in the fifth year after entry into the agreement, when the program typically reaches its normal volume. We have demonstrated progress against our megatrend initiatives, such as Electrification, and intend to continue these efforts to expand our markets and provide strong growth and differentiation for the future. We continue to believe investments in these megatrends, including technology collaborations and partnerships with third parties to expand our technological capabilities, will further our end market diversification, increase our long-term growth rate and provide important competitive advantages as these trends transform our world. In addition, we believe that the overall market environment may provide meaningful opportunities to further strengthen our portfolio through strategically important, value-creating acquisitions.

Financial Flexibility

We have taken multiple steps to enhance our financial flexibility. In the second quarter, we implemented various cost reduction activities, including temporary salary reductions and furloughs, resulting in savings in the second quarter of approximately $21.8 million, including the impact of government subsidies. These salary reductions and furloughs did not continue in the third or fourth quarters. However, we have continued working to align our long-term operating costs with future expected demand levels, maintaining lower levels of discretionary spending and keeping production in certain facilities at a level necessary to be in line with end market demand. In addition, we reduced our capital expenditures for the year and are carefully managing our working capital. Also in the second quarter, we initiated the Q2 2020 Global Restructure Program, discussed in more detail below.

We believe that we are in a strong financial position today, having generated $559.8 million of operating cash flow in fiscal year 2020. Additionally, in the third quarter of 2020, we took advantage of historically low interest rates in issuing $750.0 million aggregate principal amount of 3.75% senior notes due 2031 (the "3.75% Senior Notes") under an indenture dated as of August 17, 2020. In addition, on February 3, 2021, we announced that we intended to redeem in full the outstanding balance on our $750.0 million aggregate principal amount of 6.25% senior notes due 2026 (the "6.25% Senior Notes") in March 2021. Refer to Note 14, "Debt," of our Financial Statements for additional information on this planned redemption. In taking these actions, we are extending the maturity of our debt profile and lowering our cost of capital.

Q2 2020 Global Restructure Program

On June 30, 2020, in response to the potential long-term impact of the global financial and health crisis caused by the COVID-19 pandemic on our business, we committed to a plan to reorganize our business (the "Q2 2020 Global Restructure Program"), which consists of voluntary and involuntary reductions-in-force and certain site closures in order to align our cost structure to the demand levels that we anticipated in the coming quarters. This program is expected to impact approximately 880 positions. We have taken a large portion of the actions contemplated under the Q2 2020 Global Restructure Program, with the majority expected to be completed on or before June 30, 2021.

Over the life of the Q2 2020 Global Restructure Program, we expect to incur restructuring charges of between $31.0 million and $33.7 million related to reductions-in-force and between $8.0 million and $10.0 million related to site closures. We expect to settle these charges with cash on hand.

In fiscal year 2020, we recognized $24.5 million of severance charges related to the Q2 2020 Global Restructure Program. As of December 31, 2020, our severance liability related to the Q2 2020 Global Restructure Program was $10.8 million. Refer to Note 5, "Restructuring and Other Charges, Net," of our Financial Statements, for additional information on the Q2 2020 Global Restructure Program.

We continue to realize savings related to the Q2 2020 Global Restructure Program and from ongoing cost reduction activities and spend controls. Such savings represented approximately $13 million in fiscal year 2020. We expect that the actions taken as a result of the Q2 2020 Global Restructure Program will result in annualized savings of personnel- and facilities-related costs of approximately $43 million by 2021.

Selected Segment Information

We operate in, and report financial information for, two reportable segments: Performance Sensing and Sensing Solutions.

Set forth below is selected information for each of these segments for the periods presented. Amounts and percentages in the tables below have been calculated based on unrounded numbers. Accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

The following table presents net revenue by segment for the identified periods:

	For the year ended December 31,					
	2020		2019		2018	
(Dollars in millions)	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
Net revenue:						
Performance Sensing	$ 2,223.8	73.0 %	$ 2,546.0	73.8 %	$ 2,627.7	74.6 %
Sensing Solutions	821.8	27.0	904.6	26.2	894.0	25.4
Total net revenue	$ 3,045.6	100.0 %	$ 3,450.6	100.0 %	$ 3,521.6	100.0 %

The following table presents segment operating income in U.S. dollars ("USD") and as a percentage of segment net revenue for the identified periods (prior period information has been recast to reflect revised presentation as discussed in Note 20, "Segment Reporting," of our Financial Statements):

	For the year ended December 31,					
	2020		2019		2018	
(Dollars in millions)	Amount	Percent of Segment Net Revenue	Amount	Percent of Segment Net Revenue	Amount	Percent of Segment Net Revenue
Segment operating income:						
Performance Sensing	$ 532.5	23.9 %	$ 670.5	26.3 %	$ 728.3	27.7 %
Sensing Solutions	241.2	29.4 %	294.0	32.5 %	295.0	33.0 %
Total segment operating income	$ 773.7		$ 964.4		$ 1,023.2	

For a reconciliation of total segment operating income to consolidated operating income, refer to Note 20, "Segment Reporting," of our Financial Statements.

Selected Geographic Information

We are a global business with significant operations around the world and a diverse revenue mix by geography, customer, and end market. The following table presents (as a percentage of total) property, plant and equipment, net ("PP&E"), and net revenue by geographic region for the identified periods:

	PP&E, net as of December 31,		Net revenue for the year ended December 31,		
	2020	2019	2020	2019	2018
Americas	33.1 %	34.8 %	39.3 %	42.3 %	42.0 %
Europe	24.4 %	23.2 %	26.8 %	28.1 %	29.2 %
Asia and rest of world	42.5 %	42.0 %	33.9 %	29.6 %	28.8 %

Refer to Note 20, "Segment Reporting," of our Financial Statements for additional information related to our PP&E, net by selected geographic area as of December 31, 2020 and 2019 and net revenue by selected geographic area for the years ended December 31, 2020, 2019, and 2018.

Net Revenue by End Market

Our net revenue for the years ended December 31, 2020, 2019, and 2018 was derived from the following end markets (amounts are calculated based on unrounded numbers, and may not appear to recalculate):

	For the year ended December 31,		
(Percentage of total)	2020	2019	2018
Automotive	57.5 %	58.8 %	60.4 %
HVOR	16.7 %	16.2 %	15.6 %
Industrial	11.0 %	10.2 %	9.6 %
Heating, ventilation and air conditioning ("HVAC")	6.2 %	5.8 %	5.9 %
Aerospace	4.5 %	5.1 %	4.7 %
Other	4.1 %	3.9 %	3.8 %

We are a significant supplier to multiple OEMs within many of these end markets, thereby reducing customer concentration risk.

Factors Affecting Our Operating Results

The following discussion describes components of the consolidated statements of operations as well as factors that impact those components. Refer to Note 2, "Significant Accounting Policies," of our Financial Statements, and *Critical Accounting Policies and Estimates* included elsewhere in this MD&A for additional information on the accounting policies and estimates made related to these components.

Net revenue

We generate revenue primarily from the sale of tangible products. Because we derive a significant portion of our revenue from sales into the automotive end market, conditions in the automotive industry can have a significant impact on the amount of revenue that we recognize. However, outside of the automotive industry, we sell our products to end-users in a wide range of industries, end markets, and geographic regions. As a result, the drivers of demand for these products vary considerably and are influenced by the conditions in these industries, end markets, or geographic regions.

Our overall net revenue is impacted by various factors, which we characterize as either "organic" or "inorganic." Organic factors are reflective of our ongoing operations. Inorganic factors are either not reflective of our historical business or related to situations for which we have little to no control (e.g. changes in foreign currency exchange rates).

Our net revenue may be impacted by the following organic factors:

- fluctuations in overall economic activity within the geographic regions in which we operate;
- underlying growth in one or more of our core end markets, either worldwide or in particular geographies in which we operate;
- the number of our products used within existing applications, or the development of new applications requiring these products, due to regulations or other factors;
- the "mix" of products sold, including the proportion of new or upgraded products and their pricing relative to existing products;
- changes in product sales prices (including quantity discounts, rebates, and cash discounts for prompt payment);
- changes in the level of competition faced by our products, including the launch of new products by competitors; and
- our ability to successfully develop, launch, and sell new products and applications.

Our net revenue may be impacted by the following inorganic factors:

- fluctuations in foreign currency exchange rates; and
- acquisitions and divestitures.

While the factors described above may impact net revenue in each of our reportable segments, the impact of these factors on our reportable segments can differ. For more information about revenue risks relating to our business, refer to Item 1A, "Risk Factors," included elsewhere in this Report.

Cost of revenue

We manufacture the majority of our products and subcontract only a limited number of products to third parties. As such, our cost of revenue consists principally of the following:

- *Production Materials Costs.* We purchase much of the materials used in production on a global best-cost basis, but we are still impacted by global and local market conditions, including fluctuations in foreign currency exchange rates. A portion of our production materials contains certain commodities, resins, and rare earth metals, and the cost of these materials may vary with underlying pricing. However, we enter into forward contracts to economically hedge a portion of our exposure to the potential change in prices associated with certain of these commodities. The terms of these contracts fix the price at a future date for various notional amounts associated with these commodities. Gains and losses recognized on these derivatives are recorded in other, net and are not included in cost of revenue. Refer to Note 6, "Other, Net," of our Financial Statements for additional information.
- *Employee Costs.* Employee costs include wages and benefits for employees involved in our manufacturing operations and certain engineering activities, including variable incentive compensation. A significant portion of these costs can fluctuate on an aggregate basis in direct correlation with changes in production volumes. As a percentage of net revenue, these costs may decline as a result of economies of scale associated with higher production volumes, and conversely, may increase with lower production volumes. These costs also fluctuate based on local market conditions. We rely on contract workers for direct labor in certain geographies. As of December 31, 2020, we had approximately 2,500 direct labor contract workers on a worldwide basis.
- *Sustaining Engineering Activity Costs.* These costs relate to modifications of existing products for use by new and existing customers in familiar applications.

- *Other.* Our remaining cost of revenue primarily consists of:
  - gains and losses on certain foreign currency forward contracts that are designated as cash flow hedges;
  - material yields;
  - costs to import raw materials, such as tariffs;
  - depreciation of fixed assets used in the manufacturing process;
  - freight costs;
  - warehousing expenses;
  - maintenance and repair expenses;
  - operating supplies; and
  - other general manufacturing expenses, such as expenses for energy consumption and operating lease expense.

Changes in cost of revenue as a percentage of net revenue have historically been impacted by a number of factors, including:

- changes in the price of raw materials, including the impact of changes in costs to import such raw materials, such as tariffs;
- price reductions provided to our customers;
- implementation of cost improvement measures aimed at increasing productivity, including reduction of fixed production costs, refinements in inventory management, design and process driven changes, and the coordination of procurement within each subsidiary and at the business level;
- product lifecycles, as we typically incur higher cost of revenue associated with new product development (related to excess manufacturing capacity and higher production costs during the initial stages of product launches) and during the phase-out of discontinued products;
- changes in production volumes – production costs are capitalized in inventory based on normal production volumes, as revenue increases, the fixed portion of these costs does not;
- transfer of production to our lower-cost manufacturing facilities;
- changes in depreciation expense, including those arising from the adjustment of PP&E to fair value associated with acquisitions;
- fluctuations in foreign currency exchange rates;
- changes in product mix;
- changes in logistics costs;
- acquisitions and divestitures – acquired and divested businesses may generate higher or lower cost of revenue as a percentage of net revenue than our core business; and
- the increase in the carrying value of inventory that is adjusted to fair value as a result of the application of purchase accounting associated with acquisitions.

Research and development expense

We develop products that address increasingly complex engineering and operating performance requirements to help our customers solve their most difficult challenges in the automotive, HVOR, industrial, and aerospace industries. We believe that continued focused investment in research and development ("R&D") is critical to our future growth and maintaining our leadership positions in the markets we serve. Our R&D efforts are directly related to timely development of new and enhanced products that are central to our business strategy. We continuously develop our technologies to meet an evolving set of customer requirements and new product introductions. We conduct such activities in areas that we believe will increase our long-term revenue growth. Our development expense is typically associated with engineering core technology platforms to specific applications and engineering major upgrades that improve the functionality or reduce the cost of existing products. In addition, we continually consider new technologies where we may have expertise for potential investment or acquisition.

An increasing portion of our R&D activities are being directed towards technologies and megatrends that we believe have the potential for significant future growth, but relate to products that are not currently within our core business or include new features and capabilities for existing products. Expenses related to these activities are less likely to result in increased near-term revenue than our more mainstream development activities.

R&D expense consists of costs related to product design, development, and process engineering. Costs related to modifications of existing products for use by new and existing customers in familiar applications are presented in cost of revenue and are not included in R&D expense. The level of R&D expense in any period is related to the number of products in development, the stage of the development process, the complexity of the underlying technology, the potential scale of the product upon successful commercialization, and the level of our exploratory research.

Selling, general and administrative expense

Selling, general and administrative ("SG&A") expense consists of all expenditures incurred in connection with the sale and marketing of our products, as well as administrative overhead costs, including:

- salary and benefit costs for sales and marketing personnel and administrative staff;
- share-based incentive compensation expense;
- charges related to the use and maintenance of administrative offices, including depreciation expense;
- other administrative costs, including expenses relating to information systems, human resources, and legal and accounting services;
- other selling and marketing related costs, such as expenses incurred in connection with travel and communications; and
- transaction costs associated with acquisitions.

Changes in SG&A expense as a percentage of net revenue have historically been impacted by a number of factors, including:

- changes in sales volume, as higher volumes enable us to spread the fixed portion of our selling, marketing, and administrative expense over higher revenue (e.g. expenses relating to our sales and marketing personnel can fluctuate due to prolonged trends in sales volume, while expenses relating to administrative personnel generally do not increase or decrease directly with changes in sales volume);
- price reductions provided to our customers;
- changes in the mix of products we sell, as some products may require more customer support and sales effort than others;
- new product launches in existing and new markets, as these launches typically involve a more intense sales and marketing activity before they are integrated into customer applications and systems;
- changes in our customer base, as new customers may require different levels of sales and marketing attention;
- fluctuations in foreign currency exchange rates; and
- acquisitions and divestitures - acquired and divested businesses may require different levels of SG&A expense as a percentage of net revenue than our core business.

Depreciation expense

Depreciation expense includes depreciation of PP&E, which includes assets held under finance lease, and amortization of leasehold improvements. Depreciation expense is included in either cost of revenue or SG&A expense depending on the use of the asset as a manufacturing or administrative asset. Depreciation expense will vary according to the age of existing PP&E and the level of capital expenditures.

Amortization expense

We have recognized a significant amount of definite-lived intangible assets. Acquisition-related definite-lived intangible assets are amortized on an economic-benefit basis according to the useful lives of the assets, or on a straight-line basis if a pattern of economic benefits cannot be reliably determined. The amount of amortization expense related to definite-lived intangible assets depends on the amount and timing of definite-lived intangible assets acquired and where previously acquired definite-lived intangible assets are in their estimated life-cycle. In general, the economic benefit of a definite-lived intangible asset is concentrated towards the beginning of its useful life.

Restructuring and other charges, net

Restructuring and other charges, net consists of severance, outplacement, other separation benefits, and facility and other exit costs. These charges may be incurred as part of an announced restructuring plan, or may be individual charges recognized related to acquired businesses or the termination of a limited number of employees that do not represent the initiation of a larger restructuring plan. Restructuring and other charges, net also includes the gain, net of transaction costs, from the sale of businesses, and other operating income or expense that is not presented elsewhere in operating income.

Amounts recognized in restructuring and other charges, net will vary according to the extent of our restructuring programs and other income or expense items not presented elsewhere in operating income.

Interest expense, net

As of December 31, 2020 and 2019, we had gross outstanding indebtedness of $4,036.6 million and $3,291.8 million, respectively. This indebtedness consists of a secured credit facility and senior unsecured notes. Refer to Note 14, "Debt," of our Financial Statements for additional information.

The credit agreement governing our secured credit facility (as amended, the "Credit Agreement") provides for senior secured credit facilities (the "Senior Secured Credit Facilities") consisting of a term loan facility (the "Term Loan"), the $420.0 million revolving credit facility (the "Revolving Credit Facility"), and incremental availability (the "Accordion") under which additional secured credit facilities could be issued under certain circumstances.

Our respective senior unsecured notes (the "Senior Notes") accrue interest at fixed rates. However, the Term Loan and the Revolving Credit Facility accrue interest at variable interest rates, which drives some of the variability in interest expense, net. Refer to Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," included elsewhere in this Report for more information regarding our exposure to potential changes in variable interest rates.

Interest income, which is netted against interest expense on the consolidated statements of operations, relates to interest earned on our cash and cash equivalent balances, and varies according to the balances in, and the interest rates provided by, these investments.

Other, net

Other, net primarily includes gains and losses associated with the remeasurement of non-USD denominated monetary assets and liabilities into USD, changes in the fair value of derivative financial instruments not designated as cash flow hedges, debt financing transactions, and net periodic benefit cost, excluding service cost.

Amounts recognized in other, net vary according to changes in foreign currency exchange rates, changes in the forward prices for the foreign currencies and commodities that we hedge, the number and magnitude of debt financing transactions we undertake, and the change in funded status of our pension and other post-retirement benefit plans.

Refer to Note 6, "Other, Net," of our Financial Statements for additional information related to the components of other, net. Refer to Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," included elsewhere in this Report for additional information related to our exposure to potential changes in foreign currency exchange rates and commodity prices. Refer to Note 14, "Debt," of our Financial Statements for additional information related to our debt financing transactions.

Provision for/(benefit from) income taxes

We are subject to income tax in the various jurisdictions in which we operate. The provision for/(benefit from) income taxes consists of:

- current tax expense, which relates primarily to our profitable operations in non-U.S. tax jurisdictions and withholding taxes related to interest, royalties, and repatriation of foreign earnings; and

- deferred tax expense (or benefit), which represents adjustments in book-to-tax basis differences primarily related to the step-up in fair value of fixed and intangible assets, including goodwill, acquired in connection with business combination transactions, the utilization of net operating losses, changes in tax rates, and changes in our assessment of the realizability of our deferred tax assets.

Our current tax expense is favorably impacted by the amortization of definite-lived intangible assets and other tax benefits derived from our operating and capital structure, including tax incentives in both the U.K. and China as well as favorable tax status in Mexico. In addition, our tax structure takes advantage of participation exemption regimes that permit the receipt of intercompany dividends without incurring taxable income in those jurisdictions.

While the extent of our future tax liability is uncertain, the impact of purchase accounting for past and future acquisitions, changes to debt and equity capitalization of our subsidiaries, and the realignment of the functions performed and risks assumed by our various subsidiaries are among the factors that will determine the future book and taxable income of each of our subsidiaries and of Sensata as a whole.

Our effective tax rate will generally not equal the U.S. statutory tax rate due to various factors, the most significant of which are described below. As these factors fluctuate from year to year, our effective tax rate will change. The factors include, but are not limited to, the following:

- establishing or releasing a portion of the valuation allowance related to our gross deferred tax assets;
- foreign tax rate differential - we operate in locations outside the U.S., including Bermuda, Bulgaria, China, Malaysia, the Netherlands, South Korea, and the U.K., that historically have had statutory tax rates different than the U.S. statutory tax rate. This can result in a foreign tax rate differential that may reflect a tax benefit or detriment. This foreign tax rate differential can change from year to year based upon the jurisdictional mix of earnings and changes in current and future enacted tax rates, tax holidays, and favorable tax regimes available to certain of our foreign subsidiaries;
- changes in tax laws, including emerging Organization for Economic Co-operation and Development guidelines and European Commission challenges to sovereign European Union member states;
- losses incurred in certain jurisdictions, which cannot be currently benefited, as it is not more likely than not that the associated deferred tax asset will be realized in the foreseeable future;
- foreign currency exchange gains and losses;
- as a result of income tax audit settlements, final assessments, or lapse of applicable statutes of limitation, we may recognize an income tax expense or benefit including the reversal of previously accrued interest and penalties; and
- in certain jurisdictions, we recognize withholding and other taxes on intercompany payments, including dividends.

Seasonality

Refer to Item 1, "Business," included elsewhere in this Report for discussion of our assessment of seasonality related to our business.

Inflation

With the exception of the effects of fluctuations in foreign currency exchange rates, which are discussed elsewhere in this MD&A if material, we do not believe that inflation has had a material effect on our financial condition or results of operations in recent years.

Legal Proceedings

Refer to Item 3, "Legal Proceedings," included elsewhere in this Report for discussion of legal proceedings related to our business.

Results of Operations

Our discussion and analysis of results of operations are based upon our Financial Statements. The Financial Statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of the Financial Statements requires us to make estimates and judgments that affect the amounts reported therein. We base our estimates on historical experience and assumptions believed to be reasonable under the circumstances, and we re-evaluate such estimates on an ongoing basis. Actual results could differ from our estimates under different assumptions or conditions. Our significant accounting policies and estimates are more fully described in Note 2, "Significant Accounting Policies," of our Financial Statements, and *Critical Accounting Policies and Estimates* included elsewhere in this MD&A.

The table below presents our historical results of operations in millions of dollars and as a percentage of net revenue. We have derived these results of operations from our Financial Statements. Amounts and percentages in the table below have been calculated based on unrounded numbers. Accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

	For the year ended December 31,					
	2020		2019		2018	
	Amount	Percent of Net Revenue	Amount	Percent of Net Revenue	Amount	Percent of Net Revenue
Net revenue:						
Performance Sensing	$ 2,223.8	73.0 %	$ 2,546.0	73.8 %	$ 2,627.7	74.6%
Sensing Solutions	821.8	27.0	904.6	26.2	894.0	25.4
Total net revenue	3,045.6	100.0 %	3,450.6	100.0 %	3,521.6	100.0%
Operating costs and expenses	2,707.8	88.9	2,893.7	83.9	2,811.2	79.8
Operating income	337.7	11.1	556.9	16.1	710.4	20.2
Interest expense, net	(171.8)	(5.6)	(158.6)	(4.6)	(153.7)	(4.4)
Other, net	(0.3)	0.0	(7.9)	(0.2)	(30.4)	(0.9)
Income before taxes	165.6	5.4	390.4	11.3	526.4	14.9
Provision for/(benefit from) income taxes	1.4	0.0	107.7	3.1	(72.6)	(2.1)
Net income	$ 164.3	5.4 %	$ 282.7	8.2 %	$ 599.0	17.0 %

Net revenue - Overall

Net revenue declined 11.7% in fiscal year 2020 largely due to end-market contraction caused by the COVID-19 pandemic. Excluding an increase of 0.2% attributed to changes in foreign currency exchange rates, net revenue in fiscal year 2020 declined 11.9% on an organic basis. This represents a market outgrowth of 600 basis points. Organic revenue growth (or decline), presented throughout this MD&A, is a financial measure not presented in accordance with U.S. GAAP. Refer to the section entitled *Non-GAAP Financial Measures* below for additional information related to our use of organic revenue growth (or decline).

Net revenue declined 2.0% in fiscal year 2019 primarily due to a somewhat weaker automotive end market. Excluding a decline of 0.2% related to acquisitions and divestitures and a decline of 0.7% related to changes in foreign currency exchange rates, net revenue in fiscal year 2019 declined 1.1% on an organic basis.

Net Revenue - Performance Sensing

Fiscal year 2020 vs. fiscal year 2019

Performance Sensing net revenue declined 12.7% in fiscal year 2020, driven primarily by impacts from the COVID-19 pandemic. Excluding an increase of 0.1% attributed to changes in foreign currency exchange rates, Performance Sensing net revenue declined 12.8% on an organic basis. The overall net revenue decline in fiscal year 2020 was reduced in the second half of the year as OEM customers ramped production within their facilities through the half in an effort to replace production lost during shut-downs earlier in the year. The Performance Sensing results in fiscal year 2020 represent market outgrowth of 770 basis points. In addition, price reductions of 1.5%, primarily to automotive customers, contributed to the Performance Sensing organic revenue decline.

Net revenue in our automotive business declined 13.6% in fiscal year 2020, or 13.9% on an organic basis. These results represented market outgrowth of 690 basis points compared to the combination of an automotive market that was down 18.5% and the impact of OEM customers working down inventory. This market outgrowth continues to be led by new product launches in emissions, electrification, and safety-related applications and systems. A high level of automotive production in the fourth quarter resulted in customers using more inventory on hand to fill orders, negatively impacting fiscal year 2020 revenue. However, as our customers restock inventory in 2021, we expect to recover much of that decline. Global automotive production is expected to grow in fiscal year 2021, as the industry seeks to address low inventory levels at the end of 2020. In addition, we expect market outgrowth in our automotive business to be in the range of 400 to 600 basis points for fiscal year 2021.

Net revenue in our HVOR business declined 9.2% in fiscal year 2020, on a reported and an organic basis. These results represented market outgrowth of 880 basis points compared to an HVOR market that was down 18.0%. Our China on-road truck business continued to post better than expected growth as a result of the accelerated adoption of NS6 emissions regulations. We expect market outgrowth in our HVOR business to be in the range of 600 to 800 basis points for fiscal year 2021.

Fiscal year 2019 vs. fiscal year 2018

Performance Sensing net revenue declined 3.1% in fiscal year 2019. Excluding a decline of 1.9% related to acquisitions and divestitures and a decline of 0.7% related to changes in foreign currency exchange rates, Performance Sensing net revenue declined 0.5% on an organic basis. In addition, price reductions of 1.6%, primarily to automotive customers, contributed to the Performance Sensing organic revenue decline.

Net revenue in our automotive business declined 4.3% in fiscal year 2019, or 0.9% on an organic basis. These results represented market outgrowth compared to an automotive market that was down 5.6%. All of our major geographic markets contributed to this market outgrowth, but most notably China.

Net revenue in our HVOR business grew 1.6% in fiscal year 2019, or 0.9% on an organic basis. These results represented market outgrowth compared to an HVOR market that was down 5.5%. This market outgrowth was primarily related to our business in China as well as in the agriculture and on-road truck markets.

Net Revenue - Sensing Solutions

Fiscal year 2020 vs. fiscal year 2019

Sensing Solutions net revenue declined 9.2% in fiscal year 2020 on a reported and an organic basis. This decrease was the result of year over year declines in the industrial, appliance and HVAC, and aerospace end markets. The global industrial and appliance and HVAC end markets began recovering in the fourth quarter of 2020, which, in addition to supply chain restocking, reflected strong growth in HVAC and 5G applications. The decline in the aerospace industry has continued throughout the year, reflecting reduced OEM production and significantly lower air traffic. New product launches in the fourth quarter, primarily in the defense market, partially offset this decline.

Fiscal year 2019 vs. fiscal year 2018

Sensing Solutions net revenue increased 1.2% in fiscal year 2019. Excluding an increase of 4.6% related to acquisitions and divestitures and a decline of 0.7% related to changes in foreign currency exchange rates, Sensing Solutions net revenue declined 2.7% on an organic basis. The organic revenue decline was primarily attributable to weakness in the industrial markets we serve. This market weakness is consistent with trends in certain indicators of demand, such as global manufacturing Purchasing Managers' Index ("PMI") data, which is signaling continued demand contraction, consistent with slowing customer production and reductions in inventory. Our industrial growth in China is particularly weak as exports out of China have further slowed as a result of tariffs and global trade actions.

Operating costs and expenses

Operating costs and expenses for the years ended December 31, 2020, 2019, and 2018 are presented, in millions of dollars and as a percentage of revenue, in the following table. Amounts and percentages in the table below have been calculated based on unrounded numbers. Accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

	For the year ended December 31,					
	2020		2019		2018	
	Amount	Percent of Net Revenue	Amount	Percent of Net Revenue	Amount	Percent of Net Revenue
Operating costs and expenses:						
Cost of revenue	$ 2,119.0	69.6 %	$ 2,267.4	65.7 %	$ 2,266.9	64.4 %
Research and development	131.4	4.3	148.4	4.3	147.3	4.2
Selling, general and administrative	294.7	9.7	281.4	8.2	305.6	8.7
Amortization of intangible assets	129.5	4.3	142.9	4.1	139.3	4.0
Restructuring and other charges, net	33.1	1.1	53.6	1.6	(47.8)	(1.4)
Total operating costs and expenses	$ 2,707.8	88.9 %	$ 2,893.7	83.9 %	$ 2,811.2	79.8 %

Cost of revenue

Cost of revenue as a percentage of net revenue increased in fiscal year 2020 primarily as a result of (1) productivity headwinds from lower volume, the resulting lower than normal capacity, and increased costs related to the COVID-19 pandemic, (2) a $29.2 million loss related to a judgment against us in intellectual property litigation brought against Schrader by Wasica Finance GmbH ("Wasica") in the first quarter of 2020 (settled in the third quarter 2020), and (3) higher compensation to retain and incentivize critical employee talent, partially offset by (1) the impact of ongoing savings resulting from cost reduction activities taken in fiscal years 2019 and 2020, (2) the favorable effect of changes in foreign currency exchange rates, and (3) savings from temporary cost reductions in the second quarter of 2020 (including salary reductions and furloughs). Refer to Note 15, "Commitments and Contingencies," of our Financial Statements for additional information regarding the intellectual property litigation with Wasica.

We expect that the actions taken as part of the Q2 2020 Global Restructure Program will result in improvements of our cost of revenue as a percentage of revenue in future quarters. Refer to the Q2 2020 Global Restructure Program section earlier in this MD&A for a more detailed discussion of expected savings under the Q2 2020 Global Restructure Program. However, we believe that the impact of a global microchip shortage that the entire industry is currently experiencing will adversely impact our operating costs in fiscal year 2021.

Cost of revenue as a percentage of net revenue increased in fiscal year 2019 primarily as a result of (1) organic revenue decline, (2) negative mix due to new product launches, (3) the impact of acquisitions and divestitures, and (4) increased tariff costs, partially offset by (1) the favorable effect of changes in foreign currency exchange rates and (2) lower variable compensation.

Research and development expense

R&D expense decreased in fiscal year 2020 primarily as a result of the impact of ongoing savings resulting from cost reduction activities taken in fiscal years 2019 and 2020, somewhat offset by increased R&D expense related to our megatrend initiatives. R&D expense related to our megatrend initiatives was $26.1 million in fiscal year 2020, an increase of $6.8 million from fiscal year 2019. We currently expect approximately $50 million to $55 million in total megatrend-related spend in 2021, the majority of which is expected to be in R&D.

R&D expense did not materially change in fiscal year 2019 compared to fiscal year 2018 as increased design and development effort to support new design wins and fund megatrends was offset by the favorable effect of changes in foreign currency exchange rates, primarily the Euro and British Pound Sterling.

Selling, general and administrative expense

SG&A expense increased in fiscal year 2020 primarily as a result of (1) higher compensation to retain and incentivize critical employee talent, (2) increased costs related to enhancements and improvements to our global operating processes to increase productivity, and (3) incremental SG&A related to acquired businesses, partially offset by (1) the impact of ongoing savings resulting from cost reduction activities taken in fiscal years 2019 and 2020 and (2) savings from temporary cost reductions in the second quarter of 2020 (including salary reductions and furloughs).

SG&A expense decreased in fiscal year 2019 primarily due to (1) lower variable compensation, (2) lower selling costs, (3) the divestiture of the Valves Business, (4) the favorable effect of changes in foreign currency exchange rates (primarily the Euro, Chinese Renminbi, and British Pound Sterling), and (5) lower costs related to our redomicile in the prior year, partially offset by additional SG&A expense related to GIGAVAC.

Amortization of intangible assets

Amortization expense decreased in fiscal year 2020 primarily as a result of the effect of the economic-benefit method of amortization. We expect amortization expense to be approximately $117.5 million in fiscal year 2021. Refer to Note 11, "Goodwill and Other Intangible Assets, Net," of our Financial Statements for additional information regarding definite-lived intangible assets and the related amortization.

Amortization expense increased in fiscal year 2019 primarily due to the intangible assets acquired with GIGAVAC, partially offset by the effect of the economic-benefit method of amortization.

Restructuring and other charges, net

Restructuring and other charges, net for the years ended December 31, 2020, 2019, and 2018 consisted of the following (amounts have been calculated based on unrounded numbers, accordingly, certain amounts may not appear to recalculate due to the effect of rounding):

	For the year ended December 31,		
(In millions)	**2020**	**2019**	**2018**
Q2 2020 Global Restructure Program [1]	$ 24.5	$ —	$ —
Other restructuring charges			
Severance costs, net [2]	3.0	29.2	7.6
Facility and other exit costs	1.3	0.8	0.9
Gain on sale of Valves Business [3]	—	—	(64.4)
Other [4]	4.3	23.5	8.2
Restructuring and other charges, net	$ 33.1	$ 53.6	$ (47.8)

(1) Refer to *Q2 2020 Global Restructure Program* section elsewhere in this MD&A for additional discussion related to the Q2 2020 Global Restructure Program.

(2) For each of the years ended December 31, 2020, 2019, and 2018, these charges include termination benefits provided in connection with workforce reductions of manufacturing, engineering, and administrative positions, including the elimination of certain positions related to site consolidations, net of reversals. For the year ended December 31, 2020, these charges related to termination benefits arising from the shutdown and relocation of operating sites in Northern Ireland and Belgium. For the year ended December 31, 2019, these charges included approximately $12.7 million of benefits provided under a voluntary retirement incentive program offered to a limited number of eligible employees in the U.S., and $6.5 million of termination benefits provided under a one-time benefit arrangement related to the shutdown and relocation of an operating site in Germany.

(3) In the year ended December 31, 2018, we completed the sale of the Valves Business. The gain on this sale was recorded in restructuring and other charges, net.

(4) Represents charges that are not included in one of the other classifications. In the year ended December 31, 2020, we settled intellectual property litigation brought against Schrader by Wasica and released $11.7 million of the related liability. This release largely offset a charge of $12.1 million resulting from a prejudgment interest-related award granted by the court on behalf of Wasica in the three months ended June 30, 2020. Refer to Note 15, "Commitments and Contingencies," of our Financial Statements for additional information related to this matter. In the year ended December 31, 2019, we recognized a $17.8 million loss related to the termination of a supply agreement in connection with the Metal Seal Precision, Ltd. ("Metal Seal") litigation. In the year ended December 31, 2018, we incurred $5.9 million of incremental direct costs in order to transact the sale of the Valves Business. For each of the years ended December 31, 2020, 2019, and 2018, we recorded expense related to the deferred compensation arrangement that we entered into in connection with the acquisition of GIGAVAC in the year ended December 31, 2018.

Operating income

In fiscal year 2020, operating income decreased $219.1 million or 39.4%, to $337.7 million (11.1% of net revenue) compared to $556.9 million (16.1% of net revenue) in fiscal year 2019. This decrease was primarily driven by:

- the impacts of the COVID-19 pandemic, most significantly lower revenues, productivity headwinds from our manufacturing facilities running at lower than normal capacity, and increased COVID-19 related costs;
- charges related to the intellectual property litigation brought against Schrader by Wasica, which was settled in the third quarter, including $29.2 million recognized in the first quarter of 2020;
- $24.5 million in severance charges recognized in fiscal year 2020 related to the Q2 2020 Global Restructure Program; and
- higher compensation costs to retain and incentivize critical employee talent.

These drivers of reduced operating income were partially offset by:

- the non-recurrence of certain restructuring and other charges from fiscal year 2019 as discussed in Note 5, "Restructuring and Other Charges, Net," of our Financial Statements, including $17.8 million loss related to the termination of a supply agreement in connection with the Metal Seal litigation and charges related to benefits provided under a voluntary retirement incentive program;
- cost savings of approximately $21.8 million realized in the second quarter of 2020 resulting from temporary salary reductions, furloughs, and government subsidies;
- the impact of ongoing savings resulting from cost reduction activities taken in fiscal years 2019 and 2020;
- the favorable effect of changes in foreign currency exchange rates; and
- lower intangible amortization expense due to the impacts of the economic-benefit method of amortization.

We expect that the actions taken as part of the Q2 2020 Global Restructure Program will result in savings that will be favorable to operating income in future quarters. Refer to the *Q2 2020 Global Restructure Program* section earlier in this MD&A for a more detailed discussion of expected savings under the Q2 2020 Global Restructure Program. However, we believe that the impact of a global microchip shortage that the entire automotive industry is currently experiencing will adversely impact out operating costs in fiscal year 2021.

In fiscal year 2019, operating income decreased $153.5 million or 21.6%, to $556.9 million (16.1% of net revenue) compared to $710.4 million (20.2% of net revenue) in fiscal year 2018. This decrease was primarily due to (1) the divestiture of the Valves Business in the third quarter of 2018 (including the gain on sale), (2) net productivity headwinds partly due to the scaling up of new product launches, (3) $17.8 million loss related to the termination of a supply agreement in connection with the Metal Seal litigation, (4) higher severance charges, (5) the impact of increased tariffs, and (6) lower volume.

These drivers of reduced operating income were partially offset by (1) lower variable compensation, (2) lower selling expenses, (3) the favorable effect of changes in foreign currency exchange rates, and (4) the impact of the acquisition of GIGAVAC.

Interest expense, net

Interest expense, net increased in fiscal year 2020 primarily due to (1) a full year of interest expense related to the $450.0 million aggregate principal amount of 4.375% senior notes due 2030 (the "4.375% Senior Notes"), which were issued in fiscal year 2019, (2) a partial year of interest expense related to the 3.75% Senior Notes, which was issued in 2020, (3) interest incurred on outstanding balances of the Revolving Credit Facility in fiscal year 2020, and (4) lower cash interest income due to declining interest rates. These increases were partially offset by lower interest expense on the term loan, which was partially repaid in fiscal year 2019 after issuance of the 4.375% Senior Notes. On April 1, 2020, in order to enhance our financial flexibility given the general uncertainty associated with the COVID-19 pandemic, we withdrew $400.0 million from our Revolving Credit Facility. On August 17, 2020, we took advantage of historically low interest rates in issuing the 3.75% Senior Notes. Given improving market conditions and strengthening financial markets, we decided to use a portion of the proceeds to repay $400.0 million of outstanding borrowings under the Revolving Credit Facility.

On February 3, 2021, we announced that we intended to redeem in full the outstanding balance on the 6.25% Senior Notes in March 2021. The 6.25% Senior Notes represent approximately $46.9 million of interest expense annually. We will redeem the notes at a premium of 103.125% of the aggregate principal amount of the notes outstanding, or approximately $23.4 million. Accordingly, while we expect to see a reduction of interest expense in fiscal year 2021 as a result of this redemption, the reduction will be significantly larger in fiscal year 2022.

Interest expense, net increased in fiscal year 2019 primarily due to an increase in interest expense related to higher variable interest rates as well as the impact of the refinancing of a portion of our Term Loan (variable rate debt) through the issuance of the 4.375% Senior Notes (fixed rate debt). The 4.375% Senior Notes accrued interest at a higher rate than the average rate of the Term Loan in fiscal year 2019.

Other, net

Other, net for the years ended December 31, 2020, 2019, and 2018 consisted of the following (amounts have been calculated based on unrounded numbers, accordingly, certain amounts may not appear to recalculate due to the effect of rounding):

	For the year ended December 31,		
(In millions)	2020	2019	2018
Currency remeasurement gain/(loss) on net monetary assets [1]	$ 10.8	$ (6.8)	$ (18.9)
(Loss)/gain on foreign currency forward contracts [2]	(6.8)	2.2	2.1
Gain/(loss) on commodity forward contracts [2]	10.0	4.9	(8.5)
Loss on debt financing [3]	—	(4.4)	(2.4)
Net periodic benefit cost, excluding service cost	(10.0)	(3.2)	(3.6)
Other	(4.5)	(0.7)	0.9
Other, net	$ (0.3)	$ (7.9)	$ (30.4)

(1) Relates to the remeasurement of non-USD denominated monetary assets and liabilities into USD.

(2) Relates to changes in the fair value of derivative financial instruments that are not designated as hedges. Refer to Note 19, "Derivative Instruments and Hedging Activities," of our Financial Statements for additional information related to gains and losses related to our commodity and foreign currency exchange forward contracts. Refer to Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," included elsewhere in this Report for an analysis of the sensitivity of other, net to changes in foreign currency exchange rates and commodity prices.

(3) Refer to Note 14, "Debt," of our Financial Statements for additional information related to our debt financing transactions.

Provision for/(benefit from) income taxes

The components of provision for/(benefit from) income taxes for the years ended December 31, 2020, 2019, and 2018 are described in more detail in the table below (amounts have been calculated based on unrounded numbers, accordingly, certain amounts may not appear to recalculate due to the effect of rounding):

	For the year ended December 31,		
(In millions)	2020	2019	2018
Tax computed at statutory rate of 21% [1]	$ 34.8	$ 82.0	$ 110.5
Intangible property transfers [2]	(54.2)	—	—
Foreign tax rate differential [3]	(22.0)	(19.1)	(41.2)
Valuation allowances [4]	8.9	19.6	(123.4)
Withholding taxes not creditable	12.2	9.5	8.7
Change in tax laws or rates	11.2	5.1	(22.3)
Research and development incentives [5]	(7.4)	(8.4)	(19.5)
Reserve for tax exposure	(0.2)	20.1	10.8
Other [6]	18.0	(1.1)	3.7
Provision for/(benefit from) income taxes	$ 1.4	$ 107.7	$ (72.6)

(1) Represents the product of the applicable statutory tax rate and income before taxes, as reported in the consolidated statements of operations.

(2) In the fourth quarter of 2020, we completed the transfer of intangible property which resulted in a net $54.2 million deferred tax benefit.

(3) We operate in locations outside the U.S., including Bermuda, Bulgaria, China, Malaysia, the Netherlands, South Korea, and the U.K., that historically have had statutory tax rates different than the U.S. statutory tax rate. This can result in a foreign tax rate differential that may reflect a tax benefit or detriment. This foreign tax rate differential can change from year to year based upon the jurisdictional mix of earnings and changes in current and future enacted tax rates. Certain of our subsidiaries are currently eligible, or have been eligible, for tax exemptions or reduced tax rates in their respective jurisdictions.

(4) During the years ended December 31, 2020, 2019, and 2018, we established/(released) a portion of our valuation allowance and recognized a deferred tax expense/(benefit). The valuation allowance as of December 31, 2020 and 2019 was $202.1 million and $146.8 million, respectively. A significant portion of our valuation allowance is against interest carryforwards due to our assessment of our inability to utilize these carryforwards based on our forecasts of future taxable income. The remaining valuation allowance primarily relates to foreign tax credit capital loss carryforwards, goodwill tax basis, and net operating losses in jurisdictions outside the U.S. It is more likely than not that these attributes will not be utilized in the foreseeable future. However, any future release of all or a portion of this valuation allowance resulting from a change in this assessment will impact our future provision for/(benefit from) income taxes.

(5) Certain income of our U.K. subsidiaries is eligible for lower tax rates under the "patent box" regime, resulting in certain of our intellectual property income being taxed at a rate lower than the U.K. statutory tax rate. In China, we benefit from the R&D super deduction regime. In fiscal year 2018, we substantially completed an assessment of our ability to claim an R&D credit in the U.S. As a result of this assessment, we recognized a tax benefit of $10.0 million. Prior to fiscal year 2018, the deferred tax asset related to these R&D credits would have been offset by the valuation allowance.

(6) Refer to Note 7, "Income Taxes," of our Financial Statements for additional information related to other components of our rate reconciliation.

We do not believe that there are any known trends related to the reconciling items noted above that are reasonably likely to result in our liquidity increasing or decreasing in any material way.

Non-GAAP Financial Measures

This section provides additional information regarding certain non-GAAP financial measures, including organic revenue growth (or decline), adjusted operating income, adjusted operating margin, adjusted net income, adjusted earnings per share ("EPS"), free cash flow, net leverage ratio, and adjusted earnings before interest, taxes, depreciation, and amortization ("EBITDA"), which are used by our management, Board of Directors, and investors. We use these non-GAAP financial measures internally to make operating and strategic decisions, including the preparation of our annual operating plan, evaluation of our overall business performance, and as a factor in determining compensation for certain employees.

The use of our non-GAAP financial measures have limitations. They should be considered as supplemental in nature and are not intended to be considered in isolation from, or as an alternative to, reported net revenue growth (or decline), operating income, operating margin, net income, diluted EPS, operating cash flows, segment operating margin, total debt, finance lease, and other financing obligations, or EBITDA, respectively, calculated in accordance with U.S. GAAP. In addition, our measures of organic revenue growth (or decline), adjusted operating income, adjusted operating margin, adjusted net income, adjusted EPS, free cash flow, net leverage ratio, and adjusted EBITDA may not be the same as, or comparable to, similar non-GAAP financial measures presented by other companies.

Organic revenue growth (or decline)

Organic revenue growth (or decline) is defined as the reported percentage change in net revenue, calculated in accordance with U.S. GAAP, excluding the period-over-period impact of foreign currency exchange rate differences as well as the net impact of material acquisitions and divestitures for the 12-month period following the respective transaction date(s).

We believe that organic revenue growth (or decline) provides investors with helpful information with respect to our operating performance, and we use organic revenue growth (or decline) to evaluate our ongoing operations as well as for internal planning and forecasting purposes. We believe that organic revenue growth (or decline) provides useful information in evaluating the results of our business because it excludes items that we believe are not indicative of ongoing performance or that we believe impact comparability with the prior-year period.

Adjusted operating income, adjusted operating margin, adjusted net income, and adjusted EPS

We define adjusted operating income as operating income determined in accordance with U.S. GAAP, excluding certain non-GAAP adjustments which are described below. Adjusted operating margin is calculated by dividing adjusted operating income by net revenue calculated in accordance with U.S. GAAP. We define adjusted net income as follows: net income determined in accordance with U.S. GAAP, excluding certain non-GAAP adjustments which are described in *Non-GAAP Adjustments* below. Adjusted EPS is calculated by dividing adjusted net income by the number of diluted weighted-average ordinary shares outstanding in the period.

Management uses adjusted operating income, adjusted operating margin, adjusted net income, and adjusted EPS as measures of operating performance, for planning purposes (including the preparation of our annual operating budget), to allocate resources to enhance the financial performance of our business, to evaluate the effectiveness of our business strategies, in communications with our Board of Directors and investors concerning our financial performance, and as factors in determining compensation for certain employees. We believe investors and securities analysts also use these non-GAAP financial measures in their evaluation of our performance and the performance of other similar companies. These non-GAAP financial measures are not measures of liquidity.

Free cash flow

Free cash flow is defined as net cash provided by/(used in) operating activities less additions to PP&E and capitalized software. We believe free cash flow is useful to management and investors as a measure of cash generated by business operations that will be used to repay scheduled debt maturities and can be used to, among other things, fund acquisitions, repurchase ordinary shares, and (or) accelerate the repayment of debt obligations.

Adjusted EBITDA

Adjusted EBITDA represents net income, determined in accordance with U.S. GAAP, excluding interest expense, net, provision for/(benefit from) income taxes, depreciation expense, amortization of intangible assets, and the following non-GAAP adjustments, if applicable: (1) restructuring related and other, (2) financing and transaction related, (3) deferred gain or loss on commodities and other derivative instruments, and (4) step-up inventory amortization. Refer to *Non-GAAP Adjustments* below for additional discussion of these adjustments.

Net leverage ratio

Net leverage ratio represents net debt (total debt, finance lease and other financing obligations less cash and cash equivalents) divided by last twelve months ("LTM") adjusted EBITDA. We believe that the net leverage ratio is a useful measure to management and investors in understanding trends in our overall financial condition.

Non-GAAP adjustments

Many of our non-GAAP adjustments relate to a series of strategic initiatives developed by our management aimed at better positioning us for future revenue growth and an improved cost structure. These initiatives have been modified from time to time to reflect changes in overall market conditions and the competitive environment facing our business. These initiatives include, among other items, acquisitions, divestitures, restructurings of certain business, supply chain, or corporate activities, and various financing transactions. We describe these adjustments in more detail below.

- *Restructuring related and other*: includes charges, net related to certain restructuring and other exit activities as well as other costs (or income) that we believe are either unique or unusual to the identified reporting period, and that we believe impact comparisons to prior period operating results. Such costs include charges related to optimization of our manufacturing processes to increase productivity. This type of activity occurs periodically, however each action is unique, discrete, and driven by various facts and circumstances. Such amounts are excluded from internal financial statements and analyses that management uses in connection with financial planning, and in its review and assessment of our operating and financial performance, including the performance of our segments. Restructuring related and other does not, however, include charges related to the integration of acquired businesses, including such charges that are recognized as restructuring and other charges, net in the consolidated statements of operations. This adjustment is net of current tax impacts.

- *Financing and other transaction costs*: includes losses or gains related to debt financing transactions, losses or gains related to the divestiture of a business, losses or gains related to the termination of a long-term unfavorable supply agreement, and costs incurred, including for legal, accounting, and other professional services, that are directly related to an acquisition, divestiture, or equity financing transaction. There was no current tax effect related to this adjustment in any period presented.

- *Deferred loss or gain on derivative instruments*: includes unrealized losses or gains on derivative instruments that do not qualify for hedge accounting as well as the impact of commodity prices on our raw material costs relative to the strike price on our commodity forward contracts. There was no current tax effect related to this adjustment in any period presented.
- *Step-up depreciation and amortization*: includes depreciation and amortization expense associated with the step-up in fair value of assets acquired in connection with a business combination (e.g., PP&E, definite-lived intangible assets, and inventory). The current tax effect of step-up depreciation and amortization was not material, individually or in the aggregate, in any period presented.
- *Deferred taxes and other tax related*: includes adjustments for book-to-tax basis differences due primarily to the step-up in fair value of fixed and intangible assets and goodwill, the utilization of net operating losses, and adjustments to our U.S. valuation allowance in connection with certain acquisitions and U.S. tax law changes. Other tax related items include certain adjustments to unrecognized tax positions and withholding tax on repatriation of foreign earnings.
- *Amortization of debt issuance costs*. There was no current tax effect related to this adjustment in any period presented.
- Where applicable, the current tax effect of non-GAAP adjustments.

Our definition of adjusted net income excludes the deferred provision for/(benefit from) income taxes and other tax related items described above. As we treat deferred income taxes as an adjustment to compute adjusted net income, the deferred income tax effect associated with the reconciling items presented below would not change adjusted net income for any period presented.

Non-GAAP reconciliations

The following tables provide reconciliations of certain financial measures calculated in accordance with U.S. GAAP to the related non-GAAP financial measures for the periods presented. Refer to *Non-GAAP Adjustments* section above for additional information on these adjustments. Amounts and percentages have been calculated based on unrounded numbers, accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

	For the year ended December 31, 2020			
(Dollars in millions, except per share amounts)	Operating Income	Operating Margin	Net Income	Diluted EPS
Reported (GAAP)	$ 337.7	11.1 %	$ 164.3	$ 1.04
Non-GAAP adjustments:				
Restructuring related and other [c]	87.4	2.9	93.8	0.59
Financing and other transaction costs	8.2	0.3	6.4	0.04
Step-up depreciation and amortization	125.7	4.1	125.7	0.79
Deferred loss/(gain) on derivative instruments	3.1	0.1	(7.0)	(0.04)
Amortization of debt issuance costs	—	—	6.9	0.04
Deferred taxes and other tax related	—	—	(40.9)	(0.26)
Total adjustments	224.4	7.4	184.9	1.17
Adjusted (non-GAAP)	$ 562.1	18.5 %	$ 349.2	$ 2.21

(Dollars in millions, except per share amounts)	For the year ended December 31, 2019 Operating Income	Operating Margin	Net Income	Diluted EPS
Reported (GAAP)	$ 556.9	16.1 %	$ 282.7	$ 1.75
Non-GAAP adjustments:				
Restructuring related and other [c]	61.9	1.8	62.2	0.38
Financing and other transaction costs	28.9	0.8	34.9	0.22
Step-up depreciation and amortization	139.6	4.0	139.6	0.86
Deferred gain on derivative instruments	(1.6)	(0.0)	(6.5)	(0.04)
Amortization of debt issuance costs	—	—	7.8	0.05
Deferred taxes and other tax related	—	—	55.2	0.34
Total adjustments	228.8	6.6	293.2	1.81
Adjusted (non-GAAP)	$ 785.7	22.8 %	$ 575.9	$ 3.56

(Dollars in millions, except per share amounts)	For the year ended December 31, 2018 Operating Income	Operating Margin	Net Income	Diluted EPS
Reported (GAAP)	$ 710.4	20.2 %	$ 599.0	$ 3.53
Non-GAAP adjustments:				
Restructuring related and other [c]	25.4	0.7	28.0	0.17
Financing and other transaction costs [a]	(47.0)	(1.3)	(40.3)	(0.24)
Step-up depreciation and amortization	141.2	4.0	141.2	0.83
Deferred loss on derivative instruments	2.0	0.1	12.5	0.07
Amortization of debt issuance costs	—	—	7.3	0.04
Deferred taxes and other tax related [b]	—	—	(128.3)	(0.76)
Total adjustments	121.5	3.5	20.4	0.12
Adjusted (non-GAAP)	$ 832.0	23.6 %	$ 619.4	$ 3.65

(a) Financing and other transaction costs in fiscal year 2018 primarily included a $64.4 million gain on the sale of the Valves Business and $5.9 million of related transaction costs.

(b) In fiscal year 2020, we completed the transfer of intangible property which resulted in a $54.2 million deferred tax benefit. In fiscal year 2018, we recognized a deferred tax benefit of $144.1 million, which primarily included a $122.1 million deferred tax benefit related to the release of a portion of our U.S. valuation allowance as discussed in Note 7, "Income Taxes," of our Financial Statements.

(c) The following table presents the components of our restructuring related and other non-GAAP adjustment to net income for fiscal years 2020, 2019, and 2018 (amounts have been calculated based on unrounded numbers, accordingly, certain amounts may not appear to recalculate due to the effect of rounding):

(in millions)	For the year ended December 31, 2020	2019	2018
Business and corporate repositioning [i]	$ 35.8	$ 40.1	$ 8.8
Supply chain repositioning and transition [ii]	30.8	16.0	15.3
Preacquisition legal matters [iii]	31.5	5.3	2.9
Other	—	2.7	1.0
Income tax effect [iv]	(4.2)	(1.8)	—
Total non-GAAP restructuring related and other [v]	$ 93.8	$ 62.2	$ 28.0

i. Fiscal year 2020 includes charges incurred under the Q2 2020 Global Restructure Program and charges for other business and corporate workforce rationalization. Fiscal year 2019 includes benefits provided under a voluntary retirement incentive program, costs related to the shutdown and relocation of an operating site in Germany, and charges for other business and corporate workforce rationalization.

ii. Primarily includes costs related to optimization of our manufacturing processes to increase productivity and rationalize our manufacturing footprint and supply chain workforce rationalization.

iii. Represents charges incurred related to legal matters associated with acquired businesses, for which new information is brought to light after the measurement period for the business combination is closed, but for which the liability relates to events or activities that occurred prior to our acquisition of the business. Fiscal year 2020 primarily includes the settlement of intellectual property litigation brought against Schrader by Wasica.

iv. We treat deferred taxes as a non-GAAP adjustment. Accordingly, the tax effect of the restructuring related and other non-GAAP adjustment refers only to the current tax effect. With respect to the year ended December 31, 2018, the current tax effect was not material, individually or in the aggregate.

v. Total presented is the non-GAAP adjustment to net income. Certain portions of these adjustments are non-operating and are excluded from the non-GAAP adjustments to operating income.

The following table provides a reconciliation of net cash provided by operating activities in accordance with U.S. GAAP to free cash flow.

	For the year ended December 31,		
(in millions)	**2020**	**2019**	**2018**
Net cash provided by operating activities	$ 559.8	$ 619.6	$ 620.6
Additions to property, plant and equipment and capitalized software	$ (106.7)	$ (161.3)	$ (159.8)
Free cash flow	$ 453.1	$ 458.3	$ 460.8

The following table provides a reconciliation of net income in accordance with U.S. GAAP to Adjusted EBITDA.

	For the year ended December 31,		
(in millions)	**2020**	**2019**	**2018**
Net income	$ 164.3	$ 282.7	$ 599.0
Interest expense, net	171.8	158.6	153.7
Provision for/(benefit from) income taxes	1.4	107.7	(72.6)
Depreciation expense	125.7	115.9	106.0
Amortization of intangible assets	129.5	142.9	139.3
EBITDA	592.6	807.7	925.4
Non-GAAP Adjustments			
Restructuring related and other	93.1	64.1	28.0
Financing and other transaction costs	6.4	34.9	(40.3)
Deferred (gain)/loss on derivative instruments	(7.0)	(6.5)	12.5
Step up inventory amortization	—	—	0.9
Adjusted EBITDA	$ 685.1	$ 900.1	$ 926.5

The following table provides a reconciliation of total debt, finance lease, and other financing obligations in accordance with U.S. GAAP to net leverage ratio.

	For the year ended December 31,		
(in millions)	**2020**	**2019**	**2018**
Current portion of long-term debt, finance lease and other financing obligations	$ 757.2	$ 6.9	$ 14.6
Finance lease and other financing obligations, less current portion	27.9	28.8	30.6
Long-term debt, net	3,213.7	3,219.9	3,219.8
Total debt, finance lease, and other financing obligations	3,998.9	3,255.6	3,264.9
Less: Discount	(9.6)	(11.8)	(15.2)
Less: Deferred financing costs	(28.1)	(24.5)	(23.2)
Total gross indebtedness	4,036.6	3,291.8	3,303.3
Less: Cash and cash equivalents	1,862.0	774.1	729.8
Net Debt	$ 2,174.6	$ 2,517.7	$ 2,573.4
Adjusted EBITDA (LTM)	$ 685.1	$ 900.1	$ 926.5
Net leverage ratio	3.2	2.8	2.8

Liquidity and Capital Resources

As of December 31, 2020 and 2019 we held cash and cash equivalents in the following regions:

(in millions)	As of December 31, 2020	2019
United Kingdom	$ 25.3	$ 8.8
United States	17.2	7.0
The Netherlands	1,514.1	522.9
China	185.2	119.3
Other	120.2	116.1
Total	$ 1,862.0	$ 774.1

The amount of cash and cash equivalents held in these geographic regions fluctuates throughout the year due to a variety of factors, such as our use of intercompany loans and dividends and the timing of cash receipts and disbursements in the normal course of business. Our earnings are not considered to be permanently reinvested in certain jurisdictions in which they were earned. We recognize a deferred tax liability on these unremitted earnings to the extent the remittance of such earnings cannot be recovered in a tax free manner.

On February 3, 2021, we announced that we intended to redeem in full the outstanding balance on the 6.25% Senior Notes in March 2021 at 103.125%. The cash to be used to execute this redemption, or approximately $773.4 million (excluding fees), will be paid from cash on hand in the Netherlands.

Cash Flows

The table below summarizes our primary sources and uses of cash for the years ended December 31, 2020, 2019, and 2018. We have derived the summarized statements of cash flows from our Financial Statements. Amounts in the table below have been calculated based on unrounded numbers. Accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

(in millions)	For the year ended December 31, 2020	2019	2018
Net cash provided by/(used in):			
Operating activities:			
Net income adjusted for non-cash items	$ 405.3	$ 630.3	$ 687.5
Changes in operating assets and liabilities, net	154.5	(10.7)	(66.9)
Operating activities	559.8	619.6	620.6
Investing activities	(182.1)	(208.8)	(237.6)
Financing activities	710.2	(366.5)	(406.2)
Net change	$ 1,087.9	$ 44.3	$ (23.3)

Operating Activities

The decrease in cash provided by operating activities in fiscal year 2020 compared to fiscal year 2019 relates primarily to lower profitability, partially offset by reduced inventory and the timing of supplier payments and customer receipts.

The decrease in cash provided by operating activities in fiscal year 2019 compared to fiscal year 2018 relates primarily to lower operating profitability and the timing of supplier payments and customer receipts.

Investing Activities

Investing activities include cash flows related to additions to PP&E and capitalized software, the acquisition or divestiture of a business or assets, and the acquisition or sale of certain debt and equity securities.

The decrease in cash used in investing activities in fiscal year 2020 compared to fiscal year 2019 relates primarily to lower capital expenditures, partially offset by additional cash paid for acquisitions.

In fiscal year 2019, net cash used in investing activities decreased primarily due to lower cash used in acquisitions, as the GIGAVAC merger was completed in fiscal year 2018. This was partially offset by the impact of the divestiture of the Valves Business, for which proceeds were received in fiscal year 2018, cash paid for the acquisition of assets from Metal Seal, and cash used to acquire debt and equity securities.

In fiscal year 2021, we anticipate additions to PP&E and capitalized software of approximately $160.0 million to $170.0 million, which we expect to be funded with cash flows from operations.

Financing Activities

In fiscal year 2020 cash provided by financing activities was $710.2 million compared to cash used in financing activities of $366.5 million in fiscal year 2019. This change was primarily driven by issuance of the 3.75% Senior Notes and lower volume of share repurchases.

On February 3, 2021, we announced we announced that we intended to redeem in full the outstanding balance on the 6.25% Senior Notes in March 2021 at 103.125%. The cash to be used to execute this redemption, or approximately $773.4 million (excluding fees), will be presented in cash used in financing activities in the first quarter of 2021.

In fiscal year 2019, net cash used in financing activities decreased primarily due to a lower volume of ordinary share repurchases.

Indebtedness and Liquidity

The following table details our gross outstanding indebtedness as of December 31, 2020, and the associated interest expense for the year then ended:

(in millions)	Balance as of December 31, 2020	Interest Expense, net for the year ended December 31, 2020
Term Loan	$ 456.1	$ 11.0
4.875% Senior Notes	500.0	24.4
5.625% Senior Notes	400.0	22.5
5.0% Senior Notes	700.0	35.0
6.25% Senior Notes[1]	750.0	46.9
4.375% Senior Notes	450.0	19.7
3.75% Senior Notes	750.0	10.5
Revolving Credit Facility	—	2.1
Finance lease and other financing obligations	30.5	2.6
Total gross outstanding indebtedness	$ 4,036.6	
Other interest expense, net [2]		(2.9)
Interest expense, net		$ 171.8

(1) On February 3, 2021, we announced that we intended to redeem in full the outstanding balance on the 6.25% Senior Notes in March 2021. As a result, these notes have been classified as current on our consolidated balance sheets as of December 31, 2020.

(2) Other interest expense, net includes interest income, amortization of debt issuance costs, and interest costs capitalized in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Subtopic 835-20, *Capitalization of Interest*.

Debt Instruments

Refer to Note 14, "Debt," of our Financial Statements for information related to the terms of our debt instruments.

Capital Resources

Our sources of liquidity include cash on hand, cash flows from operations, and available capacity under the Revolving Credit Facility. In addition, the Senior Secured Credit Facilities provide for the Accordion, under which additional secured debt may be issued or the capacity of the Revolving Credit Facility may be increased. Availability under the Accordion varies each period based on our attainment of certain financial metrics as set forth in the terms of the Credit Agreement and the indentures under which our Senior Notes were issued (the "Senior Notes Indentures"). As of December 31, 2020, availability under the Accordion was approximately $0.6 billion.

We believe, based on our current level of operations as reflected in our results of operations for the year ended December 31, 2020, and taking into consideration the restrictions and covenants included in the Credit Agreement and Senior Notes Indentures discussed below and in Note 14, "Debt," of our Financial Statements, and the redemption of the 6.25% Senior Notes as discussed below, that these sources of liquidity will be sufficient to fund our operations, capital expenditures, ordinary share repurchases (if and when resumed), and debt service for at least the next twelve months. However, we cannot make assurances that our business will generate sufficient cash flows from operations or that future borrowings will be available to us in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. Further, our highly-leveraged nature may limit our ability to procure additional financing in the future.

On April 1, 2020, in order to enhance our financial flexibility given the general uncertainty associated with the COVID-19 pandemic, we withdrew $400.0 million from the Revolving Credit Facility. On August 17, 2020, we used a portion of the proceeds from the issuance and sale of the 3.75% Senior Notes to repay the balance outstanding on the Revolving Credit Facility. As of December 31, 2020, we had $416.1 million available under the Revolving Credit Facility, net of $3.9 million of obligations related to outstanding letters of credit issued thereunder. Outstanding letters of credit are issued primarily for the benefit of certain operating activities. As of December 31, 2020, no amounts had been drawn against these outstanding letters of credit. On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021. This redemption will be paid with cash on hand.

The Credit Agreement provides that, if our senior secured net leverage ratio exceeds a specified level, we are required to use a portion of our excess cash flow, as defined in the Credit Agreement, generated by operating, investing, or financing activities to prepay some or all of the outstanding borrowings under the Senior Secured Credit Facilities. The Credit Agreement also requires mandatory prepayments of the outstanding borrowings under the Senior Secured Credit Facilities upon certain asset dispositions and casualty events, in each case subject to certain reinvestment rights, and upon the incurrence of certain indebtedness (excluding any permitted indebtedness). These provisions were not triggered during the year ended December 31, 2020.

All obligations under the Senior Secured Credit Facilities are unconditionally guaranteed by certain of our subsidiaries (the "Guarantors"). The collateral for such borrowings under the Senior Secured Credit Facilities consists of substantially all present and future property and assets of our indirect, wholly-owned subsidiary, Sensata Technologies B.V. ("STBV") and the Guarantors.

Our ability to raise additional financing, and our borrowing costs, may be impacted by short- and long-term debt ratings assigned by independent rating agencies, which are based, in significant part, on our performance as measured by certain credit metrics such as interest coverage and leverage ratios. As of January 29, 2021, Moody’s Investors Service’s corporate credit rating for STBV was Ba2 with a stable outlook, and Standard & Poor’s corporate credit rating for STBV was BB+ with a negative outlook. The Standard & Poor's outlook represents a decline from their outlook of "stable" as of December 31, 2019. The change in outlook reflects the uncertainties in the markets caused by the COVID-19 pandemic. Any future downgrades to STBV's credit ratings may increase our future borrowing costs, but will not reduce availability under the Credit Agreement.

The Credit Agreement and the Senior Notes Indentures contain restrictions and covenants (described in more detail in Note 14, "Debt," of our Financial Statements) that limit the ability of STBV and its subsidiaries to, among other things, incur subsequent indebtedness, sell assets, pay dividends, and make other restricted payments. These restrictions and covenants, which are subject to important exceptions and qualifications set forth in the Credit Agreement and Senior Notes Indentures, were taken into consideration in establishing our share repurchase programs, and are evaluated periodically with respect to future potential funding. We do not believe that these restrictions and covenants will prevent us from funding share repurchases under our share repurchase programs with available cash and cash flows from operations, should we decide to do so. As of December 31, 2020, we believe that we were in compliance with all the covenants and default provisions under the Credit Agreement and the Senior Notes Indentures.

Share repurchase program

From time to time, our Board of Directors has authorized various share repurchase programs, which may be modified or terminated by our Board of Directors at any time. Under these programs, we may repurchase ordinary shares at such times and in amounts to be determined by our management, based on market conditions, legal requirements, and other corporate considerations, on the open market or in privately negotiated transactions, provided that such transactions were completed pursuant to an agreement and with a third party approved by our shareholders at the annual general meeting. In July 2019, our Board of Directors authorized our current $500.0 million share repurchase program (the "July 2019 Program"). On April 2, 2020, we announced a temporary suspension of the July 2019 Program, which will continue to remain on hold until market conditions show greater improvement and stability. As of December 31, 2020, approximately $302.3 million remained available under the July 2019 Program.

During the year ended December 31, 2020, we repurchased approximately 0.9 million ordinary shares at a weighted-average price of $39.17 per share under the July 2019 Program.

During the year ended December 31, 2019, we repurchased ordinary shares under the July 2019 Program and a $250.0 million share repurchase program authorized by our Board of Directors in October 2018 (the "October 2018 Program"). We repurchased approximately 7.2 million ordinary shares at a weighted-average price of $48.87 per share under these programs. The October 2018 Program was terminated upon commencement of the July 2019 Program.

During the year ended December 31, 2018, we repurchased approximately 7.6 million ordinary shares at a weighted-average price of $52.75 per share under a $400.0 million share repurchase program authorized by our Board of Directors in May 2018.

Contractual Obligations and Commercial Commitments

The table below reflects our contractual obligations as of December 31, 2020. On February 3, 2021, we announced that we intended to redeem in full the outstanding balance on the 6.25% Senior Notes in March 2021. As a result of this announcement, the 6.25% Senior Notes have been classified within current liabilities on our consolidated balance sheet as of December 31, 2020. The table below has been recast to reflect this classification. Amounts we pay in future periods may vary from those reflected in the table. Amounts in the table below have been calculated based on unrounded numbers. Accordingly, certain amounts may not appear to recalculate due to the effect of rounding.

	Payments Due by Period				
(In millions)	**Total**	**Less than One Year**	**One to Three Years**	**Three to Five Years**	**More than Five Years**
Debt obligations principal[1]	$ 4,006.1	$ 754.6	$ 509.3	$ 1,109.3	$ 1,632.9
Debt obligations interest[2]	919.3	187.8	275.9	205.2	250.4
Finance lease obligations principal[3]	30.3	2.1	3.1	3.8	21.3
Finance lease obligations interest[3]	19.2	2.5	4.6	4.0	8.2
Other financing obligations principal[4]	0.2	0.2	—	—	—
Operating lease obligations[5]	70.0	14.6	21.0	12.6	21.8
Non-cancelable purchase obligations[6]	63.2	41.4	21.4	0.3	0.2
Total contractual obligations[7][8]	$ 5,108.3	$ 1,003.2	$ 835.3	$ 1,335.2	$ 1,934.8

(1) With the exception of the 6.25% Senior Notes, as discussed above, represents the contractually required principal payments, in accordance with the required payment schedule, on our debt obligations in existence as of December 31, 2020. The redemption of the $750.0 million aggregate principal amount of 6.25% Senior Notes is reflected as an outflow in fiscal year 2021.

(2) Represents the contractually required interest payments, in accordance with the required payment schedule, on our debt obligations in existence as of December 31, 2020. Cash flows associated with the next interest payment to be made on our variable rate debt subsequent to December 31, 2020 were calculated using the interest rates in effect as of the latest interest rate reset date prior to December 31, 2020, plus the applicable spread. Fiscal year 2021 outflow reflects cash outflow of $26.0 million related to interest on the 6.25% Senior Notes through March 5, 2021 and cash outflow of $23.4 million related to the 3.125% premium owed to the lenders as a result of the early redemption. This schedule has also been adjusted to reflect the annualized full year cash interest savings of approximately $46.9 million per year through fiscal year 2025 and $23.6 million in fiscal year 2026 as a result of early redemption of the 6.25% Senior Notes.

(3) Represents the contractually required payments, in accordance with the required payment schedule, under our finance lease obligations in existence as of December 31, 2020. No assumptions were made with respect to renewing these leases beyond their current terms.

(4) Represents the contractually required payments, in accordance with the required payment schedule, under our financing obligations in existence as of December 31, 2020. No assumptions were made with respect to renewing these financing arrangements beyond their current terms.

(5) Represents the contractually required payments, in accordance with the required payment schedule, under our operating lease obligations in existence as of December 31, 2020. No assumptions were made with respect to renewing these leases beyond their current terms.

(6) Represents the contractually required payments under our various purchase obligations in existence as of December 31, 2020. No assumptions were made with respect to renewing the purchase obligations at the expiration date of their initial terms.

(7) Contractual obligations denominated in a foreign currency were calculated utilizing the USD to local currency exchange rates in effect as of December 31, 2020.

(8) This table does not include the contractual obligations associated with our pension and other post-retirement benefit plans. As of December 31, 2020, we had recognized a net benefit liability of $51.5 million, representing the net unfunded benefit obligations of the defined benefit and retiree healthcare plans. Refer to Note 13, "Pension and Other Post-Retirement Benefits," of our Financial Statements for additional information related to our pension and other post-retirement benefits, including expected benefit payments for the next 10 years. This table also does not include $24.7 million of unrecognized tax benefits as of December 31, 2020, as we are unable to make reasonably reliable estimates of when cash settlement, if any, will occur with a tax authority, as the timing and the ultimate resolution of the examination is uncertain. Refer to Note 7, "Income Taxes," of our Financial Statements for additional information related to our unrecognized tax benefits.

Critical Accounting Policies and Estimates

As discussed in Note 2, "Significant Accounting Policies," of our Financial Statements, which more fully describes our significant accounting policies, the preparation of consolidated financial statements in accordance with U.S. GAAP requires us to exercise judgment in the process of applying our accounting policies. It also requires that we make estimates and assumptions about future events that affect the amounts reported in the consolidated financial statements and accompanying notes. The accounting policies and estimates that we believe are most critical to the portrayal of our financial condition and results of operations are listed below. We believe these policies require the most difficult, subjective, and complex judgments in estimating the effect of inherent uncertainties.

Revenue Recognition

The discussion below details the most significant judgments and estimates we make regarding recognition of revenue in accordance with FASB ASC Topic 606, *Revenue from Contracts with Customers*. In accordance with FASB ASC Topic 606, we recognize revenue to depict the transfer of promised goods to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods using a five step model. The most critical judgments and estimates we make in the implementation of this model relate to identifying the contract with the customer and determination of the transaction price associated with the performance obligation(s) in the contract, specifically related to variable consideration.

While many of the agreements with our customers specify certain terms and conditions that apply to any transaction between the parties, many of which are in effect for a defined term, the vast majority of these agreements do not result in contracts (as defined in FASB ASC Topic 606) because they do not create enforceable rights and obligations on the parties. Specifically, (1) the parties are not committed to perform any obligations in accordance with the specified terms and conditions until a customer purchase order is received and accepted by us and (2) there is a unilateral right of each party to terminate the agreement at any time without compensating the other party. For this reason, the vast majority of our contracts (as defined in FASB ASC Topic 606) are customer purchase orders. If this assessment were to change, it could result in a material change to the amount of net revenue recognized in a period.

The transaction price is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer. In determining the transaction price related to a contract, we determine whether the amount promised in a contract includes a variable amount (variable consideration). Variable consideration may be specified in the customer purchase order, in another agreement that identifies terms and conditions of the transaction, or based on our customary practices. We have identified certain types of variable consideration that may be included in the transaction price related to our contracts, including sales returns (which generally include a right of return for defective or non-conforming product) and trade discounts (including retrospective volume discounts and early payment incentives). Such variable consideration has not historically been material. However, should our judgments and estimates regarding variable consideration change, it could result in a material change to the amount of net revenue recognized in a period.

Goodwill, Intangible Assets, and Long-Lived Assets

Businesses acquired are recognized at their fair value on the date of acquisition, with the excess of the purchase price over the fair value of identifiable assets acquired and liabilities assumed recognized as goodwill. Intangible assets acquired may include either definite-lived or indefinite-lived intangible assets, or both. In accordance with FASB ASC Topic 350, *Intangibles —Goodwill and Other*, goodwill and intangible assets determined to have an indefinite useful life are not amortized. Instead these assets are evaluated for impairment on an annual basis, and whenever events or business conditions change that could indicate that the asset is impaired.

Goodwill

Our judgments regarding the existence of indicators of goodwill impairment are based on several factors, including the performance of the end markets served by our customers, as well as the actual financial performance of our reporting units and their respective financial forecasts over the long-term. We evaluate goodwill and indefinite-lived intangible assets for impairment in the fourth quarter of each fiscal year, unless events occur which trigger the need for an earlier impairment review.

Identification of reporting units. Our reporting units have been identified based on the definitions and guidance provided in FASB ASC Topic 350. Identification of reporting units includes an analysis of the components that comprise each of our operating segments, which considers, among other things, the manner in which we operate our business and the availability of discrete financial information. Components of an operating segment are aggregated to form one reporting unit if the components have similar economic characteristics. We periodically review these reporting units to ensure that they continue to reflect the manner in which the business is operated.

Historically, we have identified six reporting units. In the fourth quarter of 2020, in connection with our review of these reporting units, and consistent with our determination that our Performance Sensing operating segment was now two separate operating segments, we determined that our Performance Sensing reporting unit was now two separate reporting units, Automotive and HVOR. Refer to Note 20, “Segment Reporting,” of our Financial Statements for additional information on this decision. We reassigned assets and liabilities, including goodwill, to these new reporting units as required by FASB ASC Topic 350. This did not result in an impairment of the goodwill of either reporting unit. Accordingly, we now have seven reporting units, Automotive, HVOR, Electrical Protection, Industrial Sensing, Aerospace, Power Management, and Interconnection.

Assignment of assets, liabilities, and goodwill to reporting units. Some assets and liabilities relate to the operations of multiple reporting units. We allocate these assets and liabilities to the reporting units based on methods that we believe are reasonable and supportable. We apply that allocation method on a consistent basis from year to year. Other assets and liabilities, such as debt, cash and cash equivalents, and PP&E associated with our corporate offices, are viewed as being corporate in nature. Accordingly, we do not assign these assets and liabilities to our reporting units.

In the event we reorganize our business, we reassign the assets (including goodwill) and liabilities among the affected reporting units using a reasonable and supportable methodology. As businesses are acquired, we assign assets acquired (including goodwill) and liabilities assumed to a new or existing reporting unit as of the date of the acquisition. In the event a disposal group meets the definition of a business, goodwill is allocated to the disposal group based on the relative fair value of the disposal group to the retained portion of the related reporting unit.

Evaluation of goodwill for impairment. We have the option to first assess qualitative factors to determine whether a quantitative analysis must be performed. The objective of a qualitative analysis is to assess whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. We make this assessment based on macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and other relevant factors as applicable. If we elect not to use this option, or if we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying value, then we prepare a discounted cash flow analysis to determine whether the carrying value of the reporting unit exceeds its estimated fair value. If the carrying value of a reporting unit exceeds its estimated fair value, we recognize an impairment of goodwill for the amount of this excess, in accordance with the guidance in FASB Accounting Standards Update ("ASU") No. 2017-04, *Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment*, which we adopted as of January 1, 2020.

We evaluated the goodwill of each reporting unit for impairment as of October 1, 2020 using a combination of the quantitative and qualitative methods. As a result of this evaluation we determined that none of our reporting units were impaired. For reporting units that were evaluated using the quantitative method, we estimated the fair values of our reporting units using the discounted cash flow method. For this method, we prepared detailed annual projections of future cash flows for the reporting unit for the subsequent five fiscal years (the "Discrete Projection Period"). We estimated the value of the cash flows beyond the fifth fiscal year (the "Terminal Year") by applying a multiple to the projected Terminal Year EBITDA. The cash flows from the Discrete Projection Period and the Terminal Year were discounted at an estimated weighted-average cost of capital ("WACC") appropriate for each reporting unit. The estimated WACC was derived, in part, from comparable companies appropriate to each reporting unit. We believe that our procedures for estimating discounted future cash flows, including the Terminal Year valuation, were reasonable and consistent with accepted valuation practices.

The preparation of forecasts of revenue growth and profitability for use in the long-range forecasts, the selection of the discount rates, and the estimation of the multiples used in valuing the Terminal Year involve significant judgments. Changes to these assumptions could affect the estimated fair value of one or more of our reporting units and could result in a goodwill impairment charge in a future period.

Types of events that could result in a goodwill impairment. As noted above, the assumptions used in the quantitative calculation of fair value of our reporting units, including the long-range forecasts, the selection of the discount rates, and the estimation of the multiples or long-term growth rates used in valuing the Terminal Year involve significant judgments. Changes to these assumptions could affect the estimated fair values of our reporting units calculated in prior years and could result in a goodwill impairment charge in a future period. We believe that certain factors, such as a future recession, any material adverse conditions in the automotive industry and other industries in which we operate, and other factors identified in Item 1A, "Risk Factors," included elsewhere in this Report could cause us to revise our long-term projections and could reduce the multiples used to determine Terminal Year value. Such revisions could result in a goodwill impairment charge in the future.

We consider a combination of quantitative and qualitative factors to determine whether a reporting unit is at risk of failing Step 1 of the goodwill impairment test, including: the timing of our most recent quantitative impairment tests and the relative amount by which a reporting unit's fair value exceeded its then carrying value, the inputs and assumptions underlying our valuation models and the sensitivity of our fair value measurements to those inputs and assumptions, the impact that adverse economic or market conditions may have on the degree of uncertainty inherent in our long-term operating forecasts, and changes in the carrying value of a reporting unit's net assets from the time of our most recent goodwill impairment test. Based on the results of this analysis, we do not consider any of our reporting units to be at risk of failing Step 1 of the goodwill impairment test.

Evaluation of other intangible assets for impairment

Indefinite-lived intangible assets. Similar to goodwill, we perform an annual impairment review of our indefinite-lived intangible assets in the fourth quarter of each fiscal year, unless events occur that trigger the need for an earlier impairment review. We have the option to first assess qualitative factors in determining whether it is more likely than not that an indefinite-lived intangible asset is impaired. If we elect not to use this option, or we determine that it is more likely than not that the asset is impaired, we perform a quantitative impairment analysis in which we estimate the fair value of the indefinite-lived intangible asset and compare that amount to its carrying value. In performing this analysis, we estimate the fair value by using the relief-from-royalty method, in which we make assumptions about future conditions impacting the fair value of our indefinite-lived intangible assets, including projected growth rates, cost of capital, effective tax rates, and royalty rates. Impairment, if any, is based on the excess of the carrying value over the fair value of these assets.

We evaluated our indefinite-lived intangible assets for impairment as of October 1, 2020 (using the quantitative method) and determined that the estimated fair values of these assets exceeded their carrying values at that date. Should certain assumptions used in the development of the fair values of our indefinite-lived intangible assets change, we may be required to recognize an impairment charge in the future.

Definite-lived intangible assets. Reviews are regularly performed to determine whether facts or circumstances exist that indicate that the carrying values of our definite-lived intangible assets to be held and used are impaired. If we determine that such facts or circumstances exist, we estimate the recoverability of these assets by comparing the projected undiscounted net cash flows associated with these assets to their respective carrying values. If the sum of the projected undiscounted net cash flows falls below the carrying value of an asset, the impairment charge is measured as the excess of the carrying value over the fair value of that asset. We determine fair value by using the appropriate income approach valuation methodology depending on the nature of the definite-lived intangible asset.

Evaluation of long-lived assets for impairment

We periodically re-evaluate the carrying values and estimated useful lives of long-lived assets whenever events or changes in circumstances indicate that the carrying values of these assets may not be recoverable. We use estimates of undiscounted cash flows from long-lived assets to determine whether the carrying values of such assets are recoverable over the assets' remaining useful lives. These estimates include assumptions about our future performance and the performance of the end markets we serve. If an asset is determined to be impaired, the impairment is the amount by which its carrying value exceeds its fair value. These evaluations are performed at a level where discrete cash flows may be attributed to either an individual asset or a group of assets.

Income Taxes

As part of the process of preparing our financial statements, we are required to estimate our provision for (or benefit from) income taxes in each of the jurisdictions in which we operate. This involves estimating our actual current tax exposure, including assessing the risks associated with tax audits, together with assessing temporary differences resulting from the different treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities.

Management judgment is required in determining various elements of our provision for (or benefit from) income taxes, including the amount of tax benefits on uncertain tax positions, and deferred tax assets that should be recognized.

In accordance with FASB ASC Topic 740, *Income Taxes*, we record uncertain tax positions on the basis of a two-step process. First, we determine whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position. Second, for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the relevant tax authority. Significant judgment is required in evaluating whether our tax positions meet this two-step process. The more-likely-than-not recognition threshold must be met in each reporting period to support continued recognition of any tax benefits claimed, both in the current year, as well as any year which remains open for review by the relevant tax authority at the balance sheet date. Penalties and interest related to uncertain tax positions may be classified as either income taxes or another expense line item in the consolidated statements of operations. We classify interest and penalties related to uncertain tax positions within the provision for/(benefit from) income taxes line of the consolidated statements of operations.

We recognize deferred tax assets to the extent that we believe these assets are more likely than not to be realized. In measuring our deferred tax assets, we consider all available evidence, both positive and negative, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations in various jurisdictions, to determine whether, based on the weight of that evidence, a valuation allowance is needed for all or some portion of the deferred tax assets. Significant judgment is required in considering the relative impact of these items along with the weight that should be given to each category, commensurate with the extent to which it can be objectively verified. The more negative evidence that exists, the more positive evidence is necessary, and the more difficult it is to support a conclusion that a valuation allowance is not needed. Additionally, we utilize the "more likely than not" criteria established in FASB ASC Topic 740 to determine whether the future tax benefit from the deferred tax assets should be recognized.

Ultimately, the ability to realize our deferred tax assets is based on our assessment of future taxable income, which is based on estimated future results. In the event that actual results differ from these estimates, or we adjust our estimates in the future, we may need to adjust our valuation allowance assessment, which could materially impact our consolidated financial position and results of operations.

Pension and Other Post-Retirement Benefits

We sponsor various pension and other post-retirement benefit plans covering our current and former employees in several countries.

The funded status of pension and other post-retirement benefit plans is measured as the difference between the fair value of plan assets and the benefit obligation at the measurement date. Changes in the funded status of a pension or other post-retirement benefit plan are recognized in the year in which they occur by adjusting the recognized (net) liability or asset with an offsetting adjustment to either net income or other comprehensive income.

Our most difficult and subjective judgments and estimates relate to the valuation of our benefit obligations. Benefit obligations represent the actuarial present value of all benefits attributed by the pension formula as of the measurement date to employee service rendered before that date, and can be categorized as projected benefit obligations or accumulated benefit obligations. The value of projected benefit obligations take into consideration various actuarial assumptions including future compensation levels and the probability of payment between the measurement date and the expected date of payment. Accumulated benefit obligations differ from projected benefit obligations only in that they include no assumptions about future compensation levels.

The most significant assumptions used to determine a plan's funded status and net periodic benefit cost relate to discount rate, expected return on plan assets, and rate of increase in healthcare costs. These assumptions are reviewed annually. Refer to Note 13, "Pension and Other Post-Retirement Benefits," of our Financial Statements for additional information related to the values determined for each of these assumptions in the last three fiscal years.

The discount rate reflects the current rate at which the pension and other post-retirement liabilities could be effectively settled, considering the timing of expected payments for plan participants. It is used to discount the estimated future obligations of the plans to the present value of the liability reflected in the financial statements. In estimating this rate in countries that have a market of high-quality fixed-income investments, we consider rates of return on these investments included in various bond indices, adjusted to eliminate the effects of call provisions and differences in the timing and amounts of cash outflows related to the bonds. In other countries where a market of high-quality fixed-income investments does not exist, we estimate the discount rate using government bond yields or long-term inflation rates.

The expected return on plan assets reflects the average rate of earnings expected on the funds invested to provide for the benefits included in the projected benefit obligation. To determine the expected return on plan assets, we consider the historical returns earned by similarly invested assets, the rates of return expected on plan assets in the future, and our investment strategy and asset mix with respect to the plans' funds.

The rate of increase of healthcare costs directly impacts the estimate of our future obligations in connection with our post-retirement medical benefits. Our estimate of healthcare cost trends is based on historical increases in healthcare costs under similarly designed plans, the level of increase in healthcare costs expected in the future, and the design features of the underlying plan.

Other assumptions used include employee demographic factors such as compensation rate increases, retirement patterns, employee turnover rates, and mortality rates. Our review of demographic assumptions includes analyzing historical patterns and/or referencing industry standard tables, combined with our expectations around future compensation and staffing strategies. The difference between these assumptions and our actual experience results in the recognition of an actuarial gain or loss.

Future changes to assumptions, or differences between actual and expected outcomes, can significantly affect our future net periodic benefit cost, projected benefit obligations, and accumulated other comprehensive loss.

Share-Based Compensation

FASB ASC Topic 718, *Compensation—Stock Compensation*, requires that a company measure at fair value any new or modified share-based compensation arrangements with employees, such as stock options and restricted securities, and recognize as compensation expense that fair value over the requisite service period.

We estimate the fair value of stock options on the date of grant using the Black-Scholes-Merton option-pricing model. Key assumptions used in this model are (1) the fair value of the underlying ordinary shares, (2) the time period for which we expect the stock options will be outstanding (the expected term), (3) the expected volatility of the price of our ordinary shares, (4) the risk-free interest rate, and (5) the expected dividend yield. Expected term and expected volatility are the judgments that we believe are the most critical and subjective in estimating fair value (and related share-based compensation expense) of our stock option awards.

The expected term is determined based upon our own historical average term of exercised and outstanding stock options. We consider our own historical volatility, as well as our implied volatility, in estimating expected volatility for stock options. Implied volatility provides a forward-looking indication and may offer insight into expected volatility.

Other assumptions used include risk-free interest rate and expected dividend yield. The risk-free interest rate is based on the yield for a U.S. Treasury security having a maturity similar to the expected term of the related stock option grant. This assumption is dependent on the assumed expected term. The dividend yield of 0% is based on our history of having never declared or paid any dividends on our ordinary shares as well as our current intention not to declare dividends in the foreseeable future. Refer to Item 5, "Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities," included elsewhere in this Report for additional information related to limitations on our ability to pay dividends.

Certain of our restricted securities include performance conditions that require us to estimate the probable outcome of the performance condition. This assessment is based on management's judgment using internally developed forecasts and is assessed at each reporting period. Compensation expense is recognized if it is probable that the performance condition will be achieved.

We elect to recognize share-based compensation expense net of estimated forfeitures as permitted by FASB ASC Topic 718, and therefore only recognize compensation expense for those awards expected to vest over the requisite service period. The forfeiture rate is based on our estimate of forfeitures by plan participants after consideration of historical forfeiture rates. Compensation expense recognized for each award ultimately reflects the number of units that actually vest.

Material changes to any of these assumptions may have a significant effect on our valuation of stock options, and, ultimately, the share-based compensation expense recognized in the consolidated statements of operations.

Off-Balance Sheet Arrangements

From time to time, we execute contracts that require us to indemnify the other parties to the contracts. These indemnification obligations generally arise in two contexts. First, in connection with certain transactions, such as the divestiture of a business or the issuance of debt or equity securities, the agreement typically contains standard provisions requiring us to indemnify the purchaser against breaches by us of representations and warranties contained in the agreement. These indemnities are generally subject to time and liability limitations. Second, we enter into agreements in the ordinary course of business, such as customer contracts, that might contain indemnification provisions relating to product quality, intellectual property infringement, governmental regulations and employment related matters, and other typical indemnities. In certain cases, indemnification obligations arise by law.

We believe that our indemnification obligations are consistent with other companies in the markets in which we compete. Performance under any of these indemnification obligations would generally be triggered by a breach of the terms of the contract or by a third-party claim. Historically, we have experienced only immaterial and irregular losses associated with these indemnifications. Consequently, any future liabilities brought about by these indemnifications cannot reasonably be estimated or accrued.

Refer to Note 15, "Commitments and Contingencies," of our Financial Statements for additional information related to our off-balance sheet arrangements.

Recent Accounting Pronouncements

Recently issued accounting standards adopted in the current period:

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment* in order to simplify the subsequent measurement of goodwill. This guidance changes the method by which an impairment of goodwill is calculated. Under the previous guidance, goodwill impairment was calculated in two steps. In Step 1, an entity would assess whether an impairment had occurred, either qualitatively or by comparing the estimated fair values of our reporting units to their respective carrying values, including goodwill. If the results of Step 1 indicated an impairment had occurred, Step 2 would be performed, in which the implied value of goodwill of the reporting unit would be calculated and an impairment would be recognized for the difference between the implied value of goodwill and the recorded amount of goodwill. Under FASB ASU No. 2017-04, while Step 1 of this process has not changed, Step 2 as described above has been eliminated, and impairment charges are recorded for the amount by which the carrying value of the reporting unit exceeds its estimated fair value. FASB ASU No. 2017-04 was effective for annual and interim goodwill impairment tests in fiscal years beginning after December 15, 2019. We adopted FASB ASU No. 2017-04 as of January 1, 2020. This adoption did not have an impact on our financial statements as none of our reporting units were determined to have carrying values in excess of fair values during the year ended December 31, 2020.

Recently issued accounting standards to be adopted in a future period:

There are no recently issued accounting standards to be adopted in future periods that are expected to have a material impact on our consolidated financial position or results of operations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to changes in foreign currency exchange rates because we transact in a variety of foreign currencies. We are also exposed to changes in the prices of certain commodities (primarily metals) that we use in production. Changes in these foreign currency exchange rates and commodity prices may have an impact on future cash flows and earnings. We monitor our exposure to these risks, and may employ derivative financial instruments to limit the volatility to earnings and cash flows generated by these exposures. We employ derivative contracts that may or may not be designated for hedge accounting treatment under FASB ASC Topic 815, *Derivatives and Hedging*, which can result in volatility to earnings depending upon fluctuations in the underlying markets.

By using derivative instruments, we are subject to credit and market risk. The fair market values of these derivative instruments are based upon valuation models whose inputs are derived using market observable inputs, including foreign currency exchange and commodity spot and forward rates, and reflect the asset and liability positions as of the end of each reporting period. When the fair value of a derivative contract is positive, the counterparty is liable to us, thus creating a receivable risk for us. We are exposed to counterparty credit (or repayment) risk in the event of non-performance by counterparties to our derivative agreements. We attempt to minimize this risk by entering into transactions with major financial institutions of investment grade credit rating.

Interest Rate Risk

As discussed further in Note 14, "Debt," of our Financial Statements, the Credit Agreement provides for the Senior Secured Credit Facilities consisting of the Term Loan, the Revolving Credit Facility, and incremental availability under which additional secured credit facilities could be issued under certain circumstances.

The Term Loan accrues interest at a variable rate that is currently based on LIBOR, plus an interest rate margin, in accordance with the terms of the Credit Agreement.

Sensitivity Analysis

As of December 31, 2020, we had an outstanding balance on the Term Loan (excluding debt discount and deferred financing costs) of $456.1 million. The applicable interest rate associated with the Term Loan at December 31, 2020 was 1.90%. An increase of 100 basis points in this rate would result in additional interest expense of $4.4 million in fiscal year 2021. An additional 100 basis point increase in this rate would result in incremental interest expense of $8.7 million in fiscal year 2021.

As of December 31, 2019, we had an outstanding balance on the Term Loan (excluding debt discount and deferred financing costs) of $460.7 million. The applicable interest rate associated with the Term Loan at December 31, 2019 was 3.59%. An increase of 100 basis points in this rate would have resulted in additional interest expense of $4.7 million in fiscal year 2020. An additional 100 basis point increase in this rate would have resulted in incremental interest expense of $4.7 million in fiscal year 2020.

Foreign Currency Risk

Consistent with our risk management objective and strategy to reduce exposure to variability in cash flows, and for non-trading purposes, we enter into foreign currency exchange rate derivatives that qualify as cash flow hedges, and that are intended to offset the effect of exchange rate fluctuations on forecasted sales and certain manufacturing costs. We also enter into foreign currency forward contracts that are not designated for hedge accounting purposes. Refer to Note 19, "Derivative Instruments and Hedging Activities," of our Financial Statements for additional information related to the foreign currency forward contracts outstanding as of December 31, 2020.

Sensitivity Analysis

The tables below present our foreign currency forward contracts as of December 31, 2020 and 2019 and the estimated impact to future pre-tax earnings as a result of a 10% strengthening/weakening in the foreign currency exchange rate:

		(Decrease)/Increase to Future Pre-tax Earnings Due to:	
(In millions)	Net (Liability)/Asset Balance as of December 31, 2020	10% Strengthening of the Value of the Foreign Currency Relative to the U.S. Dollar	10% Weakening of the Value of the Foreign Currency Relative to the U.S. Dollar
Euro	$ (21.3)	$ (41.9)	$ 41.9
Chinese Renminbi	$ (2.2)	$ (16.5)	$ 16.5
Japanese Yen	$ 0.0	$ 0.9	$ (0.9)
Korean Won	$ (1.0)	$ (1.5)	$ 1.5
Malaysian Ringgit	$ 0.0	$ 0.5	$ (0.5)
Mexican Peso	$ 12.3	$ 15.9	$ (15.9)
British Pound Sterling	$ 3.7	$ 7.5	$ (7.5)

		(Decrease)/Increase to Future Pre-tax Earnings Due to:	
(In millions)	Net Asset/(Liability) Balance as of December 31, 2019	10% Strengthening of the Value of the Foreign Currency Relative to the U.S. Dollar	10% Weakening of the Value of the Foreign Currency Relative to the U.S. Dollar
Euro	$ 12.6	$ (41.2)	$ 41.2
Chinese Renminbi	$ (0.7)	$ (10.7)	$ 10.7
Japanese Yen	$ 0.0	$ 0.5	$ (0.5)
Korean Won	$ 0.3	$ (2.1)	$ 2.1
Malaysian Ringgit	$ 0.0	$ 0.5	$ (0.5)
Mexican Peso	$ 8.5	$ 15.5	$ (15.5)
British Pound Sterling	$ 0.8	$ 6.7	$ (6.7)

Commodity Risk

We are exposed to the potential change in prices associated with certain commodities used in the manufacturing of our products. We offset a portion of this exposure by entering into forward contracts that fix the price at a future date for various notional amounts associated with these commodities. These forward contracts are not designated as accounting hedges. Refer to Note 19, "Derivative Instruments and Hedging Activities," of our Financial Statements for additional information related to the commodity forward contracts outstanding as of December 31, 2020.

Sensitivity Analysis

The tables below present our commodity forward contracts as of December 31, 2020 and 2019 and the estimated impact to pre-tax earnings associated with a 10% increase/(decrease) in the related forward price for each commodity:

(In millions, except per unit amounts)	Net Asset/(Liability) Balance as of December 31, 2020	Average Forward Price Per Unit as of December 31, 2020	Increase/(Decrease) to Pre-tax Earnings Due to 10% Increase in the Forward Price	Increase/(Decrease) to Pre-tax Earnings Due to 10% Decrease in the Forward Price
Silver	$ 4.4	$ 26.47	$ 2.0	$ (2.0)
Gold	$ 1.2	$ 1,901.03	$ 1.4	$ (1.4)
Nickel	$ 0.2	$ 7.58	$ 0.1	$ (0.1)
Aluminum	$ 0.1	$ 0.91	$ 0.2	$ (0.2)
Copper	$ 1.2	$ 3.52	$ 0.6	$ (0.6)
Platinum	$ 1.1	$ 1,064.51	$ 0.8	$ (0.8)
Palladium	$ 0.4	$ 2,423.24	$ 0.2	$ (0.2)

(In millions, except per unit amounts)	Net Asset/(Liability) Balance as of December 31, 2019	Average Forward Price Per Unit as of December 31, 2019	Increase/(Decrease) to Pre-tax Earnings Due to 10% Increase in the Forward Price	Increase/(Decrease) to Pre-tax Earnings Due to 10% Decrease in the Forward Price
Silver	$ 1.2	$ 18.15	$ 1.6	$ (1.6)
Gold	$ 1.1	$ 1,539.13	$ 1.2	$ (1.2)
Nickel	$ 0.0	$ 6.41	$ 0.1	$ (0.1)
Aluminum	$ (0.2)	$ 0.84	$ 0.3	$ (0.3)
Copper	$ (0.0)	$ 2.81	$ 0.7	$ (0.7)
Platinum	$ 0.6	$ 986.68	$ 0.7	$ (0.7)
Palladium	$ 0.4	$ 1,873.95	$ 0.2	$ (0.2)

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

1. Financial Statements

The following audited consolidated financial statements of Sensata Technologies Holding plc are included in this Annual Report on Form 10-K:

2. Financial Statement Schedules

The following schedules are included elsewhere in this Annual Report on Form 10-K:

Schedules other than those listed above have been omitted since the required information is not present, or not present in amounts sufficient to require submission of the schedule, or because the information required is included in the audited consolidated financial statements or the notes thereto.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
Sensata Technologies Holding plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sensata Technologies Holding plc (the Company) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, cash flows and changes in shareholders' equity for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedules listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at 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 U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 12, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) 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.

Valuation of goodwill	
Description of the Matter	As of December 31, 2020, the Company's goodwill balance was $3.1 billion. The Company's goodwill is initially assigned to its reporting units as of the acquisition date. As discussed in Note 2 of the consolidated financial statements, goodwill is tested for impairment at the reporting unit level. The Company evaluated goodwill for impairment as of October 1, 2020. The Company used a combination of the quantitative and qualitative methods to assess their reporting units for impairment.

Auditing management’s goodwill impairment analysis for the reporting units for which the quantitative method was utilized was complex and judgmental due to the estimation required in determining the fair value of the reporting units. In particular, the fair value estimates included significant assumptions such as the long-range forecasts, the selection of the discount rates, and the estimation of the multiples or long-term growth rates used in valuing the terminal year which are affected by expectations about future market or economic conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company’s quantitative goodwill impairment review process. For example, we tested controls over management’s review of the data used in their valuation models and reviewed significant assumptions discussed above used in determining the reporting unit fair values.

To test the estimated fair value of the Company’s reporting units, with the assistance of our valuation professionals, our audit procedures included, among others, assessing fair value methodologies and testing the significant assumptions discussed above. We compared the significant assumptions used by management to current industry and economic trends, the Company’s historical trends with consideration given to changes in the Company’s business, customer base or product mix and other relevant factors. We assessed the historical accuracy of management’s estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the reporting units that would result from changes in the assumptions. We also evaluated the reconciliation of the estimated aggregate fair value of the reporting units to the Company’s market capitalization.

Income taxes – uncertain tax positions

Description of the Matter

As discussed in Note 7, at December 31, 2020, the Company had approximately $201.4 million of unrecognized tax benefits associated with uncertain tax positions. Uncertainty in a tax position may arise as tax laws are subject to interpretation. The Company uses significant judgment in (1) determining whether a tax position’s technical merits are more-likely-than-not to be sustained and (2) measuring the amount of tax benefit that qualifies for recognition.

Auditing the recognition and measurement of tax positions related to uncertain tax positions involved significant auditor judgment and use of tax professionals with specialized skills and knowledge because both the recognition and measurement of the tax positions are complex, highly judgmental and based on interpretations of tax laws and legal rulings.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company’s process to identify and record the reserve for uncertain tax positions. For example, we tested controls over management’s evaluation of the technical merits of tax positions and identification of uncertain tax positions and the controls to measure the benefit of those tax positions, including management’s review of the inputs and calculations of unrecognized tax benefits resulting from uncertain tax positions.

To test the amounts recorded as uncertain tax positions we involved our tax professionals to evaluate the technical merits of the Company’s income tax positions. Our procedures included, among others, evaluating income tax technical analysis or other third party advice obtained by the company and inspecting correspondence, assessments and settlements from the relevant tax authorities. We also applied our knowledge and experience with the application of federal, foreign and state income tax laws to evaluate the Company’s accounting for those tax positions. We analyzed the Company’s assumptions and data used to determine the amount of tax benefit to recognize and tested the accuracy of the calculations. We also evaluated the Company’s income tax disclosures included in Note 7 in relation to these matters.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2005.

Boston, Massachusetts
February 12, 2021

SENSATA TECHNOLOGIES HOLDING PLC

Consolidated Balance Sheets

(In thousands, except per share amounts)

	As of December 31, 2020	As of December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 1,861,980	$ 774,119
Accounts receivable, net of allowances of $19,033 and $15,129 as of December 31, 2020 and 2019, respectively	576,647	557,874
Inventories	451,005	506,678
Prepaid expenses and other current assets	90,340	126,981
Total current assets	2,979,972	1,965,652
Property, plant and equipment, net	803,825	830,998
Goodwill	3,111,349	3,093,598
Other intangible assets, net	691,549	770,904
Deferred income tax assets	84,785	21,150
Other assets	172,722	152,217
Total assets	$ 7,844,202	$ 6,834,519
Liabilities and shareholders' equity		
Current liabilities:		
Current portion of long-term debt, finance lease and other financing obligations	$ 757,205	$ 6,918
Accounts payable	393,907	376,968
Income taxes payable	19,215	35,234
Accrued expenses and other current liabilities	324,830	215,626
Total current liabilities	1,495,157	634,746
Deferred income tax liabilities	259,857	251,033
Pension and other post-retirement benefit obligations	48,002	36,100
Finance lease and other financing obligations, less current portion	27,931	28,810
Long-term debt, net	3,213,747	3,219,885
Other long-term liabilities	94,022	90,190
Total liabilities	5,138,716	4,260,764
Commitments and contingencies (Note 15)		
Shareholders' equity:		
Ordinary shares, €0.01 nominal value per share, 177,069 shares authorized and 173,266 and 172,561 shares issued as of December 31, 2020 and 2019, respectively	2,220	2,212
Treasury shares, at cost, 15,631 and 14,733 shares as of December 31, 2020 and 2019, respectively	(784,596)	(749,421)
Additional paid-in capital	1,759,668	1,725,091
Retained earnings	1,777,729	1,616,357
Accumulated other comprehensive loss	(49,535)	(20,484)
Total shareholders' equity	2,705,486	2,573,755
Total liabilities and shareholders' equity	$ 7,844,202	$ 6,834,519

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

SENSATA TECHNOLOGIES HOLDING PLC

Consolidated Statements of Operations

(In thousands, except per share amounts)

	For the year ended December 31,		
	2020	2019	2018
Net revenue	$ 3,045,578	$ 3,450,631	$ 3,521,627
Operating costs and expenses:			
Cost of revenue	2,119,044	2,267,433	2,266,863
Research and development	131,429	148,425	147,279
Selling, general and administrative	294,725	281,442	305,558
Amortization of intangible assets	129,549	142,886	139,326
Restructuring and other charges, net	33,094	53,560	(47,818)
Total operating costs and expenses	2,707,841	2,893,746	2,811,208
Operating income	337,737	556,885	710,419
Interest expense, net	(171,757)	(158,554)	(153,679)
Other, net	(339)	(7,908)	(30,365)
Income before taxes	165,641	390,423	526,375
Provision for/(benefit from) income taxes	1,355	107,709	(72,620)
Net income	$ 164,286	$ 282,714	$ 598,995
Basic net income per share	$ 1.04	$ 1.76	$ 3.55
Diluted net income per share	$ 1.04	$ 1.75	$ 3.53

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

SENSATA TECHNOLOGIES HOLDING PLC

Consolidated Statements of Comprehensive Income

(In thousands)

	For the year ended December 31,		
	2020	2019	2018
Net income	$ 164,286	$ 282,714	$ 598,995
Other comprehensive (loss)/income, net of tax:			
Cash flow hedges	(23,279)	7,362	37,363
Defined benefit and retiree healthcare plans	(5,772)	(1,668)	(377)
Other comprehensive (loss)/income	(29,051)	5,694	36,986
Comprehensive income	$ 135,235	$ 288,408	$ 635,981

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

SENSATA TECHNOLOGIES HOLDING PLC

Consolidated Statements of Cash Flows

(In thousands)

	For the year ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net income	$ 164,286	$ 282,714	$ 598,995
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	125,680	115,862	106,014
Amortization of debt issuance costs	6,854	7,804	7,317
Gain on sale of business	—	—	(64,423)
Share-based compensation	19,125	18,757	23,825
Loss on debt financing	—	4,364	2,350
Amortization of intangible assets	129,549	142,886	139,326
Deferred income taxes	(44,900)	27,623	(144,068)
Unrealized loss on derivative instruments and other	4,709	30,292	18,176
Changes in operating assets and liabilities, net of the effects of acquisitions and divestitures:			
Accounts receivable, net	(16,668)	26,605	(34,877)
Inventories	58,390	(10,924)	(55,445)
Prepaid expenses and other current assets	36,431	10,073	(11,891)
Accounts payable and accrued expenses	90,479	(34,563)	48,371
Income taxes payable	(16,019)	2,308	(353)
Other	1,859	(4,239)	(12,754)
Net cash provided by operating activities	559,775	619,562	620,563
Cash flows from investing activities:			
Acquisitions, net of cash received	(64,432)	(32,465)	(228,307)
Additions to property, plant and equipment and capitalized software	(106,719)	(161,259)	(159,787)
Investment in debt and equity securities	(22,963)	(9,950)	—
Proceeds from sale of business, net of cash sold	—	—	149,777
Other	12,022	(5,103)	711
Net cash used in investing activities	(182,092)	(208,777)	(237,606)
Cash flows from financing activities:			
Proceeds from exercise of stock options and issuance of ordinary shares	15,457	15,150	6,093
Payment of employee restricted stock tax withholdings	(2,911)	(6,990)	(3,674)
Proceeds from borrowings on debt	1,150,000	450,000	—
Payments on debt	(408,914)	(464,605)	(15,653)
Payments to repurchase ordinary shares	(35,175)	(350,004)	(399,417)
Payments of debt and equity issuance costs	(8,279)	(10,050)	(9,931)
Other	—	—	16,369
Net cash provided by/(used in) financing activities	710,178	(366,499)	(406,213)
Net change in cash and cash equivalents	1,087,861	44,286	(23,256)
Cash and cash equivalents, beginning of year	774,119	729,833	753,089
Cash and cash equivalents, end of year	$ 1,861,980	$ 774,119	$ 729,833
Supplemental cash flow items:			
Cash paid for interest	$ 164,494	$ 169,543	$ 163,478
Cash paid for income taxes	$ 65,823	$ 61,031	$ 72,924

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

SENSATA TECHNOLOGIES HOLDING PLC

Consolidated Statements of Changes in Shareholders' Equity

(In thousands)

	Ordinary Shares		Treasury Shares		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Number	Amount	Number	Amount				
Balance as of December 31, 2017	178,437	$ 2,289	(7,076)	$ (288,478)	$ 1,663,367	$ 1,031,612	$ (63,164)	$ 2,345,626
Surrender of shares for tax withholding	—	—	(71)	(3,674)	—	—	—	(3,674)
Stock options exercised	114	1	58	2,250	3,998	(156)	—	6,093
Vesting of restricted securities	257	3	—	—	—	(3)	—	—
Retirement of ordinary shares due to Merger	(7,018)	(89)	7,018	286,228	—	(286,139)	—	—
Repurchase of ordinary shares	—	—	(7,571)	(399,417)	—	—	—	(399,417)
Other retirements of ordinary shares	(71)	(1)	71	3,674	—	(3,673)	—	—
Share-based compensation	—	—	—	—	23,825	—	—	23,825
Net income	—	—	—	—	—	598,995	—	598,995
Other comprehensive income	—	—	—	—	—	—	36,986	36,986
Balance as of December 31, 2018	171,719	2,203	(7,571)	(399,417)	1,691,190	1,340,636	(26,178)	2,608,434
Surrender of shares for tax withholding	—	—	(149)	(6,990)	—	—	—	(6,990)
Stock options exercised	537	6	—	—	15,144	—	—	15,150
Vesting of restricted securities	454	5	—	—	—	(5)	—	—
Repurchase of ordinary shares	—	—	(7,162)	(350,004)	—	—	—	(350,004)
Retirement of ordinary shares	(149)	(2)	149	6,990	—	(6,988)	—	—
Share-based compensation	—	—	—	—	18,757	—	—	18,757
Net income	—	—	—	—	—	282,714	—	282,714
Other comprehensive income	—	—	—	—	—	—	5,694	5,694
Balance as of December 31, 2019	172,561	2,212	(14,733)	(749,421)	1,725,091	1,616,357	(20,484)	2,573,755
Surrender of shares for tax withholding	—	—	(96)	(2,911)	—	—	—	(2,911)
Stock options exercised	452	5	—	—	15,452	—	—	15,457
Vesting of restricted securities	349	4	—	—	—	(4)	—	—
Repurchase of ordinary shares	—	—	(898)	(35,175)	—	—	—	(35,175)
Retirement of ordinary shares	(96)	(1)	96	2,911	—	(2,910)	—	—
Share-based compensation	—	—	—	—	19,125	—	—	19,125
Net income	—	—	—	—	—	164,286	—	164,286
Other comprehensive loss	—	—	—	—	—	—	(29,051)	(29,051)
Balance as of December 31, 2020	173,266	$ 2,220	(15,631)	$ (784,596)	$ 1,759,668	$ 1,777,729	$ (49,535)	$ 2,705,486

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

SENSATA TECHNOLOGIES HOLDING PLC
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Business Description and Basis of Presentation

Description of Business

The accompanying audited consolidated financial statements reflect the financial position, results of operations, comprehensive income, cash flows, and changes in shareholders' equity of Sensata Technologies Holding plc ("Sensata plc"), a public limited company incorporated under the laws of England and Wales, and its wholly-owned subsidiaries, collectively referred to as the "Company," "Sensata," "we," "our," and "us."

Prior to March 28, 2018, our parent company issuer was Sensata Technologies Holding N.V. ("Sensata N.V."), which was incorporated under the laws of the Netherlands. On March 28, 2018, Sensata plc completed a cross-border merger (the "Merger") with Sensata N.V., which changed the location of our incorporation from the Netherlands to England and Wales, but did not change the business being conducted by us or our subsidiaries.

We are a global industrial technology company that develops, manufactures, and sells sensors, electrical protection products, and other products that are used in mission-critical systems and applications that create valuable business insights for our customers and end users. Our sensors are used by our customers to translate a physical parameter, such as pressure, temperature, position, or location of an object, into electronic signals that our customers' products and solutions can act upon. These actionable insights lead to products that are safer, cleaner, more efficient, more electrified, and increasingly more connected. Our electrical protection product portfolio is comprised of various sensors, controllers, receivers, and software, and includes high-voltage contactors and other products embedded within systems to maximize their efficiency and protect them from excessive heat or current.

Sensata plc conducts its operations through subsidiary companies that operate business and product development centers primarily in Belgium, Bulgaria, China, Denmark, France, India, Japan, the Netherlands, South Korea, the United Kingdom (the "U.K."), and the United States (the "U.S."); and manufacturing operations primarily in Bulgaria, China, Malaysia, Mexico, the U.K., and the U.S.

We operate in, and report financial information for, two reportable segments: Performance Sensing and Sensing Solutions. Refer to Note 20, "Segment Reporting," for additional information related to each of our segments.

Basis of Presentation

The accompanying audited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and present separately our financial position, results of operations, comprehensive income, cash flows, and changes in shareholders' equity.

All intercompany balances and transactions have been eliminated. All U.S. dollar ("USD") and share amounts presented, except per share amounts, are stated in thousands, unless otherwise indicated. Certain reclassifications have been made to prior periods to conform to current period presentation.

2. Significant Accounting Policies

Use of Estimates

The preparation of consolidated financial statements in accordance with U.S. GAAP requires us to exercise our judgment in the process of applying our accounting policies. It also requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingencies at the date of the financial statements, and the reported amounts of net revenue and expense during the reporting periods.

Estimates are used when accounting for certain items such as allowance for doubtful accounts and sales returns, inventory obsolescence, asset impairments (including goodwill and other intangible assets), contingencies, the value of certain equity awards and the measurement of share-based compensation, the determination of accrued expenses, certain asset valuations, accounting for income taxes, the useful lives of plant and equipment, measurement of our post-retirement benefit obligations, and the identification, valuation, and determination of useful lives of identifiable intangible assets acquired in business combinations. The accounting estimates used in the preparation of the consolidated financial statements may change as new events occur, as more experience is acquired, as additional information is obtained, and as the operating environment changes. Actual results could differ from those estimates.

Revenue Recognition

We recognize revenue to depict the transfer of promised goods to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods. In order to achieve this, we use the five step model outlined in Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers*. This five step model requires us to identify the contract with the customer, identify the performance obligation(s) in the contract, determine the transaction price, allocate the transaction price to the performance obligation(s), and recognize revenue when (or as) we satisfy the performance obligation(s).

The vast majority of our contracts (as defined in FASB ASC Topic 606) are customer purchase orders that require us to transfer specified quantities of tangible products to our customers. These performance obligations are generally satisfied within a short period of time. Amounts billed to our customers for shipping and handling after control has transferred are recognized as revenue and the related costs that we incur are presented in cost of revenue.

In determining the transaction price, we evaluate whether the consideration promised in the contract includes a variable amount and, if applicable, we include in the transaction price some or all of an amount of variable consideration only to the extent it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Variable consideration may be explicitly stated in the contract or implied based on our customary practices. Examples of variable consideration present in our contracts include rights of return, in the case of a defective or non-conforming product, and trade discounts, including early payment discounts and retrospective volume discounts. Such variable consideration has not historically been material in relation to our net revenue.

Our contract terms generally require the customer to make payment shortly (that is, less than one year) after the shipment date. In such instances, we do not consider the effects of a significant financing component in determining the transaction price. Lastly, we exclude from our determination of the transaction price value-added tax and other similar taxes.

Our performance obligations are satisfied, and revenue is recognized, when control of the product is transferred to the customer. The transfer of control generally occurs at the point in time the product is shipped from our warehouse or, less often, at the point in time it is received by the customer, depending on the specific terms of the arrangement. Many of our products are designed and engineered to meet customer specifications. These activities, and the testing of our products to determine compliance with those specifications, occur prior to any revenue being recognized. Products are then manufactured and sold to customers. However, in certain cases, pre-production activities are a performance obligation in a customer purchase order, and revenue is recognized when the performance obligation is satisfied. Customer arrangements do not involve post-installation or post-sale testing and acceptance.

Our standard terms of sale provide our customers with a warranty against faulty workmanship and the use of defective materials, which is not considered a distinct performance obligation in accordance with FASB ASC Topic 606. Depending on the product, we generally provide such warranties for a period of twelve to eighteen months after the date we ship the product to our customer or for a period of twelve months after the date the customer resells our product, whichever comes first. Our liability associated with this warranty is, at our option, to repair the product, replace the product, or provide the customer with a credit. We do not offer separately priced extended warranty or product maintenance contracts.

We also sell products to customers under negotiated agreements or where we have accepted the customer’s terms of purchase. In these instances, we may provide additional warranties for longer durations, consistent with differing end market practices, and where our liability is not limited. In addition, many sales take place in situations where commercial or civil codes, or other laws, would imply various warranties and restrict limitations on liability.

Refer to Note 3, "Revenue Recognition," for additional information related to the net revenue recognized in the consolidated statements of operations.

Share-Based Compensation

We measure at fair value any new or modified share-based compensation arrangements with employees, such as stock options and restricted securities, and recognize as compensation expense that fair value over the requisite service period in accordance with FASB ASC Topic 718, *Compensation—Stock Compensation*. Share-based compensation expense is generally recognized as a component of selling, general and administrative ("SG&A") expense, which is consistent with where the related employee costs are presented, however, such costs, or a portion thereof, may be capitalized provided certain criteria are met.

Share-based awards may be subject to either cliff vesting (i.e., the entire award vests on a particular date) or graded vesting (i.e., portions of the award vest at different points in time). In accordance with FASB ASC Topic 718, compensation expense associated with share-based awards subject to cliff vesting must be recognized on a straight-line basis. For awards without performance conditions that are subject to graded vesting, companies have the option to recognize compensation expense either on a straight-line or accelerated basis. We have elected to recognize compensation expense for these awards on a straight-line basis. However, awards that are subject to both graded vesting and performance conditions must be expensed on an accelerated basis.

We estimate the fair value of options on the grant date using the Black-Scholes-Merton option-pricing model. Key inputs and assumptions used in this model are as follows:

- The fair value of the underlying ordinary shares. This is determined as the closing price of our ordinary shares on the New York Stock Exchange (the "NYSE") on the grant date.
- The expected term. This is determined based upon our own historical average term of exercised and outstanding options.
- Expected volatility. We consider our own historical volatility as well as our implied volatility in estimating expected volatility for stock options. Implied volatility provides a forward-looking indication and may offer insight into expected volatility.
- Risk-free interest rate. The risk-free interest rate is based on the yield for a U.S. Treasury security having a maturity similar to the expected term of the related option grant.
- Expected dividend yield. The dividend yield of 0% is based on our history of having never declared or paid any dividends on our ordinary shares as well as our current intention not to declare dividends in the foreseeable future.

Restricted securities are valued using the closing price of our ordinary shares on the NYSE on the grant date. Certain of our restricted securities include performance conditions that require us to estimate the probable outcome of the performance condition. Compensation expense is recognized if it is probable that the performance condition will be achieved.

We elect to recognize share-based compensation expense net of estimated forfeitures as permitted by FASB ASC Topic 718. Accordingly, we only recognize compensation expense for those awards expected to vest over the requisite service period. Compensation expense recognized for each award ultimately reflects the number of units that actually vest.

Refer to Note 4, "Share-Based Payment Plans," for additional information related to share-based compensation.

Financial Instruments

Our material financial instruments include derivative instruments, debt instruments, equity investments, and trade accounts receivable.

Derivative financial instruments: We account for our derivative financial instruments in accordance with FASB ASC Topic 820, *Fair Value Measurements and Disclosures* and FASB ASC Topic 815, *Derivatives and Hedging*. In accordance with FASB ASC Topic 815, we recognize all derivatives on the balance sheet at fair value. The fair value of our derivative financial instruments is determined using widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each instrument. These analyses utilize observable market-based inputs, including foreign currency exchange rates and commodity forward curves, and reflect the contractual terms of these instruments, including the period to maturity.

Derivative instruments that are designated and qualify as hedges of the exposure to changes in the fair value of an asset, liability, or commitment, and that are attributable to a particular risk, such as interest rate risk, are considered fair value hedges. Derivative instruments that are designated and qualify as hedges of the exposure to variability in expected future cash flows are considered cash flow hedges. Derivative instruments may also be designated as hedges of the foreign currency exposure of a net investment in a foreign operation. Currently, all of our derivative instruments that are designated as accounting hedges are cash flow hedges. We also hold derivative instruments that are not designated as accounting hedges.

The accounting for changes in the fair value of our cash flow hedges depends on whether we have elected to designate the derivative as a hedging instrument for accounting purposes and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. In accordance with FASB ASC Topic 815, both the effective and ineffective portion of changes in the fair value of derivatives designated and qualifying as cash flow hedges is recognized in accumulated other comprehensive loss and is subsequently reclassified into earnings in the period in which the hedged forecasted transaction affects earnings. Changes in the fair value of derivative instruments that are not designated as accounting hedges are recognized immediately in other, net. Refer to Note 16, "Shareholders' Equity," and Note 19, "Derivative Instruments and Hedging Activities," for additional information related to the reclassification of amounts from accumulated other comprehensive loss into earnings.

We present the cash flows arising from our derivative financial instruments in a manner consistent with the presentation of cash flows that relate to the underlying hedged items.

We incorporate credit valuation adjustments to appropriately reflect both our own non-performance risk and the respective counterparty's non-performance risk in the fair value measurements. In adjusting the fair value of our derivative contracts for the effect of non-performance risk, we have considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees. We do not offset the fair value amounts recognized for derivative instruments against fair value amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral.

We maintain derivative instruments with major financial institutions of investment grade credit rating and monitor the amount of credit exposure to any one issuer. We believe there are no significant concentrations of risk associated with our derivative instruments.

Refer to Note 19, "Derivative Instruments and Hedging Activities," for additional information related to our derivative instruments.

Debt Instruments: A premium or discount on a debt instrument is recognized on the balance sheet as an adjustment to the carrying value of the debt liability. In general, amounts paid to creditors are considered a reduction in the proceeds received from the issuance of the debt and are accounted for as a component of the premium or discount on the issuance, not as an issuance cost.

Direct and incremental costs associated with the issuance of debt instruments such as legal fees, printing costs, and underwriters' fees, among others, paid to parties other than creditors, are also reported and presented as a reduction of debt on the consolidated balance sheets.

Debt issuance costs and premiums or discounts are amortized over the term of the respective financing arrangement using the effective interest method. Amortization of these amounts is included as a component of interest expense, net in the consolidated statements of operations.

In accounting for debt refinancing transactions, we apply the provisions of FASB ASC Subtopic 470-50, *Modifications and Extinguishments*. Our evaluation of the accounting under FASB ASC Subtopic 470-50 is done on a creditor by creditor basis in order to determine if the terms of the debt are substantially different and, as a result, whether to apply modification or extinguishment accounting. In the event that an individual holder of existing debt did not invest in new debt, we apply extinguishment accounting. Borrowings associated with individual holders of new debt that are not holders of existing debt are accounted for as new issuances.

Refer to Note 14, "Debt," for additional information related to our debt instruments and transactions.

Equity Investments: We measure equity investments (other than those accounted for under the equity method, those that result in consolidation of the investee, and certain other investments) either at fair value, with changes to fair value recognized in net income, or in certain instances, by use of a measurement alternative prescribed in FASB ASC Topic 321, *Investments - Equity Securities*. Under the measurement alternative, such investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer.

Refer to Note 18, "Fair Value Measures," for additional information related to our measurement of financial instruments, including equity investments.

Trade accounts receivable: Trade accounts receivable are recognized at invoiced amounts and do not bear interest. Trade accounts receivable are reduced by an allowance for losses on receivables. Concentrations of risk with respect to trade accounts receivable are generally limited due to the large number of customers in various industries and their dispersion across several geographic areas. Although we do not foresee that credit risk associated with these receivables will deviate from historical experience, repayment is dependent upon the financial stability of these individual customers. We estimate an allowance for credit losses on trade accounts receivable at an amount that represents our estimated expected credit losses over the lifetime of our receivables. Our contract terms generally require the customer to make payment shortly after (that is, less than one year) the shipment date. Our largest customer accounted for approximately 7% of our net revenue for the year ended December 31, 2020.

Allowance for Losses on Receivables

The allowance for losses on receivables is used to present accounts receivable, net at an amount that represents our estimate of the related transaction price recognized as revenue in accordance with FASB ASC Topic 606. The allowance represents an estimate of expected credit losses over the lifetime of our receivables, even if the loss is considered remote, and reflects expected recoveries of amounts previously written-off. We estimate the allowance on the basis of specifically identified receivables that are evaluated individually for impairment and a statistical analysis of the remaining receivables determined by reference to past default experience. We consider the need to adjust historical information to reflect the extent to which we expect current conditions and reasonable forecasts to differ from the conditions that existed for the historical period considered. Customers are generally not required to provide collateral for purchases. The allowance for losses on receivables also includes an allowance for sales returns (variable consideration).

Management judgments are used to determine when to charge off uncollectible trade accounts receivable. We base these judgments on the age of the receivable, credit quality of the customer, current economic conditions, and other factors that may affect a customer's ability and intent to pay.

Losses on receivables have not historically been significant.

Goodwill and Other Intangible Assets

Businesses acquired are recognized at their fair value on the date of acquisition, with the excess of the purchase price over the fair value of identifiable assets acquired and liabilities assumed recognized as goodwill. Intangible assets acquired may include either definite-lived or indefinite-lived intangible assets, or both.

In accordance with the guidance in FASB ASC Topic 350, *Intangibles—Goodwill and Other*, goodwill and intangible assets determined to have an indefinite useful life are not amortized. Instead these assets are evaluated for impairment on an annual basis and whenever events or business conditions change that could indicate that the asset is impaired. We evaluate goodwill and indefinite-lived intangible assets for impairment in the fourth quarter of each fiscal year, unless events occur which trigger the need for an earlier impairment review.

Goodwill: Our reporting units have been identified based on the definitions and guidance provided in FASB ASC Topic 350. Identification of reporting units includes an analysis of the components that comprise each of our operating segments, which considers, among other things, the manner in which we operate our business and the availability of discrete financial information. Components of an operating segment are aggregated to form one reporting unit if the components have similar economic characteristics. We periodically review these reporting units to ensure that they continue to reflect the manner in which the business is operated.

Some assets and liabilities relate to the operations of multiple reporting units. We allocate these assets and liabilities to the related reporting units based on methods that we believe are reasonable and supportable. We apply that allocation method on a consistent basis from year to year. Other assets and liabilities, such as debt, cash and cash equivalents, and property, plant and equipment, net ("PP&E") associated with our corporate offices, are viewed as being corporate in nature. Accordingly, we do not assign these assets and liabilities to our reporting units.

In the event we reorganize our business, we reassign the assets (including goodwill) and liabilities among the affected reporting units using a reasonable and supportable methodology. As businesses are acquired, we assign assets acquired (including goodwill) and liabilities assumed to a new or existing reporting unit as of the date of the acquisition. In the event a disposal group meets the definition of a business, goodwill is allocated to the disposal group based on the relative fair value of the disposal group to the retained portion of the related reporting unit.

We have the option to first assess qualitative factors to determine whether a quantitative analysis must be performed. The objective of a qualitative analysis is to assess whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. We make this assessment based on macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and other relevant factors as applicable. If we elect not to use this option, or if we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying value, then we prepare a discounted cash flow analysis to determine whether the carrying value of reporting unit exceeds its estimated fair value. If the carrying value of a reporting unit exceeds its estimated fair value, we recognize an impairment of goodwill for the amount of this excess, in accordance with the guidance in FASB Accounting Standards Update ("ASU") No. 2017-04, *Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment*, which we adopted as of January 1, 2020.

Indefinite-lived intangible assets: Similar to goodwill, we perform an annual impairment review of our indefinite-lived intangible assets in the fourth quarter of each fiscal year, unless events occur that trigger the need for an earlier impairment review. We have the option to first assess qualitative factors in determining whether it is more likely than not that an indefinite-lived intangible asset is impaired. If we elect not to use this option, or we determine that it is more likely than not that the asset is impaired, we perform a quantitative impairment analysis in which we estimate the fair value of the indefinite-lived intangible asset and compare that amount to its carrying value. In this analysis, we estimate the fair value by using the relief-from-royalty method, in which we make assumptions about future conditions impacting the fair value of our indefinite-lived intangible assets, including projected growth rates, cost of capital, effective tax rates, and royalty rates. Impairment, if any, is based on the excess of the carrying value over the fair value of these assets.

Definite-lived intangible assets: Acquisition-related definite-lived intangible assets are amortized on an economic-benefit basis according to the useful lives of the assets, or on a straight-line basis if a pattern of economic benefits cannot be reliably determined. Capitalized software and capitalized software licenses are presented on the consolidated balance sheets as intangible assets. Capitalized software licenses are amortized on a straight-line basis over the lesser of the term of the license or the estimated useful life of the software. Capitalized software is amortized on a straight-line basis over its estimated useful life.

Reviews are regularly performed to determine whether facts or circumstances exist that indicate that the carrying values of our definite-lived intangible assets are impaired. If we determine that such facts or circumstances exist, we estimate the recoverability of these assets by comparing the projected undiscounted net cash flows associated with these assets to their respective carrying values. If the sum of the projected undiscounted net cash flows is less than the carrying value of an asset, the impairment charge is measured as the excess of the carrying value over the fair value of that asset. We determine fair value by using the appropriate income approach valuation methodology, depending on the nature of the definite-lived intangible asset.

Refer to Note 11, "Goodwill and Other Intangible Assets, Net," for additional information related to our goodwill and other intangible assets.

Income Taxes

We estimate our provision for (or benefit from) income taxes in each of the jurisdictions in which we operate. The provision for (or benefit from) income taxes includes both our current and deferred tax exposure. Our deferred tax exposure is measured using the asset and liability method, under which deferred income taxes are recognized to reflect the future tax consequences of differences between the tax bases of assets and liabilities and their financial reporting amounts at each balance sheet date, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to reverse or settle. The effect on deferred tax assets and liabilities of a change in statutory tax rates is recognized in the consolidated statements of operations as an adjustment to income tax expense in the period that includes the enactment date.

In measuring our deferred tax assets, we consider all available evidence, both positive and negative, to determine whether, based on the weight of that evidence, a valuation allowance is needed for all or some portion of the deferred tax assets. If it is determined that it is more likely than not that future tax benefits associated with a deferred tax asset will not be realized, a valuation allowance is provided. As a result, we maintain valuation allowances against the deferred tax assets in jurisdictions that have incurred losses in recent periods and in which it is more likely than not that such deferred tax assets will not be utilized in the foreseeable future.

In accordance with FASB ASC Topic 740, *Income Taxes*, we record uncertain tax positions on the basis of a two-step process. First, we determine whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position. Second, for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the relevant tax authority. Significant judgment is required in evaluating whether our tax positions meet this two-step process. The more-likely-than-not recognition threshold must be met in each reporting period to support continued recognition of any tax benefits claimed, both in the current year, as well as any year which remains open for review by the relevant tax authority at the balance sheet date. Penalties and interest related to uncertain tax positions may be classified as either income taxes or another expense line item in the consolidated statements of operations. We classify interest and penalties related to uncertain tax positions within the provision for/(benefit from) income taxes line of the consolidated statements of operations.

Refer to Note 7, "Income Taxes," for additional information related to our income taxes.

Pension and Other Post-Retirement Benefits

We sponsor various pension and other post-retirement benefit plans covering our current and former employees in several countries.

The funded status of pension and other post-retirement benefit plans, recognized on our consolidated balance sheets as an asset, current liability, or long-term liability, is measured as the difference between the fair value of plan assets and the benefit obligation at the measurement date. In general, the measurement date coincides with our fiscal year end, however, certain significant events, such as (1) plan amendments, (2) business combinations, (3) settlements or curtailments, or (4) plan mergers, may trigger the need for an interim measurement of both the plan assets and benefit obligations.

Benefit obligations represent the actuarial present value of all benefits attributed by the pension formula as of the measurement date to employee service rendered before that date. The value of benefit obligations takes into consideration various financial assumptions, including assumed discount rate and the rate of increase in healthcare costs, and demographic assumptions, including compensation rate increases, retirement patterns, employee turnover rates, and mortality rates. We review these assumptions annually.

Our review of demographic assumptions includes analyzing historical patterns and/or referencing industry standard tables, combined with our expectations around future compensation and staffing strategies. The difference between these assumptions and our actual experience results in the recognition of an actuarial gain or loss. Actuarial gains and losses are recorded directly to other comprehensive income or loss. If the total net actuarial gain or loss included in accumulated other comprehensive loss exceeds a threshold of 10% of the greater of the projected benefit obligation or the market related value of plan assets, it is subject to amortization and recorded as a component of net periodic benefit cost over the average remaining service lives of the employees participating in the pension or post-retirement benefit plan.

The discount rate reflects the current rate at which the pension and other post-retirement liabilities could be effectively settled, considering the timing of expected payments for plan participants. It is used to discount the estimated future obligations of the plans to the present value of the liability reflected in the financial statements. In estimating this rate in countries that have a market of high-quality, fixed-income investments, we consider rates of return on these investments included in various bond indices, adjusted to eliminate the effects of call provisions and differences in the timing and amounts of cash outflows related to the bonds. In other countries where a market of high-quality, fixed-income investments does not exist, we estimate the discount rate using government bond yields or long-term inflation rates.

The expected return on plan assets reflects the average rate of earnings expected on the funds invested to provide for the benefits included in the projected benefit obligation. To determine the expected return on plan assets, we use the fair value of plan assets and consider the historical returns earned by similarly invested assets, the rates of return expected on plan assets in the future, and our investment strategy and asset mix with respect to the plans' funds.

Changes to benefit obligations may also be initiated by a settlement or curtailment. A settlement of a defined benefit obligation is an irrevocable transaction that relieves us (or the plan) of primary responsibility for the defined benefit obligation and eliminates significant risks related to the obligation and the assets used to effect the settlement. The settlement of all or more than a minor portion of the pension obligation constitutes an event that requires recognition of all or part of the net actuarial gains or losses deferred in accumulated other comprehensive loss. Our policy is to apply settlement accounting to the extent our year-to date settlements for a given plan exceed the sum of our forecasted full year service cost and interest cost for that particular plan.

A curtailment is an event that significantly reduces the expected years of service of active employees or eliminates for a significant number of employees the accrual of defined benefits for some or all of their future service. The curtailment accounting provisions are applied on a plan-by-plan basis. The total gain or loss resulting from a curtailment is the sum of two distinct elements: (1) prior service cost write-off and (2) curtailment gain or loss. Our policy is that a curtailment event represents one for which we expect a 10% (or greater) reduction in future years of service or an elimination of the accrual of defined benefits for some or all of the future services of 10% (or greater) of the plan's participants.

Contributions made to pension and other post-retirement benefit plans are presented as cash used in operations within the consolidated statements of cash flows.

We present the service cost component of net periodic benefit cost in the cost of revenue, research and development ("R&D"), and SG&A expense line items, and we present the non–service components of net periodic benefit cost in other, net.

Refer to Note 13, "Pension and Other Post-Retirement Benefits," for additional information related to our pension and other post-retirement benefit plans.

Inventories

Inventories are stated at the lower of cost or estimated net realizable value. The cost of raw materials, work-in-process, and finished goods is determined based on a first-in, first-out basis and includes material, labor, and applicable manufacturing overhead. We conduct quarterly inventory reviews for salability and obsolescence, and inventory considered unlikely to be sold is adjusted to net realizable value.

Refer to Note 9, "Inventories," for additional information related to our inventory balances.

Property, Plant and Equipment and Other Capitalized Costs

PP&E is stated at cost, and in the case of plant and equipment, is depreciated on a straight-line basis over its estimated economic useful life. The depreciable lives of plant and equipment are as follows:

Buildings and improvements	2 – 40 years
Machinery and equipment	2 – 15 years

Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term or the estimated economic useful lives of the improvements. Amortization of leasehold improvements is included in depreciation expense.

Assets held under finance leases are recognized at the lower of the present value of the minimum lease payments or the fair value of the leased asset at the inception of the lease. Depreciation expense associated with finance leases is computed using the straight-line method over the shorter of the estimated useful lives of the assets or the period of the related lease, unless ownership is transferred by the end of the lease or there is a bargain purchase option, in which case the asset is depreciated, normally on a straight-line basis, over the useful life that would be assigned if the asset were owned.

Expenditures for maintenance and repairs are charged to expense as incurred, whereas major improvements that increase asset values and extend useful lives are capitalized.

Refer to Note 10, "Property, Plant and Equipment," for additional information related to our PP&E balances.

Leases

We enter into leases agreements for many of our facilities around the world. We occupy leased facilities with initial terms ranging up to 20 years. Our lease agreements frequently include options to renew for additional periods or to purchase the leased assets and generally require that we pay taxes, insurance, and maintenance costs.

Depending on the specific terms of the leases, our obligations are in two forms: finance leases and operating leases. For both forms of leases, we recognize a related lease liability and right-of-use asset on our consolidated balance sheets. Our lease liabilities are initially measured at the present value of the lease payments not yet paid, discounted using our incremental borrowing rate for a period that is comparable to the remaining lease term. We use our incremental borrowing rate, adjusted for collateralization, because the discount rate implicit in our leases are generally not readily determinable.

For finance leases, the consolidated statements of operations include separate recognition of interest on the lease liability and amortization of the right-of-use asset. For operating leases, the consolidated statements of operations include a single lease cost, calculated so that the cost of the lease is allocated over the lease term on a straight-line basis.

Cash flows from operating activities include (1) interest on finance lease liabilities and (2) payments arising from operating leases. Cash flows from financing activities include repayments of the principal portion of finance lease liabilities.

We also lease certain vehicles and equipment, which generally have a term of one year or less. We have elected to account for leases with a term of one year or less (short-term leases) using a method similar to the operating lease model under FASB ASC Topic 840, *Leases* (i.e. they are not recorded on the consolidated balance sheets) as permitted by FASB ASC Topic 842, *Leases*.

Refer to Note 17, "Leases," for additional information related to amounts recognized in the consolidated financial statements related to our leases.

Foreign Currency

We derive a significant portion of our net revenue from markets outside of the U.S. For financial reporting purposes, the functional currency of all of our subsidiaries is the USD because of the significant influence of the USD on our operations. In certain instances, we enter into transactions that are denominated in a currency other than the USD. At the date that such transaction is recognized, each asset, liability, revenue, expense, gain, or loss arising from the transaction is measured and recorded in USD using the exchange rate in effect at that date. At each balance sheet date, recorded monetary balances denominated in a currency other than USD are adjusted to USD using the exchange rate at the balance sheet date, with gains or losses recognized in other, net in the consolidated statements of operations.

Cash and Cash Equivalents

Cash comprises cash on hand. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash, are subject to an insignificant risk of change in value, and have original maturities of three months or less.

Recently issued accounting standards adopted in the current period:

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment* in order to simplify the subsequent measurement of goodwill. This guidance changes the method by which an impairment of goodwill is calculated. Under the previous guidance, goodwill impairment was calculated in two steps. In Step 1, an entity would assess whether an impairment had occurred, either qualitatively or by comparing the estimated fair values of our reporting units to their respective carrying values, including goodwill. If the results of Step 1 indicated an impairment had occurred, Step 2 would be performed, in which the implied value of goodwill of the reporting unit would be calculated and an impairment would be recognized for the difference between the implied value of goodwill and the recorded amount of goodwill. Under FASB ASU No. 2017-04, while Step 1 of this process has not changed, Step 2 as described above has been eliminated, and impairment charges are recorded for the amount by which the carrying value of the reporting unit exceeds its estimated fair value. FASB ASU No. 2017-04 was effective for annual and interim goodwill impairment tests in fiscal years beginning after December 15, 2019. We adopted FASB ASU No. 2017-04 as of January 1, 2020. This adoption did not have an impact on our financial statements as none of our reporting units were determined to have carrying values in excess of fair values during the year ended December 31, 2020.

Recently issued accounting standards to be adopted in a future period:

There are no recently issued accounting standards to be adopted in future periods that are expected to have a material impact on our consolidated financial position or results of operations.

3. Revenue Recognition

We recognize revenue to depict the transfer of promised goods to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods. The vast majority of our revenue is derived from the sale of tangible products whereby control of the product transfers to the customer at a point in time, we recognize revenue at a point in time, and the underlying contract is a purchase order that establishes a firm purchase commitment for a short period of time. Our standard terms of sale provide our customers with a warranty against faulty workmanship and the use of defective materials. We do not offer separately priced extended warranty or product maintenance contracts. Refer to Note 2, "Significant Accounting Policies," for additional information.

We have elected to apply certain practical expedients that allow for more limited disclosures than those that would otherwise be required by FASB ASC Topic 606, including (1) the disclosure of transaction price allocated to the remaining unsatisfied performance obligations at the end of the period and (2) an explanation of when we expect to recognize the related revenue.

We believe that our end markets are the categories that best depict how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. The following table presents net revenue disaggregated by segment and end market for the years ended December 31, 2020, 2019, and 2018:

	Performance Sensing			Sensing Solutions			Total		
	For the year ended December 31,			For the year ended December 31,			For the year ended December 31,		
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Net revenue:									
Automotive	$ 1,715,749	$ 1,986,537	$ 2,076,834	$ 35,621	$ 42,446	$ 49,961	$ 1,751,370	$ 2,028,983	$ 2,126,795
HVOR [(1)]	508,061	559,479	550,817	—	—	—	508,061	559,479	550,817
Industrial	—	—	—	336,506	351,942	336,617	336,506	351,942	336,617
Appliance and HVAC [(2)]	—	—	—	189,782	201,745	208,482	189,782	201,745	208,482
Aerospace	—	—	—	136,167	176,505	164,294	136,167	176,505	164,294
Other	—	—	—	123,692	131,977	134,622	123,692	131,977	134,622
Net revenue	$ 2,223,810	$ 2,546,016	$ 2,627,651	$ 821,768	$ 904,615	$ 893,976	$ 3,045,578	$ 3,450,631	$ 3,521,627

(1) Heavy vehicle and off-road

(2) Heating, ventilation and air conditioning

In addition, refer to Note 20, "Segment Reporting," for a presentation of net revenue disaggregated by product category and geographic region.

Contract Assets and Liabilities

Accounts receivable represent our only contract asset. Contract liabilities, whereby we receive payment from customers related to our promise to satisfy performance obligations in the future, are not material.

4. Share-Based Payment Plans

We issue share-based compensation awards under the Sensata Technologies Holding plc First Amended and Restated 2010 Equity Incentive Plan (the "2010 Equity Incentive Plan"). The purpose of the 2010 Equity Incentive Plan is to promote long-term growth and profitability by providing our present and future eligible directors, officers, and employees with incentives to contribute to, and participate in, our success. There are 10.0 million ordinary shares authorized for grants of awards under the 2010 Equity Incentive Plan, of which 1.8 million were available as of December 31, 2020.

Refer to Note 2, "Significant Accounting Policies," for additional information related to our to share-based compensation accounting policies.

Share-Based Compensation Awards

We grant option, restricted stock unit ("RSU"), and performance-based restricted stock unit ("PRSU") awards under the 2010 Equity Incentive Plan. For option and RSU awards, vesting is typically subject only to service conditions. For PRSU awards, vesting is also subject to service conditions, however the number of awarded units that ultimately vest also depends on the attainment of certain predefined performance criteria. Our awards include continued vesting provisions for retirement eligible employees. Throughout this Annual Report on Form 10-K, RSU and PRSU awards are often referred to collectively as "restricted securities."

Options

A summary of stock option activity for the years ended December 31, 2020, 2019, and 2018 is presented in the table below (amounts have been calculated based on unrounded shares):

	Number of Options (thousands)	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Balance as of December 31, 2017	3,606	$ 37.69	6.0	$ 50,130
Granted	307	$ 51.83		
Forfeited or expired	(39)	$ 45.59		
Exercised	(172)	$ 35.31		$ 3,143
Balance as of December 31, 2018	3,702	$ 38.89	5.3	$ 27,846
Granted	382	$ 46.92		
Forfeited or expired	(83)	$ 48.92		
Exercised	(537)	$ 28.21		$ 11,690
Balance as of December 31, 2019	3,464	$ 41.19	5.0	$ 44,696
Forfeited or expired	(155)	$ 48.30		
Exercised	(452)	$ 34.22		$ 5,117
Balance as of December 31, 2020	2,857	$ 41.90	4.4	$ 31,955
Options vested and exercisable as of December 31, 2020	2,445	$ 40.92	3.8	$ 29,896
Vested and expected to vest as of December 31, 2020	2,831	$ 41.85	4.3	$ 31,829

A summary of the status of our unvested options as of December 31, 2020, and of the changes during the year then ended, is presented in the table below (amounts have been calculated based on unrounded shares):

	Number of Options (thousands)	Weighted-Average Grant-Date Fair Value
Balance as of December 31, 2019	818	$ 14.33
Vested during the year	(333)	$ 13.17
Forfeited during the year	(73)	$ 14.58
Balance as of December 31, 2020	412	$ 15.22

The fair value of stock options that vested during the years ended December 31, 2020, 2019, and 2018 was $4.4 million, $7.8 million, and $5.5 million, respectively.

Option awards granted to employees under the 2010 Equity Incentive Plan generally vest 25% per year over four years from the grant date. We recognize compensation expense for options on a straight-line basis over the requisite service period, which is generally the same as the vesting period. The options generally expire ten years from the date of grant.

For options granted prior to April 2019, except as otherwise provided in specific option award agreements, if a participant ceases to be employed by us, options not yet vested generally expire and are forfeited at the termination date, and options that are fully vested generally expire 60 days after termination of the participant's employment. Exclusions to the general policy for terminated employees include termination for cause (in which case the options expire on the participant's termination date) and termination due to death or disability (in which case any unvested options shall immediately vest and expire six months after the participant's termination date).

For options granted in or after April 2019, the same terms apply, except that fully vested options expire 90 days after termination of the participant's employment for any reason other than termination for cause (in which case the options expire on the participant's termination date), termination due to due to death or disability (in which case the options expire one year after the participant's termination date), and termination for a qualified retirement (in which case options will continue to vest and expire ten years from the grant date).

We did not grant any options in the year ended December 31, 2020. The weighted-average grant-date fair value per option granted during the years ended December 31, 2019 and 2018 was $13.90 and $15.70, respectively. The fair value of options was estimated on the date of grant using the Black-Scholes-Merton option-pricing model. The weighted-average key assumptions used in estimating the grant-date fair value of options for the years ended December 31, 2019 and 2018 were as follows:

	For the year ended December 31,	
	2019	2018
Expected dividend yield	0.00 %	0.00 %
Expected volatility	25.00 %	25.00 %
Risk-free interest rate	2.35 %	2.62 %
Expected term (years)	6.0	6.0
Fair value per share of underlying ordinary shares	$ 46.92	$ 51.83

Restricted Securities

We grant RSU awards that cliff vest between one year and three years from the grant date, and we grant PRSU awards that cliff vest three years after the grant date. For PRSU awards, the number of units that ultimately vest depends on the extent to which certain performance criteria are met, as described in the table below. For restricted securities granted in or after April 2019, terms include provisions allowing continued or accelerated vesting for a qualified retirement. Beginning in April 2020, we began granting RSUs that vest ratably over three years, one-third per year beginning on the first anniversary of the grant date. These RSUs will fully vest on various dates between April 2023 and December 2023.

A summary of restricted securities granted in the years ended December 31, 2020, 2019, and 2018 is presented below:

			Percentage Range of Units That May Vest [1]			
			0.0% to 150.0%		0.0% to 172.5%	
(Awards in thousands)	RSU Awards Granted	Weighted-Average Grant-Date Fair Value	PRSU Awards Granted	Weighted-Average Grant-Date Fair Value	PRSU Awards Granted	Weighted-Average Grant-Date Fair Value
2020	806	$ 29.06	—	$ —	401	$ 28.22
2019	298	$ 47.73	76	$ 46.92	138	$ 46.92
2018	218	$ 51.05	63	$ 51.83	118	$ 51.83

(1) Represents the percentage range of PRSU award units granted that may vest according to the terms of the awards. The amounts presented within this table do not reflect our current assessment of the probable outcome of vesting based on the achievement or expected achievement of performance conditions.

Compensation expense for the year ended December 31, 2020 reflects our estimate of the probable outcome of the performance conditions associated with the PRSU awards granted in the years ended December 31, 2020, 2019, and 2018.

A summary of activity related to outstanding restricted securities for the years ended December 31, 2020, 2019, and 2018 is presented in the table below (amounts have been calculated based on unrounded shares):

	Restricted Securities (thousands)	Weighted-Average Grant-Date Fair Value
Balance as of December 31, 2017	1,081	$ 44.43
Granted	399	$ 51.40
Forfeited	(121)	$ 48.28
Vested	(240)	$ 53.01
Balance as of December 31, 2018	1,119	$ 44.66
Granted [1]	555	$ 46.73
Forfeited	(115)	$ 47.07
Vested	(454)	$ 39.62
Balance as of December 31, 2019	1,105	$ 47.51
Granted	1,207	$ 28.78
Forfeited	(284)	$ 37.89
Vested	(349)	$ 43.54
Balance as of December 31, 2020	1,679	$ 36.49

(1) Includes 43 thousand PRSU awards granted due to greater than 100% vesting.

Aggregate intrinsic value information for restricted securities as of December 31, 2020, 2019, and 2018 is presented below:

	As of December 31,		
	2020	2019	2018
Outstanding	$ 88,534	$ 59,526	$ 50,161
Expected to vest	$ 58,675	$ 34,717	$ 44,203

The weighted-average remaining periods over which the restrictions will lapse as of December 31, 2020, 2019, and 2018 are as follows:

	As of December 31,		
	2020	2019	2018
Outstanding	1.1	1.1	1.2
Expected to vest	1.1	1.0	1.2

The expected to vest restricted securities are calculated based on the application of a forfeiture rate assumption to all outstanding restricted securities as well as our assessment of the probability of meeting the required performance conditions that pertain to the PRSU awards.

__Share-Based Compensation Expense__

The table below presents non-cash compensation expense related to our equity awards, which is recognized within SG&A expense in the consolidated statements of operations, during the identified periods:

	For the year ended December 31,		
	2020	2019	2018
Stock options	$ 2,868	$ 6,552	$ 5,739
Restricted securities	16,257	12,205	18,086
Share-based compensation expense	$ 19,125	$ 18,757	$ 23,825

In the years ended December 31, 2020, 2019, and 2018, we recognized $2.5 million, $3.2 million, and $3.0 million, respectively, of income tax benefit associated with share-based compensation expense.

The table below presents unrecognized compensation expense at December 31, 2020 for each class of award, and the remaining expected term for this expense to be recognized:

	Unrecognized Compensation Expense	Expected Recognition (years)
Options	$ 5,280	1.0
Restricted securities	21,943	1.7
Total unrecognized compensation expense	$ 27,223	

5. Restructuring and Other Charges, Net

On June 30, 2020, in response to the potential long-term impact of the global financial and health crisis caused by the coronavirus ("COVID-19") pandemic on our business, we committed to a plan to reorganize our business (the "Q2 2020 Global Restructure Program"). The Q2 2020 Global Restructure Program, consisting of voluntary and involuntary reductions-in-force and certain site closures, was commenced in order to align our cost structure to the demand levels that we anticipated in the coming quarters. We have taken a large portion of the actions contemplated under the Q2 2020 Global Restructure Program, with the majority expected to be completed on or before June 30, 2021.

The reductions-in-force, which are subject to the laws and regulations of the countries in which the actions are planned, are expected to impact approximately 880 positions. Over the life of the Q2 2020 Global Restructure Program, we expect to incur restructuring charges of between $31.0 million and $33.7 million related to reductions-in-force and between $8.0 million and $10.0 million related to site closures. We expect to settle these charges with cash on hand. We expect these restructuring charges to impact our business segments and corporate functions as follows:

		Reductions-in-Force		Site Closures	
(Dollars in millions)	Positions	Minimum	Maximum	Minimum	Maximum
Performance Sensing	180	$ 10.7	$ 11.6	$ 3.0	$ 4.0
Sensing Solutions	286	8.9	9.6	5.0	6.0
Corporate and other	414	11.4	12.5	—	—
Total	880	$ 31.0	$ 33.7	$ 8.0	$ 10.0

Charges recognized in the year ended December 31, 2020 resulting from the Q2 2020 Global Restructure Program are presented by segment below. Approximately $0.6 million of these charges relate to site closures in Sensing Solutions.

	For the year ended December 31, 2020
Performance Sensing	$ 9,073
Sensing Solutions	6,445
Corporate and other	8,940
Q2 2020 Global Restructure Program, net	$ 24,458

Restructuring and other charges, net for the years ended December 31, 2020, 2019, and 2018 were as follows:

	For the year ended December 31,		
	2020	2019	2018
Q2 2020 Global Restructure Program, net	$ 24,458	$ —	$ —
Other restructuring charges			
Severance costs, net [1]	3,042	29,240	7,566
Facility and other exit costs	1,323	808	877
Gain on sale of Valves Business [2]	—	—	(64,423)
Other [3]	4,271	23,512	8,162
Restructuring and other charges, net	$ 33,094	$ 53,560	$ (47,818)

(1) For each of the years ended December 31, 2020, 2019, and 2018, these charges include termination benefits provided in connection with workforce reductions of manufacturing, engineering, and administrative positions, including the elimination of certain positions related to site consolidations, net of reversals. For the year ended December 31, 2020, these charges related to termination benefits arising from the shutdown and relocation of operating sites in Northern Ireland and Belgium. For the year ended December 31, 2019, these charges included approximately $12.7 million of benefits provided under a voluntary retirement incentive program offered to a limited number of eligible employees in the U.S., and $6.5 million of termination benefits provided under a one-time benefit arrangement related to the shutdown and relocation of an operating site in Germany.

(2) In the year ended December 31, 2018, we completed the sale of the capital stock of Schrader Bridgeport International, Inc. and August France Holding Company SAS (collectively, the "Valves Business"). The gain on this sale was recorded in restructuring and other charges, net.

(3) Represents charges that are not included in one of the other classifications. In the year ended December 31, 2020, we settled intellectual property litigation brought against Schrader by Wasica Finance GmbH ("Wasica") and released $11.7 million of the related liability. This release largely offset a charge of $12.1 million resulting from a prejudgment interest-related award granted by the court on behalf of Wasica in the three months ended June 30, 2020. Refer to Note 15, "Commitments and Contingencies," for additional information related to this matter. In the year ended December 31, 2019, we recognized a $17.8 million loss related to the termination of a supply agreement in connection with the Metal Seal Precision, Ltd. ("Metal Seal") litigation. In the year ended December 31, 2018, we incurred $5.9 million of incremental direct costs in order to transact the sale of the Valves Business. For each of the years ended December 31, 2020, 2019, and 2018, we recorded expense related to the deferred compensation arrangement that we entered into in connection with the acquisition of GIGAVAC, LLC ("GIGAVAC") in the year ended December 31, 2018.

The following table presents a rollforward of the severance portion of our restructuring obligations for the years ended December 31, 2020 and 2019.

	Q2 Plan	Other	Total
Balance as of December 31, 2018	$ —	$ 6,591	$ 6,591
Charges, net of reversals	—	29,240	29,240
Payments	—	(21,095)	(21,095)
Foreign currency remeasurement	—	43	43
Balance as of December 31, 2019	—	14,779	14,779
Charges, net of reversals	23,824	3,042	26,866
Payments	(13,853)	(13,969)	(27,822)
Foreign currency remeasurement	871	185	1,056
Balance as of December 31, 2020	$ 10,842	$ 4,037	$ 14,879

The severance liability as of December 31, 2020 and 2019 was entirely recorded in accrued expenses and other current liabilities on our consolidated balance sheets. Refer to Note 12, "Accrued Expenses and Other Current Liabilities."

6. Other, Net

Other, net consisted of the following for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
	2020	2019	2018
Currency remeasurement gain/(loss) on net monetary assets [1]	$ 10,833	$ (6,802)	$ (18,905)
(Loss)/gain on foreign currency forward contracts [2]	(6,762)	2,225	2,070
Gain/(loss) on commodity forward contracts [2]	10,027	4,888	(8,481)
Loss on debt financing [3]	—	(4,364)	(2,350)
Net periodic benefit cost, excluding service cost [4]	(9,980)	(3,186)	(3,585)
Other	(4,457)	(669)	886
Other, net	$ (339)	$ (7,908)	$ (30,365)

(1) Relates to the remeasurement of non-USD denominated net monetary assets and liabilities into USD. Refer to the *Foreign Currency* section of Note 2, "Significant Accounting Policies," for additional information.

(2) Relates to changes in the fair value of derivative financial instruments not designated as cash flow hedges. Refer to Note 19, "Derivative Instruments and Hedging Activities," for additional information related to gains and losses on our commodity and foreign currency exchange forward contracts.

(3) Refer to Note 14, "Debt," for additional information related to our debt financing transactions.

(4) Refer to Note 13, "Pension and Other Post-Retirement Benefits," for additional information on net periodic benefit cost included in other, net.

7. Income Taxes

Effective April 27, 2006 (inception), and concurrent with the completion of the acquisition of the Sensors & Controls business ("S&C") of Texas Instruments Incorporated ("TI") (the "2006 Acquisition"), we commenced filing tax returns in the Netherlands as a stand-alone entity. On March 28, 2018, the Company reincorporated its headquarters in the U.K. We file income tax returns in the countries in which our subsidiaries are incorporated and/or operate, including Belgium, Bulgaria, China, France, Germany, Japan, Malaysia, Mexico, the Netherlands, South Korea, the U.S., and the U.K. The 2006 Acquisition purchase accounting and the related debt and equity capitalization of the various subsidiaries of the consolidated company, and the realignment of the functions performed and risks assumed by the various subsidiaries, are of significant consequence to the determination of future book and taxable income of the respective subsidiaries and Sensata as a whole.

Refer to Note 2, "Significant Accounting Policies," for detailed discussion of the accounting policies related to income taxes.

Income before taxes

Income before taxes for the years ended December 31, 2020, 2019, and 2018 was categorized by jurisdiction as follows:

	U.S.	Non-U.S.	Total
2020	$ (80,856)	$ 246,497	$ 165,641
2019	$ 13,183	$ 377,240	$ 390,423
2018	$ 68,027	$ 458,348	$ 526,375

Provision for/(benefit from) income taxes

Provision for/(benefit from) income taxes for the years ended December 31, 2020, 2019, and 2018 was categorized by jurisdiction as follows:

	U.S. Federal	Non-U.S.	U.S. State	Total
2020				
Current	$ (2,624)	$ 48,572	$ 307	$ 46,255
Deferred	(14,776)	(34,252)	4,128	(44,900)
Total	$ (17,400)	$ 14,320	$ 4,435	$ 1,355
2019				
Current	$ 5,643	$ 73,947	$ 496	$ 80,086
Deferred	9,687	17,339	597	27,623
Total	$ 15,330	$ 91,286	$ 1,093	$ 107,709
2018				
Current	$ 5,700	$ 64,666	$ 1,082	$ 71,448
Deferred	(109,663)	(18,770)	(15,635)	(144,068)
Total	$ (103,963)	$ 45,896	$ (14,553)	$ (72,620)

Effective tax rate reconciliation

The principal reconciling items from income tax computed at the U.S. statutory tax rate for the years ended December 31, 2020, 2019, and 2018 were as follows:

	For the year ended December 31,		
	2020	2019	2018
Tax computed at statutory rate of 21%	$ 34,785	$ 81,989	$ 110,539
Intangible property transfers	(54,188)	—	—
Foreign tax rate differential	(21,994)	(19,107)	(41,200)
Valuation allowances	8,869	19,640	(123,426)
Withholding taxes not creditable	12,198	9,509	8,734
Change in tax laws or rates	11,229	5,121	(22,264)
Research and development incentives	(7,408)	(8,410)	(19,475)
U.S. state taxes, net of federal benefit	3,504	863	(11,499)
Unrealized foreign currency exchange losses/(gains), net	2,650	(43)	11,346
Reserve for tax exposure	(171)	20,079	10,775
Nontaxable items and other	11,881	(1,932)	3,850
Provision for/(benefit from) income taxes	$ 1,355	$ 107,709	$ (72,620)

Intangible property transfers

The decrease in our effective tax rate for the year ended December 31, 2020, was primarily due to a $54.2 million net income tax benefit in the fourth quarter of 2020 related to intangible property transfers.

Foreign tax rate differential

We operate in locations outside the U.S., including Belgium, Bermuda, Bulgaria, China, Malaysia, the Netherlands, South Korea, and the U.K., that historically have had statutory tax rates different than the U.S. statutory tax rate. This can result in a foreign tax rate differential that may reflect a tax benefit or detriment. This foreign tax rate differential can change from year to year based upon the jurisdictional mix of earnings and changes in current and future enacted tax rates.

Our subsidiary in Changzhou, China is currently eligible for a reduced tax rate of 15%, which is effective through 2021. The impact on current tax expense of the tax holidays and exemptions is included in the foreign tax rate differential line in the reconciliation of the statutory tax rate to effective rate. The remeasurement of the deferred tax assets and liabilities is included in the change in tax laws or rates line.

Valuation allowance impact on tax expense

During the year ended December 31, 2018, we released a substantial portion of our valuation allowance against our deferred tax assets in the U.S. We continue to maintain a valuation allowance against certain of our interest, goodwill tax basis, foreign tax, and state tax credit carryforwards.

Withholding taxes not creditable

Withholding taxes may apply to intercompany interest, royalty, management fees, and certain payments to third parties. Such taxes are deducted if they cannot be credited against the recipient's tax liability in its country of residence. Additional consideration has been given to the withholding taxes associated with unremitted earnings and the recipient's ability to obtain a tax credit for such taxes. Earnings are not considered to be indefinitely reinvested in the jurisdictions in which they were earned. In certain jurisdictions we recognize a deferred tax liability on withholding and other taxes on intercompany payments including dividends.

Research and development incentives

Certain income of our U.K. subsidiaries is eligible for lower tax rates under the "patent box" regime, resulting in certain of our intellectual property income being taxed at a rate lower than the U.K. statutory tax rate. Certain R&D expenses are eligible for a bonus deduction under China's R&D super deduction regime. In fiscal year 2018, we substantially completed an assessment of our ability to claim an R&D credit in the U.S. As a result of this assessment, we recognized a tax benefit of $10.0 million.

Deferred income tax assets and liabilities

The primary components of deferred income tax assets and liabilities as of December 31, 2020 and 2019 were as follows:

	As of December 31,	
	2020	2019
Deferred tax assets:		
Net operating loss, interest expense, and other carryforwards	$ 342,689	$ 283,094
Prepaid and accrued expenses	67,221	67,143
Intangible assets and goodwill	110,382	20,457
Pension liability and other	14,241	7,158
Property, plant and equipment	13,789	14,749
Share-based compensation	9,609	10,288
Inventories and related reserves	9,329	16,712
Unrealized exchange loss	3,182	1,959
Total deferred tax assets	570,442	421,560
Valuation allowance	(202,101)	(146,775)
Net deferred tax asset	368,341	274,785
Deferred tax liabilities:		
Intangible assets and goodwill	(480,082)	(440,009)
Tax on undistributed earnings of subsidiaries	(35,254)	(31,636)
Operating lease right of use assets	(11,324)	(12,522)
Property, plant and equipment	(16,110)	(13,762)
Unrealized exchange gain	(643)	(6,739)
Total deferred tax liabilities	(543,413)	(504,668)
Net deferred tax liability	$ (175,072)	$ (229,883)

Valuation allowance and net operating loss carryforwards

We recognize deferred tax assets to the extent that we believe these assets are more likely than not to be realized. In measuring our deferred tax assets, we consider all available evidence, both positive and negative, to determine whether, based on the weight of that evidence, a valuation allowance is needed for all or some portion of the deferred tax assets. Significant judgment is required in considering the relative impact of the negative and positive evidence, and weight given to each category of evidence is commensurate with the extent to which it can be objectively verified. The more negative evidence that exists, the more positive evidence is necessary, and the more difficult it is to support a conclusion that a valuation allowance is not needed. Additionally, we utilize the "more likely than not" criteria established in FASB ASC Topic 740 to determine whether the future tax benefit from the deferred tax assets should be recognized. As a result, we have established valuation allowances on the deferred tax assets in jurisdictions that have incurred net operating losses and in which it is more likely than not that such losses will not be utilized in the foreseeable future.

As of each reporting date, we consider new evidence, both positive and negative, that could impact our view with regard to future realization of deferred tax assets. Our interest expense carryforwards in certain jurisdictions are subject to limitations. We consider these limitations in our assessment of positive and negative evidence. Our assessment of these limitations has resulted in the conclusion that a portion of our interest carryforwards are subject to a valuation allowance.

For tax purposes, certain goodwill and indefinite-lived intangible assets are generally amortizable over 6 to 20 years. For book purposes, goodwill and indefinite-lived intangible assets are not amortized, but are tested for impairment annually. The tax amortization of goodwill and indefinite-lived intangible assets will result in a taxable temporary difference, which will not reverse unless the related book goodwill or indefinite-lived intangible asset is impaired or written off. This liability may not be used to support deductible temporary differences, such as net operating loss carryforwards, which may expire within a definite period.

The total valuation allowance increased $55.3 million in the year ended December 31, 2020 and decreased $10.3 million in the year ended December 31, 2019. In connection with our 2020 intangible property transfer, we recorded a valuation allowance of $43.2 million. Subsequently reported tax benefits relating to the valuation allowance for deferred tax assets as of December 31, 2020 will be allocated to income tax benefit recognized in the consolidated statements of operations.

As of December 31, 2020, we have U.S. federal net operating loss carryforwards of $801.1 million, of which $446.6 million will expire from 2028 to 2037, and $354.5 million do not expire. We have state net operating loss carryforwards with limited and unlimited lives. Our limited life state net operating losses will expire beginning in 2021. As of December 31, 2020, we have suspended interest expense carryforwards of $339.1 million, which have an unlimited life. We also have net operating loss carryforwards in foreign jurisdictions of $239.7 million, which will begin to expire in 2021.

Unrecognized tax benefits

A reconciliation of the amount of unrecognized tax benefits is as follows:

	For the year ended December 31,		
	2020	**2019**	**2018**
Balance at beginning of year	$ 117,591	$ 89,609	$ 59,884
Increases related to current year tax positions	46,329	17,378	15,676
Increases related to prior year tax positions	43,082	15,356	14,609
Increases related to business combinations	—	450	1,000
Decreases related to settlements with tax authorities	(5,183)	(3,515)	—
Decreases related to prior year tax positions	(1,294)	(1,773)	(1,144)
Decreases related to lapse of applicable statute of limitations	(452)	(87)	—
Changes related to foreign currency exchange rate	1,337	173	(416)
Balance at end of year	$ 201,410	$ 117,591	$ 89,609

We recognize interest and penalties related to unrecognized tax benefits in the consolidated statements of operations and the consolidated balance sheets. The table that follows presents the expense/(income) related to such interest and penalties recognized in the consolidated statements of operations during the years ended December 31, 2020, 2019, and 2018, and the amount of interest and penalties recorded on the consolidated balance sheets as of December 31, 2020 and 2019:

	Statements of Operations			**Balance Sheets**	
	For the year ended December 31,			**As of December 31,**	
(In millions)	**2020**	**2019**	**2018**	**2020**	**2019**
Interest	$ 0.4	$ 0.9	$ (0.2)	$ 1.7	$ 1.3
Penalties	$ 0.2	$ (0.1)	$ (0.2)	$ 0.4	$ 0.3

At December 31, 2020, we anticipate that the liability for unrecognized tax benefits could decrease by up to $56.8 million within the next twelve months due to the expiration of certain statutes of limitation or the settlement of examinations or issues with tax authorities. The amount of unrecognized tax benefits as of December 31, 2020 that if recognized would impact our effective tax rate is $109.2 million.

Our major tax jurisdictions include Belgium, Bulgaria, China, France, Germany, Japan, Malaysia, Mexico, the Netherlands, South Korea, the U.K., and the U.S. These jurisdictions generally remain open to examination by the relevant tax authority for the tax years 2006 through 2020.

Indemnifications

We have various indemnification provisions in place with parties including TI, Honeywell, William Blair, Tomkins Limited, and Custom Sensors & Technologies Ltd. These provisions provide for the reimbursement of future tax liabilities paid by us that relate to the pre-acquisition periods of the acquired businesses including S&C, First Technology Automotive and Special Products, Airpax Holdings, Inc., August Cayman Company, Inc. ("Schrader"), CST, and GIGAVAC.

8. Net Income per Share

Basic and diluted net income per share are calculated by dividing net income by the number of basic and diluted weighted-average ordinary shares outstanding during the period. For the years ended December 31, 2020, 2019, and 2018, the weighted-average ordinary shares outstanding used to calculate basic and diluted net income per share were as follows:

	For the year ended December 31,		
(In thousands)	2020	2019	2018
Basic weighted-average ordinary shares outstanding	157,373	160,946	168,570
Dilutive effect of stock options	275	600	822
Dilutive effect of unvested restricted securities	486	422	467
Diluted weighted-average ordinary shares outstanding	158,134	161,968	169,859

Net income and net income per share are presented in the consolidated statements of operations.

Certain potential ordinary shares were excluded from our calculation of diluted weighted-average ordinary shares outstanding because either they would have had an anti-dilutive effect on net income per share or they related to equity awards that were contingently issuable for which the contingency had not been satisfied. Refer to Note 4, "Share-Based Payment Plans," for additional information related to our equity awards. These potential ordinary shares are as follows:

	For the year ended December 31,		
(In thousands)	2020	2019	2018
Anti-dilutive shares excluded	1,575	1,170	930
Contingently issuable shares excluded	995	641	687

9. Inventories

The components of inventories as of December 31, 2020 and 2019 were as follows:

	As of December 31,	
	2020	2019
Finished goods	$ 170,488	$ 197,531
Work-in-process	87,006	104,007
Raw materials	193,511	205,140
Inventories	$ 451,005	$ 506,678

Refer to Note 2, "Significant Accounting Policies," for a discussion of our accounting policies related to inventories.

10. Property, Plant and Equipment, Net

PP&E, net as of December 31, 2020 and 2019 consisted of the following:

	As of December 31,	
	2020	2019
Land	$ 17,880	$ 17,880
Buildings and improvements	273,899	266,864
Machinery and equipment	1,428,793	1,367,293
Total property, plant and equipment	1,720,572	1,652,037
Accumulated depreciation	(916,747)	(821,039)
Property, plant and equipment, net	$ 803,825	$ 830,998

Depreciation expense for PP&E, including amortization of leasehold improvements and depreciation of assets under finance leases, totaled $125.7 million, $115.9 million, and $106.0 million for the years ended December 31, 2020, 2019, and 2018, respectively.

PP&E, net as of December 31, 2020 and 2019 included the following assets under finance leases:

	As of December 31,	
	2020	2019
Assets under finance leases in property, plant and equipment	$ 49,714	$ 49,714
Accumulated depreciation	(26,107)	(24,316)
Assets under finance leases in property, plant and equipment, net	$ 23,607	$ 25,398

Refer to Note 2, "Significant Accounting Policies," for a discussion of our accounting policies related to PP&E, net.

11. Goodwill and Other Intangible Assets, Net

The following table outlines the changes in net goodwill by segment for the years ended December 31, 2020 and 2019.

	Performance Sensing	Sensing Solutions	Total
Balance as of December 31, 2018	$ 2,155,633	$ 925,669	$ 3,081,302
GIGAVAC acquisition	16,387	(16,564)	(177)
Other acquisition	—	12,473	12,473
Balance as of December 31, 2019	2,172,020	921,578	3,093,598
Other acquisition	17,751	—	17,751
Balance as of December 31, 2020	$ 2,189,771	$ 921,578	$ 3,111,349

At each of December 31, 2020, 2019, and 2018, accumulated goodwill impairment was $0.0 million related to Performance Sensing and $18.5 million related to Sensing Solutions.

Goodwill attributed to acquisitions reflects our allocation of purchase price to the estimated fair value of certain assets acquired and liabilities assumed, and has been included in our segments based on a methodology using anticipated future earnings of the components of business.

We own the Klixon® and Airpax® tradenames, which are indefinite-lived intangible assets as they have each been in continuous use for over 65 years and we have no plans to discontinue using either of them. We have recorded $59.1 million and $9.4 million, respectively, on the consolidated balance sheets related to these tradenames. In addition, in the year ended December 31, 2020, we recognized indefinite-lived intangible assets of $6.9 million related to in-process research & development acquired in a fiscal year 2020 business combination transaction.

We evaluated our goodwill and other indefinite-lived intangible assets for impairment as of October 1, 2020 using a combination of the quantitative and qualitative methods. Under the qualitative method, we assess whether it is more likely than not that the fair value of a reporting unit is less than its carrying value based on various factors, including macroeconomic conditions, industry and market considerations, cost factors, and overall financial performance, and other relevant factors as applicable. If the results of the qualitative analysis indicate that it is not more likely than not that the fair value of a reporting unit is less than its carrying value, no further analysis is prepared. Otherwise, we perform a quantitative analysis under which a discounted cash flow analysis is prepared to determine whether the fair value of the reporting unit is less than its carrying value.

Based on these analyses, we have determined that as of October 1, 2020 the fair value of each of our reporting units and indefinite-lived intangible assets exceeded their carrying values.

We consider a combination of quantitative and qualitative factors to determine whether a reporting unit is at risk of failing Step 1 of the goodwill impairment test, including: the timing of our most recent quantitative impairment tests and the relative amount by which a reporting unit's fair value exceeded its then carrying value, the inputs and assumptions underlying our valuation models and the sensitivity of our fair value measurements to those inputs and assumptions, the impact that adverse economic or market conditions may have on the degree of uncertainty inherent in our long-term operating forecasts, and changes in the carrying value of a reporting unit's net assets from the time of our most recent goodwill impairment test. Based on the results of this analysis, we do not consider any of our reporting units to be at risk of failing Step 1 of the goodwill impairment test.

The following tables outline the components of definite-lived intangible assets as of December 31, 2020 and 2019:

	As of December 31, 2020				
	Weighted-Average Life (years)	Gross Carrying Amount	Accumulated Amortization	Accumulated Impairment	Net Carrying Value
Completed technologies	14	$ 781,508	$ (578,178)	$ (2,430)	$ 200,900
Customer relationships	11	1,858,998	(1,501,960)	(12,144)	344,894
Tradenames	21	66,654	(19,816)	—	46,838
Capitalized software and other[1]	7	69,227	(45,680)	—	23,547
Total	12	$ 2,776,387	$ (2,145,634)	$ (14,574)	$ 616,179

	As of December 31, 2019				
	Weighted-Average Life (years)	Gross Carrying Amount	Accumulated Amortization	Accumulated Impairment	Net Carrying Value
Completed technologies	14	$ 770,608	$ (529,926)	$ (2,430)	$ 238,252
Customer relationships	11	1,827,998	(1,430,515)	(12,144)	385,339
Non-compete agreements	8	23,400	(23,400)	—	—
Tradenames	21	66,654	(16,598)	—	50,056
Capitalized software and other[1]	7	67,784	(38,997)	—	28,787
Total	12	$ 2,756,444	$ (2,039,436)	$ (14,574)	$ 702,434

(1) During the years ended December 31, 2020 and 2019, we wrote-off approximately $0.1 million and $0.3 million, respectively, of fully-amortized capitalized software that was not in use.

The following table outlines amortization of definite-lived intangible assets for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
	2020	2019	2018
Acquisition-related definite-lived intangible assets	$ 122,915	$ 136,087	$ 132,235
Capitalized software	6,634	6,799	7,091
Amortization of intangible assets	$ 129,549	$ 142,886	$ 139,326

The table below presents estimated amortization of definite-lived intangible assets for each of the next five years:

For the year ended December 31,	
2021	$ 117,489
2022	$ 104,101
2023	$ 90,208
2024	$ 73,544
2025	$ 45,629

12. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 31, 2020 and 2019 consisted of the following:

	As of December 31,	
	2020	2019
Accrued compensation and benefits	$ 85,140	$ 52,394
Accrued interest	53,630	42,803
Foreign currency and commodity forward contracts	19,627	1,925
Accrued severance	14,879	14,779
Current portion of operating lease liabilities	11,389	11,543
Current portion of pension and post-retirement benefit obligations	3,498	3,220
Other accrued expenses and current liabilities	136,667	88,962
Accrued expenses and other current liabilities	$ 324,830	$ 215,626

13. Pension and Other Post-Retirement Benefits

We provide various pension and other post-retirement plans for current and former employees, including defined benefit, defined contribution, and retiree healthcare benefit plans. Refer to Note 2, "Significant Accounting Policies," for a detailed discussion of the accounting policies related to our pension and other post-retirement benefit plans.

U.S. Benefit Plans

The principal retirement plans in the U.S. include a qualified defined benefit pension plan and a defined contribution plan. In addition, we provide post-retirement medical coverage and non-qualified benefits to certain employees.

Defined Benefit Pension Plans

The benefits under the qualified defined benefit pension plan are determined using a formula based upon years of service and the highest five consecutive years of compensation.

TI closed the qualified defined benefit pension plan to participants hired after November 1997. In addition, participants eligible to retire under the TI plan as of April 26, 2006 were given the option of continuing to participate in the qualified defined benefit pension plan or retiring under the qualified defined benefit pension plan and thereafter participating in an enhanced defined contribution plan.

We intend to contribute amounts to the qualified defined benefit pension plan in order to meet the minimum funding requirements of federal laws and regulations, plus such additional amounts as we deem appropriate. During the year ended December 31, 2020, we did not contribute to the qualified defined benefit plan. We expect to contribute to the qualified defined benefit pension plan in fiscal year 2021.

We also sponsor a non-qualified defined benefit pension plan, which is closed to new participants and is unfunded.

Effective January 31, 2012, we froze the defined benefit pension plans and eliminated future benefit accruals.

Defined Contribution Plans

We have one defined contribution plan for U.S. employees, which provides for an employer matching contribution of up to 4% of the employee's annual eligible earnings. The aggregate expense related to the defined contribution plan was $4.3 million, $5.5 million, and $5.7 million for the years ended December 31, 2020, 2019, and 2018, respectively.

Retiree Healthcare Benefit Plan

We offer access to group medical coverage during retirement to some of our U.S. employees. We make contributions toward the cost of those retiree medical benefits for certain retirees. The contribution rates are based upon varying factors, the most important of which are an employee’s date of hire, date of retirement, years of service, and eligibility for Medicare benefits. The balance of the cost is borne by the participants in the plan. For the year ended December 31, 2020, we did not and do not expect to, receive any amount of Medicare Part D Federal subsidy. Our projected benefit obligation as of December 31, 2020 and 2019 did not include an assumption for a Federal subsidy.

Non-U.S. Benefit Plans

Retirement coverage for non-U.S. employees is provided through separate defined benefit and defined contribution plans. Retirement benefits are generally based on an employee's years of service and compensation. Funding requirements are determined on an individual country and plan basis and are subject to local country practices and market circumstances. We do not expect to contribute to the non-U.S. defined benefit plans during 2021.

Impact on Financial Statements

The components of net periodic benefit cost/(credit) associated with our defined benefit and retiree healthcare plans for the years ended December 31, 2020, 2019, and 2018 were as follows:

	For the year ended December 31,								
	2020			2019			2018		
	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans
	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit
Service cost	$ —	$ 10	$ 3,522	$ —	$ 7	$ 2,836	$ —	$ 50	$ 3,122
Interest cost	762	155	1,466	1,483	203	1,344	1,473	272	1,310
Expected return on plan assets	(1,339)	—	(712)	(1,694)	—	(702)	(1,710)	—	(929)
Amortization of net loss	1,184	16	1,204	946	—	766	1,080	5	407
Amortization of net prior service (credit)/cost	—	(1,029)	5	—	(1,306)	9	—	(1,728)	6
Loss on settlement	5,026	—	2,712	565	—	1,572	1,047	—	1,461
Loss on curtailment	—	530	—	—	—	—	—	—	891
Net periodic benefit cost/(credit)	$ 5,633	$ (318)	$ 8,197	$ 1,300	$ (1,096)	$ 5,825	$ 1,890	$ (1,401)	$ 6,268

The following table outlines the rollforward of the benefit obligation and plan assets for the defined benefit and retiree healthcare benefit plans for the years ended December 31, 2020 and 2019:

	For the year ended December 31,					
	2020			2019		
	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans
	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit
Change in benefit obligation:						
Beginning balance	$ 45,548	$ 5,588	$ 74,172	$ 45,169	$ 6,017	$ 65,691
Service cost	—	10	3,522	—	7	2,836
Interest cost	762	155	1,466	1,483	203	1,344
Plan participants' contributions	—	696	35	—	474	31
Actuarial loss/(gain)	7,526	(1,213)	13,006	1,711	(92)	9,344
Curtailment loss	—	530	—	—	—	—
Benefits paid	(17,568)	(719)	(8,507)	(2,815)	(1,021)	(5,235)
Foreign currency remeasurement	—	—	4,618	—	—	161
Ending balance	$ 36,268	$ 5,047	$ 88,312	$ 45,548	$ 5,588	$ 74,172
Change in plan assets:						
Beginning balance	$ 44,870	$ —	$ 43,906	$ 39,875	$ —	$ 39,868
Actual return on plan assets	2,333	—	2,071	4,484	—	4,125
Employer contributions	19	23	7,714	3,326	547	4,889
Plan participants' contributions	—	696	35	—	474	31
Benefits paid	(17,568)	(719)	(8,507)	(2,815)	(1,021)	(5,235)
Foreign currency remeasurement	—	—	3,254	—	—	228
Ending balance	$ 29,654	$ —	$ 48,473	$ 44,870	$ —	$ 43,906
Funded status at end of year	$ (6,614)	$ (5,047)	$ (39,839)	$ (678)	$ (5,588)	$ (30,266)
Accumulated benefit obligation at end of year	$ 36,268	NA	$ 77,886	$ 45,548	NA	$ 65,633

The following table outlines the funded status amounts recognized in the consolidated balance sheets as of December 31, 2020 and 2019:

	As of December 31,					
	2020			2019		
	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans
	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit
Noncurrent assets	$ —	$ —	$ —	$ 2,788	$ —	$ —
Current liabilities	(1,091)	(586)	(1,821)	(952)	(717)	(1,551)
Noncurrent liabilities	(5,523)	(4,461)	(38,018)	(2,514)	(4,871)	(28,715)
Funded status	$ (6,614)	$ (5,047)	$ (39,839)	$ (678)	$ (5,588)	$ (30,266)

Balances recognized within accumulated other comprehensive loss that have not been recognized as components of net periodic benefit cost, net of tax, as of December 31, 2020, 2019, and 2018 are as follows:

	As of December 31,								
	2020			2019			2018		
	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans
	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit
Net prior service cost/(credit)	$ —	$ 1,094	$ (20)	$ —	$ 306	$ (16)	$ —	$ (692)	$ (10)
Net loss	$ 19,026	$ (131)	$ 22,833	$ 18,780	$ 809	$ 17,151	$ 20,759	$ 880	$ 14,425

Information for plans with an accumulated benefit obligation in excess of plan assets as of December 31, 2020 and 2019 is as follows:

	As of December 31,			
	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Projected benefit obligation	$ 36,268	$ 88,312	$ 3,465	$ 74,020
Accumulated benefit obligation	$ 36,268	$ 77,886	$ 3,465	$ 65,633
Plan assets	$ 29,654	$ 48,473	$ —	$ 43,754

Information for plans with a projected benefit obligation in excess of plan assets as of December 31, 2020 and 2019 is as follows:

	As of December 31,			
	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Projected benefit obligation	$ 41,315	$ 88,312	$ 9,053	$ 74,020
Plan assets	$ 29,654	$ 48,473	$ —	$ 43,754

Other changes in plan assets and benefit obligations, net of tax, recognized in other comprehensive income/(loss) for the years ended December 31, 2020, 2019, and 2018 are as follows:

	For the year ended December 31,								
	2020			2019			2018		
	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans	U.S. Plans		Non-U.S. Plans
	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit	Defined Benefit	Retiree Healthcare	Defined Benefit
Net (gain)/loss	$ 4,997	$ (928)	$ 8,425	$ (824)	$ (71)	$ 4,365	$ 2,002	$ (124)	$ 3,669
Amortization of net loss	(906)	(12)	(839)	(723)	—	(539)	(1,080)	(5)	(298)
Amortization of net prior service credit/(cost)	—	562	(4)	—	998	(6)	—	1,728	(4)
Divestiture	—	—	—	—	—	—	—	—	(228)
Plan amendment	—	—	—	—	—	—	—	(3,243)	—
Settlement effect	(3,845)	—	(1,904)	(432)	—	(1,100)	(1,047)	—	(1,023)
Curtailment effect	—	226	—	—	—	—	—	—	30
Total in other comprehensive (income)/loss	$ 246	$ (152)	$ 5,678	$ (1,979)	$ 927	$ 2,720	$ (125)	$ (1,644)	$ 2,146

Assumptions and Investment Policies

Weighted-average assumptions used to calculate the projected benefit obligations of our defined benefit and retiree healthcare benefit plans as of December 31, 2020 and 2019 are as follows:

	As of December 31,			
	2020		2019	
	Defined Benefit	Retiree Healthcare	Defined Benefit	Retiree Healthcare
U.S. assumed discount rate	1.65 %	1.80 %	2.60 %	2.80 %
Non-U.S. assumed discount rate	1.97 %	NA	1.90 %	NA
Non-U.S. average long-term pay progression	2.93 %	NA	2.87 %	NA

Weighted-average assumptions used to calculate the net periodic benefit cost of our defined benefit and retiree healthcare benefit plans for the years ended December 31, 2020, 2019, and 2018 are as follows:

	For the year ended December 31,					
	2020		2019		2018	
	Defined Benefit	Retiree Healthcare	Defined Benefit	Retiree Healthcare	Defined Benefit	Retiree Healthcare
U.S. assumed discount rate	2.60 %	2.80 %	3.79 %	3.90 %	3.45 %	3.10 %
Non-U.S. assumed discount rate	5.53 %	NA	5.76 %	NA	5.87 %	NA
U.S. average long-term rate of return on plan assets	4.29 %	NA	4.53 %	NA	4.57 %	NA
Non-U.S. average long-term rate of return on plan assets	1.61 %	NA	1.77 %	NA	2.26 %	NA
Non-U.S. average long-term pay progression	4.83 %	NA	4.43 %	NA	4.82 %	NA

Assumed healthcare cost trend rates for the U.S. retiree healthcare benefit plan as of December 31, 2020, 2019, and 2018 are as follows:

	As of December 31,		
	2020	2019	2018
Assumed healthcare trend rate for next year:			
Attributed to less than age 65	6.00 %	6.30 %	6.60 %
Attributed to age 65 or greater	6.30 %	6.70 %	7.10 %
Ultimate trend rate	4.50 %	4.50 %	4.50 %
Year in which ultimate trend rate is reached:			
Attributed to less than age 65	2038	2038	2038
Attributed to age 65 or greater	2038	2038	2038

The table below outlines the benefits expected to be paid to participants in each of the following years, taking into consideration expected future service, as appropriate. The majority of the payments will be paid from plan assets and not company assets.

	Expected Benefit Payments		
For the year ended December 31,	U.S. Defined Benefit	U.S. Retiree Healthcare	Non-U.S. Defined Benefit
2021	$ 12,177	$ 586	$ 3,546
2022	$ 3,378	$ 561	$ 3,809
2023	$ 4,221	$ 487	$ 3,777
2024	$ 2,548	$ 460	$ 3,766
2025	$ 2,506	$ 415	$ 4,639
2026 - 2030	$ 7,928	$ 1,463	$ 24,768

Plan Assets

We hold assets for our defined benefit plans in the U.S., Japan, the Netherlands, and Belgium. Information about the assets for each of these plans is detailed below. Refer to Note 18, "Fair Value Measures," for additional information related to the levels of the fair value hierarchy in accordance with FASB ASC Topic 820.

U.S. Plan Assets

Our target asset allocation for the U.S. defined benefit plan is 83% fixed income and 17% equity securities. To arrive at the targeted asset allocation, we and our investment adviser reviewed market opportunities using historical data, as well as the actuarial valuation for the plan, to ensure that the levels of acceptable return and risk are well-defined and monitored.

The following table presents information about the plan’s target and actual asset allocation, as of December 31, 2020:

	Target Allocation	Actual Allocation as of December 31, 2020
U.S. large cap equity	7%	9%
U.S. small / mid cap equity	2%	2%
Globally managed volatility fund	3%	3%
International (non-U.S.) equity	4%	5%
Fixed income (U.S. investment grade)	68%	70%
High-yield fixed income	2%	2%
International (non-U.S.) fixed income	1%	1%
Money market funds	13%	9%

The portfolio is monitored for automatic rebalancing on a monthly basis.

The following table presents information about the plan assets measured at fair value as of December 31, 2020 and 2019:

	As of December 31,	
	2020	2019
U.S. large cap equity	$ 2,548	$ 2,221
U.S. small / mid cap equity	706	637
Global managed volatility fund	826	849
International (non-U.S.) equity	1,362	1,195
Total equity mutual funds	5,442	4,902
Fixed income (U.S. investment grade)	20,801	18,830
High-yield fixed income	594	561
International (non-U.S.) fixed income	277	264
Total fixed income mutual funds	21,672	19,655
Money market funds	2,540	20,313
Total plan assets	$ 29,654	$ 44,870

All fair value measures presented above are categorized in Level 1 of the fair value hierarchy. Investments in mutual funds are based on the publicly-quoted final net asset values on the last business day of the year.

Permitted asset classes include U.S. and non-U.S. equity, U.S. and non-U.S. fixed income, cash, and cash equivalents. Fixed income includes both investment grade and non-investment grade. Permitted investment vehicles include mutual funds, individual securities, derivatives, and long-duration fixed income securities. While investments in individual securities, derivatives, long-duration fixed income securities, cash, and cash equivalents are permitted, the plan did not hold these types of investments as of December 31, 2020 and 2019.

Prohibited investments include direct investments in real estate, commodities, unregistered securities, uncovered options, currency exchange contracts, and natural resources (such as timber, oil, and gas).

Japan Plan Assets

The target asset allocation of the Japan defined benefit plan is 50% fixed income securities and 50% equity securities, cash, and cash equivalents, with allowance for a 40% deviation in either direction. We, along with the trustee of the plan's assets, minimize investment risk by thoroughly assessing potential investments based on indicators of historical returns and current credit ratings. Additionally, investments are diversified by type and geography.

The following table presents information about the plan’s target asset allocation, as well as the actual allocation, as of December 31, 2020:

	Target Allocation	Actual Allocation as of December 31, 2020
Fixed income securities, cash, and cash equivalents	10%-90%	72%
Equity securities	10%-90%	28%

The following table presents information about the plan assets measured at fair value as of December 31, 2020 and 2019:

	As of December 31,	
	2020	2019
U.S. equity	$ 2,736	$ 2,413
International (non-U.S.) equity	6,724	6,343
Total equity securities	9,460	8,756
U.S. fixed income	3,091	3,835
International (non-U.S.) fixed income	11,142	9,716
Total fixed income securities	14,233	13,551
Cash and cash equivalents	9,793	9,726
Total plan assets	$ 33,486	$ 32,033

All fair value measures presented above are categorized in Level 1 of the fair value hierarchy, with the exception of U.S. fixed income securities of $0.3 million of December 31, 2020 and 2019, which are categorized as Level 2. The fair values of equity and fixed income securities are based on publicly-quoted closing stock and bond values on the last business day of the year.

Permitted asset classes include equity securities that are traded on the official stock exchange(s) of the respective countries, fixed income securities with certain credit ratings, cash, and cash equivalents.

The Netherlands Plan Assets

The assets of the Netherlands defined benefit plan are insurance policies. The contributions we make to the plan are used to purchase insurance policies that provide for specific benefit payments to plan participants. The benefit formula is determined independently by us. Upon retirement of an individual plan participant, the insurance contracts purchased are converted to provide specific benefits for the participant. The contributions paid by us are commingled with contributions paid to the insurance provider by other employers for investment purposes and to reduce plan administration costs. However, this defined benefit plan is not considered a multi-employer plan.

The following table presents information about the plan assets measured at fair value as of December 31, 2020 and 2019:

	As of December 31,	
	2020	**2019**
Insurance policies	$ 12,905	$ 10,472

All fair value measures presented above are categorized in Level 3 of the fair value hierarchy. The following table presents a rollforward of these assets for the years ended December 31, 2020 and 2019:

	Insurance Policies
Balance as of December 31, 2018	$ 8,897
Actual return on plan assets still held at reporting date	1,821
Purchases, sales, settlements, and exchange rate changes	(246)
Balance as of December 31, 2019	10,472
Actual return on plan assets still held at reporting date	1,373
Purchases, sales, settlements, and exchange rate changes	1,060
Balance as of December 31, 2020	$ 12,905

The fair values of the insurance contracts are measured based on the future benefit payments that would be made by the insurance company to vested plan participants if we were to switch to another insurance company without actually surrendering our policy. In this case, the insurance company would guarantee to pay the vested benefits at retirement accrued under the plan based on current salaries and service to date (i.e., with no allowance for future salary increases or pension increases). The cash flows of the future benefit payments are discounted using the same discount rate that is applied to value the related defined benefit plan liability.

Belgium Plan Assets

The assets of the Belgium defined benefit plan are insurance policies. As of December 31, 2020 and 2019 the fair values of these assets were $1.5 million and $1.3 million, respectively. These fair value measurements are categorized in Level 3 of the fair value hierarchy.

14. Debt

Our long-term debt and finance lease and other financing obligations as of December 31, 2020 and 2019 consisted of the following:

		As of December 31,	
	Maturity Date	2020	2019
Term Loan	September 20, 2026	$ 456,096	$ 460,725
4.875% Senior Notes	October 15, 2023	500,000	500,000
5.625% Senior Notes	November 1, 2024	400,000	400,000
5.0% Senior Notes	October 1, 2025	700,000	700,000
6.25% Senior Notes(1)	February 15, 2026	750,000	750,000
4.375% Senior Notes	February 15, 2030	450,000	450,000
3.75% Senior Notes	February 15, 2031	750,000	—
Less: debt discount		(9,605)	(11,758)
Less: deferred financing costs		(28,114)	(24,452)
Less: current portion		(754,630)	(4,630)
Long-term debt, net		$ 3,213,747	$ 3,219,885
Finance lease and other financing obligations		$ 30,506	$ 31,098
Less: current portion		(2,575)	(2,288)
Finance lease and other financing obligations, less current portion		$ 27,931	$ 28,810

(1) On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021. As a result, these notes have been classified as current on our consolidated balance sheet as of December 31, 2020.

There were no outstanding borrowings on our $420.0 million revolving credit facility (the "Revolving Credit Facility") as of December 31, 2020 and 2019.

Secured Credit Facility

The credit agreement governing our secured credit facility (as amended, the "Credit Agreement") provides for senior secured credit facilities (the "Senior Secured Credit Facilities") consisting of a term loan facility (the "Term Loan"), the Revolving Credit Facility, and incremental availability under which additional secured credit facilities could be issued under certain circumstances.

Term Loan

The principal amount of the Term Loan amortizes in equal quarterly installments in an aggregate annual amount equal to 1.0% of the aggregate principal amount of the Term Loan upon completion of the tenth amendment of the Credit Agreement entered into on September 20, 2019 (the "Tenth Amendment,") with the balance due at maturity.

In accordance with the terms of the Credit Agreement, the Term Loan may, at our option, be maintained from time to time as a Base Rate loan or a Eurodollar Rate loan (each as defined in the Credit Agreement), with each representing a different determination of interest rates. The interest rate margins for the Term Loan are fixed at, and as of December 31, 2020 were, 0.75% and 1.75% for Base Rate loans and Eurodollar Rate loans, respectively, subject to floors of 1.00% and 0.00% for Base Rate loans and Eurodollar Rate loans, respectively. As of December 31, 2020, we maintained the Term Loan as a Eurodollar Rate loan, which accrued interest at 1.90%.

Revolving Credit Facility

In accordance with the terms of the Credit Agreement, borrowings under the Revolving Credit Facility may, at our option, be maintained from time to time as Base Rate loans, Eurodollar Rate loans, or EURIBOR loans (each as defined in the Credit Agreement), with each representing a different determination of interest rates. The interest rate margins and letter of credit fees under the Revolving Credit Facility are as follows (each depending on our senior secured net leverage ratio): (i) the interest rate margin for Base Rate loans range from 0.00% to 0.50%; (ii) the interest rate margin for Eurodollar Rate and EURIBOR loans range from 1.00% to 1.50%; and (iii) the letter of credit fees range from 0.875% to 1.375%.

We are required to pay to our revolving credit lenders, on a quarterly basis, a commitment fee on the unused portion of the Revolving Credit Facility. The commitment fee ranges from 0.125% to 0.250%, depending on our senior secured net leverage ratios.

As of December 31, 2020, there was $416.1 million available under the Revolving Credit Facility, net of $3.9 million of obligations in respect of outstanding letters of credit issued thereunder. Outstanding letters of credit are issued primarily for the benefit of certain operating activities. As of December 31, 2020, no amounts had been drawn against these outstanding letters of credit. Availability under the Revolving Credit Facility may be borrowed, repaid, and re-borrowed to fund our working capital needs and for other general corporate purposes.

Early redemption of the 6.25% Senior Notes

On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021. On February 15, 2021, the “make-whole” premium with respect to the 6.25% Senior Notes will expire, and we will redeem the 6.25% Senior Notes in accordance with the terms of the 6.25% Senior Notes Indenture and the terms of the notice of redemption. We expect to redeem the 6.25% Senior Notes on March 5, 2021 at a redemption price equal to 103.125% of the aggregate principal amount of the outstanding 6.25% Senior Notes, plus accrued and unpaid interest to (but not including) the redemption date.

Fiscal year 2020 transactions

On April 1, 2020, in order to enhance our financial flexibility given the general uncertainty associated with the COVID-19 pandemic, we withdrew $400.0 million from the Revolving Credit Facility. On August 17, 2020, we repaid these borrowings using a portion of the proceeds from issuance of $750.0 million aggregate principal amount of 3.75% senior notes due 2031 (the "3.75% Senior Notes"), issued by our indirect, wholly-owned subsidiary, Sensata Technologies Inc. ("STI").

Fiscal year 2019 transactions

On March 27, 2019 certain indirect, wholly-owned subsidiaries of Sensata plc, including Sensata Technologies B.V. ("STBV"), entered into the ninth amendment (the "Ninth Amendment") of the Credit Agreement. Among other changes to the Credit Agreement, the Ninth Amendment (i) extended the maturity date of the Revolving Credit Facility to March 27, 2024; (ii) added pounds sterling as an available currency for revolving credit loans and letters of credit under the Revolving Credit Facility; (iii) lowered the interest rate margins related to the Revolving Credit Facility (depending on our senior secured net leverage ratio); (iv) lowered our letter of credit fees (depending on our senior secured net leverage ratio); (v) reduced our revolving credit commitment fees (depending on our senior secured net leverage ratio); and (vi) modified the senior secured net leverage ratio financial covenant to increase the Revolving Credit Facility utilization threshold above which such financial covenant is tested from 10% to 20% and eliminated the requirement that such ratio be tested (regardless of utilization) for purposes of satisfying the conditions to any borrowing or other utilization under the Revolving Credit Facility.

On June 13, 2019, our subsidiaries that were at the time borrowers under the Credit Agreement entered into an amendment to the Credit Agreement with the administrative agent to correct certain technical and immaterial errors in the Credit Agreement.

On September 20, 2019 certain of our subsidiaries, including STBV and STI, entered into the Tenth Amendment. Under the terms of the Tenth Amendment, among other changes to the Credit Agreement, (i) the final maturity date of the Term Loan was extended to September 20, 2026; (ii) STI became the sole borrower under the Credit Agreement and assumed substantially all of the obligations of STBV and Sensata Technologies Finance Company, LLC ("STFC") thereunder; (iii) STBV became a guarantor of STI’s obligations under the Credit Agreement, and STFC ceased to be a guarantor with respect to the Credit Agreement; (iv) certain subsidiaries of STBV that previously guaranteed STBV’s and/or STFC’s obligations under the Credit Agreement (the “Released Guarantors”) were released from their guarantees under the Credit Agreement, subject to the satisfaction of certain tests (the “Guarantees Release”); (v) the permission to incur incremental additional indebtedness under the Credit Agreement was increased; and (vi) certain of the operational and restrictive covenants and other terms and conditions of the Senior Secured Credit Facilities to which STBV and its restricted subsidiaries are subject were modified to provide us with increased flexibility and permissions thereunder (including permission, subject to no default or event of default, to make restricted payments (including dividends) in an amount equal to $50.0 million annually, which can be increased to an unlimited amount subject to compliance with a specified senior secured net leverage ratio).

All obligations under the Senior Secured Credit Facilities are unconditionally guaranteed by certain of our subsidiaries and secured by substantially all present and future property and assets of STBV and its guarantor subsidiaries.

The Credit Agreement provides that, if our senior secured net leverage ratio exceeds a specified level, we are required to use a portion of our excess cash flow, as defined in the Credit Agreement, generated by operating, investing, or financing activities to prepay the outstanding borrowings under the Senior Secured Credit Facilities. The Credit Agreement also requires mandatory prepayments of the outstanding borrowings under the Senior Secured Credit Facilities upon certain asset dispositions and casualty events, in each case subject to certain reinvestment rights, and the incurrence of certain indebtedness (excluding any permitted indebtedness). These provisions were not triggered during the year ended December 31, 2020.

Senior Notes

We have various tranches of senior notes outstanding. Information regarding these senior notes (together, the "Senior Notes") is included in the following table. The Senior Notes were issued under indentures (the "Senior Notes Indentures") among the issuers listed in the table below, The Bank of New York Mellon, as trustee, and our guarantor subsidiaries named in the respective Senior Notes Indentures. Each of the Senior Notes were issued at par, with interest payable semi-annually on the dates shown in the table below.

	4.875% Senior Notes	5.625% Senior Notes	5.000% Senior Notes	6.250% Senior Notes[1]	4.375% Senior Notes [2]	3.750% Senior Notes
Aggregate principal amount	$ 500,000	$ 400,000	$ 700,000	$ 750,000	$ 450,000	$ 750,000
Interest rate	4.875%	5.625%	5.000%	6.250%	4.375%	3.750%
Issuer	STBV	STBV	STBV	STUK	STI	STI
Issue date	April 2013	October 2014	March 2015	November 2015	September 2019	August 2020
Interest due	April 15	May 1	April 1	February 15	February 15	February 15
Interest due	October 15	November 1	October 1	August 15	August 15	August 15
Maturity Date	October 2023	November 2024	October 2025	February 2026	February 2030	February 2031

(1) The 6.25% Senior Notes were issued by our indirect, wholly-owned subsidiary, Sensata Technologies UK Financing Co. plc ("STUK") under an indenture dated as of November 27, 2015 (the "6.25% Senior Notes Indenture"). On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021.

(2) The proceeds of the issuance of the 4.375% Senior Notes were used to repay a portion of the Term Loan concurrent with the entry into the Tenth Amendment.

Redemption

Except as described below with respect to the 3.75% Senior Notes and the 4.375% Senior Notes, at any time, and from time to time, we may optionally redeem the Senior Notes, in whole or in part, at a price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest, if any, up to, but excluding, the date of redemption, plus a "make-whole" premium set forth in the relevant Senior Notes Indenture.

The "make-whole" premium will not be payable with respect to any such redemption of the 4.375% Senior Notes on or after November 15, 2029. The "make-whole" premium will not be payable with respect to any such redemption of the 3.75% Senior Notes on or after February 15, 2026; on or after such date, we may optionally redeem the 3.75% Senior Notes, in whole or in part, at the following prices (expressed as a percentage of principal amount), plus accrued and unpaid interest, if any, up to but excluding the redemption date:

Period beginning February 15,	Price
2026	101.875 %
2027	100.938 %
2028 and thereafter	100.000 %

Upon the occurrence of certain specific change in control events, we will be required to offer to repurchase the notes at 101% of their principal amount, plus accrued and unpaid interest, if any, to, but excluding, the date of repurchase.

If changes in certain tax laws or treaties, or any change in the official application, administration, or interpretation thereof, of any relevant taxing jurisdiction become effective that would impose withholding taxes or other deductions on the payments of any of the Senior Notes or the guarantees thereof, we may, at our option, redeem the relevant Senior Notes in whole but not in part, at a redemption price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, to, but excluding, the redemption date, premium, if any, and all additional amounts (as described in the relevant Senior Notes Indenture), if any, then due and which will become due on the date of redemption.

Guarantees

The obligations of the issuers of the Senior Notes are guaranteed by STBV and all of its subsidiaries (excluding the company that is the issuer of the relevant Senior Notes) that guarantee the obligations of STI under the Credit Agreement (after giving effect to the Guarantees Release pursuant to the Tenth Amendment). The Released Guarantors are not guarantors of the 3.75% Senior Notes or the 4.375% Senior Notes, and upon consummation of the Tenth Amendment, the guarantees of the Released Guarantors with respect to the other Senior Notes were released.

Events of Default

The Senior Notes Indentures provide for events of default that include, among others, nonpayment of principal or interest when due, breach of covenants or other provisions in the relevant Senior Notes Indenture, defaults in payment of certain other indebtedness, certain events of bankruptcy or insolvency, failure to pay certain judgments, and the cessation of the full force and effect of the guarantees of significant subsidiaries. Generally, if an event of default occurs, the trustee or the holders of at least 25% in principal amount of the then outstanding Senior Notes issued under the relevant Senior Notes Indenture may declare the principal of, and accrued but unpaid interest on, all of the relevant Senior Notes to be due and payable immediately. All provisions regarding remedies in an event of default are subject to the relevant Senior Notes Indenture.

Restrictions and Covenants

As of December 31, 2020, STBV and all of its subsidiaries were subject to certain restrictive covenants under the Credit Agreement and the Senior Notes Indentures. Under certain circumstances, STBV is permitted to designate a subsidiary as "unrestricted" for purposes of the Credit Agreement, in which case the restrictive covenants thereunder will not apply to that subsidiary; the Senior Notes Indentures do not contain such a permission. STBV has not designated any subsidiaries as unrestricted. The net assets of STBV subject to these restrictions totaled $2,726.2 million at December 31, 2020.

Credit Agreement

The Credit Agreement contains non-financial restrictive covenants (subject to important exceptions and qualifications set forth in the Credit Agreement) that limit our ability to, among other things:

- incur indebtedness or liens, prepay subordinated debt, or amend the terms of our subordinated debt;
- make loans and investments (including acquisitions) or sell assets;
- change our business or accounting policies, merge, consolidate, dissolve or liquidate, or amend the terms of our organizational documents;
- enter into affiliate transactions;
- pay dividends and make other restricted payments; or
- enter into certain burdensome contractual obligations.

In addition, under the Credit Agreement, STBV and its subsidiaries are required to maintain a senior secured net leverage ratio not to exceed 5.0:1.0 at the conclusion of certain periods when outstanding loans and letters of credit that are not cash collateralized for the full face amount thereof exceed 20% of the commitments under the Revolving Credit Facility.

Senior Notes Indentures

The Senior Notes Indentures contain restrictive covenants (subject to important exceptions and qualifications set forth in the Senior Notes Indentures) that limit the ability of STBV and its subsidiaries to, among other things:

- incur liens;
- incur or guarantee indebtedness without guaranteeing the Senior Notes;
- engage in sale and leaseback transactions; or
- effect mergers or consolidations, or sell, assign, convey, transfer, lease or otherwise dispose of all or substantially all of the assets of STBV and its subsidiaries.

Certain of these covenants will be suspended if the Senior Notes are assigned an investment grade rating by Standard & Poor's Rating Services or Moody's Investors Service, Inc. and provided no default has occurred and is continuing at such time. The suspended covenants will be reinstated if the Senior Notes are no longer assigned an investment grade rating by either rating agency or an event of default has occurred and is continuing at such time. As of December 31, 2020, none of the Senior Notes were assigned an investment grade rating by either rating agency.

Restrictions on Payment of Dividends

STBV's subsidiaries are generally not restricted in their ability to pay dividends or otherwise distribute funds to STBV, except for restrictions imposed under applicable corporate law.

STBV, however, is limited in its ability to pay dividends or otherwise make distributions to its immediate parent company and, ultimately, to Sensata plc, under the Credit Agreement. Specifically, the Credit Agreement prohibits STBV from paying dividends or making distributions to its parent companies except for purposes that include, but are not limited to, the following:

- customary and reasonable operating expenses, legal and accounting fees and expenses, and overhead of such parent companies incurred in the ordinary course of business, provided that such amounts, in the aggregate, do not exceed $20.0 million in any fiscal year;
- dividends and other distributions in an aggregate amount not to exceed $200.0 million plus certain amounts, including the retained portion of excess cash flow, but only insofar as no default or event of default exists and the senior secured net leverage ratio is less than 2.0:1.0 calculated on a pro forma basis;
- so long as no default or an event of default exists, dividends and other distributions in an aggregate amount not to exceed $50.0 million in any calendar year (with the unused portion in any year being carried over to succeeding years) plus unlimited additional amounts but only insofar as the senior secured net leverage ratio is less than 2.5:1.0 calculated on a pro forma basis; and
- other dividends and other distributions in an aggregate amount not to exceed $150.0 million, so long as no default or event of default exists.

The Senior Notes Indentures generally allow STBV to pay dividends and make other distributions to its parent companies.

Compliance with Financial and Non-Financial Covenants

We were in compliance with all of the financial and non–financial covenants and default provisions associated with our indebtedness as of December 31, 2020 and for the fiscal year then ended.

Accounting for Debt Financing Transactions

During the year ended December 31, 2020, in connection with the entry into the 3.75% Senior Notes, we incurred $8.4 million of related third-party costs, which are presented as a reduction of long-term debt on our consolidated balance sheets.

During the year ended December 31, 2019, in connection with the entry into the Ninth Amendment, we incurred $2.4 million of creditor fees and related third-party costs, which are presented as a reduction of long-term debt on our consolidated balance sheets.

During the year ended December 31, 2019, in connection with of the issuance of the 4.375% Senior Notes, the entry into the Tenth Amendment, and the subsequent partial repayment of the Term Loan, we recognized a loss of $4.4 million, presented in the other, net line of our consolidated statement of operations, as well as $5.0 million of deferred financing costs, which are presented as a reduction of long-term debt on our consolidated balance sheets.

During the year ended December 31, 2018, in connection with the Merger, we paid $5.8 million of creditor fees and related third-party costs in order to obtain consents to the transaction from our existing lenders. As a result, and based on application of the provisions in FASB ASC Subtopic 470-50, we recognized a $3.5 million adjustment to the carrying value of long-term debt, net and a $2.4 million loss in other, net.

Refer to Note 2, "Significant Accounting Policies," for additional information related to our accounting policies regarding debt financing transactions.

Finance Lease and Other Financing Obligations

Refer to Note 17, "Leases," for additional information related to our finance leases.

Debt Maturities

The aggregate principal amount of each tranche of our Senior Notes is due in full at its maturity date. The Term Loan must be repaid in full on or prior to its final maturity date. Loans made pursuant to the Revolving Credit Facility must be repaid in full at its maturity date and can be repaid prior to then at par. All letters of credit issued thereunder will terminate at the final maturity of the Revolving Credit Facility unless cash collateralized prior to such time.

The following table presents the remaining mandatory principal repayments of long-term debt, excluding finance lease payments, other financing obligations, and discretionary repurchases of debt, in each of the years ended December 31, 2021 through 2025 and thereafter. On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021. This redemption is reflected in fiscal year 2021 in the following table. In accordance with the terms of the 6.25% Senior Notes, redemption will be at 103.125% of aggregate principal amount outstanding, and will represent an additional cash outflow of approximately $23.4 million in fiscal year 2021, which is not presented below.

For the year ended December 31,	Aggregate Maturities
2021	$ 754,630
2022	4,630
2023	504,630
2024	404,630
2025	704,630
Thereafter	1,632,946
Total long-term debt principal payments	$ 4,006,096

15. Commitments and Contingencies

Non-cancelable purchase agreements exist with various suppliers, primarily for services such as information technology support. The terms of these agreements are fixed and determinable. As of December 31, 2020, we had the following purchase commitments:

For the year ending December 31,	
2021	$ 41,355
2022	14,517
2023	6,889
2024	149
2025	132
Thereafter	196
Total purchase commitments	$ 63,238

Off-Balance Sheet Arrangements

From time to time, we execute contracts that require us to indemnify the other parties to the contracts. These indemnification obligations generally arise in two contexts. First, in connection with certain transactions, such as the divestiture of a business or the issuance of debt or equity securities, the agreement typically contains standard provisions requiring us to indemnify the purchaser against breaches by us of representations and warranties contained in the agreement. These indemnities are generally subject to time and liability limitations. Second, we enter into agreements in the ordinary course of business, such as customer contracts, that might contain indemnification provisions relating to product quality, intellectual property infringement, governmental regulations and employment related matters, and other typical indemnities. In certain cases, indemnification obligations arise by law.

We believe that our indemnification obligations are consistent with other companies in the markets in which we compete. Performance under any of these indemnification obligations would generally be triggered by a breach of the terms of the contract or by a third-party claim. Historically, we have experienced only immaterial and irregular losses associated with these indemnifications. Consequently, any future liabilities brought about by these indemnifications cannot reasonably be estimated or accrued.

Indemnifications Provided As Part of Contracts and Agreements

We are party to the following types of agreements pursuant to which we may be obligated to indemnify a third party with respect to certain matters.

Officers and Directors: Our articles of association provide for indemnification of directors and officers by us to the fullest extent permitted by applicable law, as it now exists or may hereinafter be amended (but, in the case of an amendment, only to the extent such amendment permits broader indemnification rights than permitted prior thereto), against any and all liabilities, including all expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit, or proceeding, provided he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful or outside of his or her mandate. The articles do not provide a limit to the maximum future payments, if any, under the indemnification. No indemnification is provided for in respect of any claim, issue, or matter as to which such person has been adjudged to be liable for gross negligence or willful misconduct in the performance of his or her duty on our behalf.

In addition, we have a liability insurance policy that insures directors and officers against the cost of defense, settlement, or payment of claims and judgments under some circumstances. Certain indemnification payments may not be covered under our directors' and officers' insurance coverage.

Initial Purchasers of Senior Notes: Pursuant to the terms of the purchase agreements entered into in connection with our private placement senior note offerings, we are obligated to indemnify the initial purchasers of the Senior Notes against certain liabilities caused by any untrue statement or alleged untrue statement of a material fact in various documents relied upon by such initial purchasers, or to contribute to payments the initial purchasers may be required to make in respect thereof. The purchase agreements do not provide a limit to the maximum future payments, if any, under these indemnifications.

Intellectual Property and Product Liability Indemnification: We routinely sell products with a limited intellectual property and product liability indemnification included in the terms of sale. Historically, we have had only immaterial and irregular losses associated with these indemnifications. Consequently, any future liabilities resulting from these indemnifications cannot reasonably be estimated or accrued.

Product Warranty Liabilities

Refer to *Revenue Recognition* in Note 2, "Significant Accounting Policies," for additional information related to the warranties we provide to customers.

In the event a warranty claim based on defective materials exists, we may be able to recover some of the cost of the claim from the vendor from whom the materials were purchased. Our ability to recover some of the costs will depend on the terms and conditions to which we agreed when the materials were purchased. When a warranty claim is made, the only collateral available to us is the return of the inventory from the customer making the warranty claim. Historically, when customers make a warranty claim, we either replace the product or provide the customer with a credit. We generally do not rework the returned product.

Our policy is to accrue for warranty claims when a loss is both probable and estimable. This is accomplished by accruing for estimated returns and estimated costs to replace the product at the time the related revenue is recognized. Liabilities for warranty claims have historically not been material. In some instances, customers may make claims for costs they incurred or other damages related to a claim.

Environmental Remediation Liabilities

Our operations and facilities are subject to U.S. and non-U.S. laws and regulations governing the protection of the environment and our employees, including those governing air emissions, chemical usage, water discharges, the management and disposal of hazardous substances and wastes, and the cleanup of contaminated sites. We could incur substantial costs, including cleanup costs, fines, civil or criminal sanctions, or third-party property damage or personal injury claims, in the event of violations or liabilities under these laws and regulations, or non-compliance with the environmental permits required at our facilities. Potentially significant expenditures could be required in order to comply with environmental laws that may be adopted or imposed in the future. We are, however, not aware of any threatened or pending material environmental investigations, lawsuits, or claims involving us or our operations.

Legal Proceedings and Claims

We are regularly involved in a number of claims and litigation matters that arise in the ordinary course of business. Although it is not feasible to predict the outcome of these matters, based upon our experience and current information known to us, we do not expect the outcome of these matters, either individually or in the aggregate, to have a material adverse effect on our results of operations, financial position, and/or cash flows.

We account for litigation and claims losses in accordance with FASB ASC Topic 450, *Contingencies*. Under FASB ASC Topic 450, loss contingency provisions are recognized for probable and estimable losses at our best estimate of a loss or, when a best estimate cannot be made, at our estimate of the minimum loss. These estimates are often developed prior to knowing the amount of the ultimate loss, require the application of considerable judgment, and are refined each accounting period as additional information becomes known. Accordingly, we are often initially unable to develop a best estimate of loss and therefore the minimum amount, which could be an immaterial amount, is recognized. As information becomes known, either the minimum loss amount is increased, or a best estimate can be made, generally resulting in additional loss provisions. A best estimate amount may be changed to a lower amount when events result in an expectation of a more favorable outcome than previously expected.

Pending Litigation and Claims:

There are no material pending litigation and claims outstanding as of December 31, 2020.

Litigation and Claims resolved in the current year:

We were a defendant in a lawsuit, *Wasica Finance Gmbh et al v. Schrader International Inc. et al, Case No. 13-1353-CPS, U.S.D.C., Delaware*, in which the claimant alleged infringement of their patent (US 5,602,524) in connection with certain of our tire pressure monitoring system products. The patent in question has expired, and as a result, the claimant sought damages for past alleged infringement with interest and costs. The asserted patent was the U.S. counterpart of a German patent that had been previously asserted against Schrader. Schrader succeeded in proving that German patent to be invalid. On February 14, 2020, a jury found us liable for damages in the amount of $31.2 million. As a result, we recorded a loss of $29.2 million in the three months ended March 31, 2020 through cost of revenue. On July 6, 2020, the court awarded an additional $12.1 million for plaintiffs and against us for prejudgment interest-related damages, and as a result, in the three months ended June 30, 2020, we recorded a loss of $12.1 million through restructuring and other charges, net, to reflect the court's order. The parties executed and closed a Litigation Settlement & License Agreement on September 18, 2020 to settle the matter for $31.6 million. As a result of this settlement, in the three months ended September 30, 2020, we recognized a gain of $11.7 million, presented in restructuring and other charges, net. The lawsuit was formally dismissed by the District Court (D. Del) on September 22, 2020, and the U.S. Court of Appeals for the Federal Circuit on September 24, 2020.

16. Shareholders’ Equity

Treasury Shares

Ordinary shares repurchased by us are recognized, measured at cost, and presented as treasury shares on our consolidated balance sheets, resulting in a reduction of shareholders' equity.

In connection with the Merger, all then outstanding treasury shares were canceled in accordance with U.K. law. Accordingly, we (1) derecognized the total purchase price of these treasury shares, (2) recognized a reduction to ordinary shares at an amount equal to the total par value of such shares, and (3) recognized a reduction to retained earnings at an amount equal to the excess of the total repurchase price over the total par value of the then outstanding treasury shares, or $286.1 million.

From time to time, our Board of Directors has authorized various share repurchase programs, which may be modified or terminated by our Board of Directors at any time. Under these programs, we may repurchase ordinary shares at such times and in amounts to be determined by our management, based on market conditions, legal requirements, and other corporate considerations, on the open market or in privately negotiated transactions, provided that such transactions were completed pursuant to an agreement and with a third party approved by our shareholders at the annual general meeting. The authorized amount of our various share repurchase programs may be modified or terminated by our Board of Directors at any time. We currently have a $500.0 million share repurchase program authorized by our Board of Directors in July 2019 (the "July 2019 Program"). On April 2, 2020, we announced a temporary suspension of July 2019 Program, which will continue to remain on hold until market conditions show greater improvement and stability. As of December 31, 2020, approximately $302.3 million remained available under the July 2019 Program.

As a result of certain aspects of U.K. law, we discontinued the practice of reissuing treasury shares as part of our share-based compensation programs upon completion of the Merger. The number of treasury shares reissued prior to completion of the Merger was not material.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss were as follows:

	Cash Flow Hedges	Defined Benefit and Retiree Healthcare Plans	Accumulated Other Comprehensive Loss
Balance as of December 31, 2017	$ (28,179)	$ (34,985)	$ (63,164)
Pre-tax current period change	49,817	(1,183)	48,634
Tax effect	(12,454)	806	(11,648)
Balance as of December 31, 2018	9,184	(35,362)	(26,178)
Pre-tax current period change	9,816	(2,198)	7,618
Tax effect	(2,454)	530	(1,924)
Balance as of December 31, 2019	16,546	(37,030)	(20,484)
Pre-tax current period change	(31,114)	(7,848)	(38,962)
Tax effect	7,835	2,076	9,911
Balance as of December 31, 2020	$ (6,733)	$ (42,802)	$ (49,535)

The details of the components of other comprehensive (loss)/income, net of tax, for the years ended December 31, 2020, 2019, and 2018 are as follows:

	For the year ended December 31,								
	2020			2019			2018		
	Cash Flow Hedges	Defined Benefit and Retiree Healthcare Plans	Total	Cash Flow Hedges	Defined Benefit and Retiree Healthcare Plans	Total	Cash Flow Hedges	Defined Benefit and Retiree Healthcare Plans	Total
Other comprehensive (loss)/income before reclassifications	$ (17,738)	$ (12,494)	$ (30,232)	$ 28,795	$ (3,470)	$ 25,325	$ 26,859	$ (2,120)	$ 24,739
Amounts reclassified from accumulated other comprehensive loss	(5,541)	6,722	1,181	(21,433)	1,802	(19,631)	10,504	1,743	12,247
Other comprehensive (loss)/income	$ (23,279)	$ (5,772)	$ (29,051)	$ 7,362	$ (1,668)	$ 5,694	$ 37,363	$ (377)	$ 36,986

The details of the (gain)/loss reclassified from accumulated other comprehensive loss for the years ended December 31, 2020, 2019, and 2018 are as follows:

	Amount of (Gain)/Loss Reclassified from Accumulated Other Comprehensive Loss — For the year ended December 31, 2020	2019	2018	Affected Line in Consolidated Statements of Operations
Derivative instruments designated and qualifying as cash flow hedges:				
Foreign currency forward contracts	$ (10,785)	$ (26,180)	$ 18,072	Net revenue [1]
Foreign currency forward contracts	3,397	(2,397)	(5,442)	Cost of revenue [1]
Foreign currency forward contracts	—	—	1,376	Other, net [1]
Total, before taxes	(7,388)	(28,577)	14,006	Income before taxes
Income tax effect	1,847	7,144	(3,502)	Provision for/(benefit from) income taxes
Total, net of taxes	$ (5,541)	$ (21,433)	$ 10,504	Net income
Defined benefit and retiree healthcare plans	$ 9,118	$ 2,552	$ 1,993	Other, net [2]
Defined benefit and retiree healthcare plans	—	—	228	Restructuring and other charges, net [3]
Total, before taxes	9,118	2,552	2,221	Income before taxes
Income tax effect	(2,396)	(750)	(478)	Provision for/(benefit from) income taxes
Total, net of taxes	$ 6,722	$ 1,802	$ 1,743	Net income

(1) Refer to Note 19, "Derivative Instruments and Hedging Activities," for additional information related to amounts to be reclassified from accumulated other comprehensive loss in future periods.

(2) Refer to Note 13, "Pension and Other Post-Retirement Benefits," for additional information related to net periodic benefit cost.

(3) Amount represents an equity component of the Valves Business, which was sold in fiscal year 2018. Refer to Note 5, "Restructuring and Other Charges, Net."

17. Leases

The table below shows right-of-use asset and lease liability amounts and the financial statement line item in which those amounts are presented:

	December 31, 2020	December 31, 2019
Operating lease right-of-use assets:		
Other assets	$ 49,980	$ 55,333
Total operating lease right-of-use assets	$ 49,980	$ 55,333
Operating lease liabilities:		
Accrued expenses and other current liabilities	$ 11,389	$ 11,543
Other long-term liabilities	43,307	45,457
Total operating lease liabilities	$ 54,696	$ 57,000
Finance lease right-of-use assets:		
Property, plant and equipment, at cost	$ 49,714	$ 49,714
Accumulated depreciation	(26,107)	(24,316)
Property, plant and equipment, net	$ 23,607	$ 25,398
Finance lease liabilities:		
Current portion of long-term debt, finance lease and other financing obligations	$ 2,403	$ 1,974
Finance lease and other financing obligations, less current portion	27,931	28,669
Total finance lease liabilities	$ 30,334	$ 30,643

The vast majority of our finance lease obligations are for facilities in Baoying, China and Attleboro, Massachusetts. As of December 31, 2020 and 2019, the combined finance lease obligation outstanding for these facilities was $29.4 million and $29.4 million, respectively.

The table below presents the lease liabilities arising from obtaining right-of-use assets in the years ended December 31, 2020 and 2019:

	For the year ended December 31,	
	2020	2019
Operating leases	$ 3,232	$ 5,423
Finance leases	$ —	$ —

The table below presents our total lease cost for the years ended December 31, 2020 and 2019 (short-term lease cost was not material for the years ended December 31, 2020 and 2019):

	For the year ended December 31,	
	2020	2019
Operating lease cost	$ 16,658	$ 16,124
Finance lease cost:		
Amortization of right-of-use assets	$ 1,794	$ 1,808
Interest on lease liabilities	2,565	2,695
Total finance lease cost	$ 4,359	$ 4,503

Rent expense for the year ended December 31, 2018 (prior to the adoption of FASB ASC Topic 842) was $21.0 million.

The table below presents the cash paid related to our operating and finance leases for the years ended December 31, 2020 and 2019:

	For the year ended December 31,	
	2020	2019
Operating cash flows from operating leases	$ 16,489	$ 15,911
Operating cash flows from finance leases	$ 2,262	$ 2,731
Financing cash flows from finance leases	$ 944	$ 1,933

The table below presents the weighted-average remaining lease term of our operating and finance leases (in years):

	2020
Operating leases	7.6
Finance leases	11.8

The table below presents our weighted-average discount rate as of December 31, 2020:

	2020
Operating leases	5.7 %
Finance leases	8.5 %

The table below presents a maturity analysis of the obligations related to our operating lease liabilities and finance lease liabilities in effect as of December 31, 2020:

	Operating Leases	Finance Leases
Year ending December 31,		
2021	$ 14,608	$ 4,572
2022	12,176	3,848
2023	8,829	3,813
2024	7,561	3,873
2025	5,048	3,934
Thereafter	21,808	29,486
Total undiscounted cash flows related to lease liabilities	70,030	49,526
Less imputed interest	(15,334)	(19,192)
Total lease liabilities	$ 54,696	$ 30,334

18. Fair Value Measures

Our assets and liabilities recorded at fair value have been categorized based upon a fair value hierarchy in accordance with FASB ASC Topic 820. The levels of the fair value hierarchy are described below:

- Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets and liabilities that we have the ability to access at the measurement date.
- Level 2 inputs utilize inputs, other than quoted prices included in Level 1, that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals.
- Level 3 inputs are unobservable inputs for the asset or liability, allowing for situations where there is little, if any, market activity for the asset or liability.

Measured on a Recurring Basis

The fair values of our assets and liabilities measured at fair value on a recurring basis as of as of December 31, 2020 and 2019 are as shown in the below table. All fair value measures presented are categorized in Level 2 of the fair value hierarchy.

	As of December 31,	
	2020	2019
Assets measured at fair value:		
Foreign currency forward contracts	16,163	23,561
Commodity forward contracts	8,902	3,623
Total assets measured at fair value	25,065	27,184
Liabilities measured at fair value:		
Foreign currency forward contracts	24,660	1,959
Commodity forward contracts	310	462
Total liabilities measured at fair value	24,970	2,421

Refer to Note 2, "Significant Accounting Policies," for additional information related to the methods used to estimate the fair value of our financial instruments, and refer Note 19, "Derivative Instruments and Hedging Activities," for additional information related to the inputs used to determine these fair value measurements and the nature of the risks that these derivative instruments are intended to mitigate.

Although we have determined that the majority of the inputs used to value our derivative instruments fall within Level 2 of the fair value hierarchy, the credit valuation adjustments associated with our derivatives utilize Level 3 inputs, such as estimates of current credit spreads, to appropriately reflect both our own non-performance risk and the respective counterparties' non-performance risk in the fair value measurement. As of December 31, 2020 and 2019, we have assessed the significance of the impact of the credit valuation adjustments on the overall valuation of our derivative positions and have determined that the credit valuation adjustments are not significant to the overall valuation of our derivatives. As a result, we have determined that our derivatives in their entirety are classified in Level 2 in the fair value hierarchy.

Measured on a Nonrecurring Basis

We evaluated our goodwill and other indefinite-lived intangible assets for impairment as of October 1, 2020. Refer to Note 11, "Goodwill and Other Intangible Assets, Net," for additional information. Based on these analyses, we determined that no impairments were required. As of December 31, 2020, no events or changes in circumstances occurred that would have triggered the need for an additional impairment review of goodwill or other indefinite-lived intangible assets.

Financial Instruments Not Recorded at Fair Value

The following table presents the carrying values and fair values of financial instruments not recorded at fair value in the consolidated balance sheets as of December 31, 2020 and 2019. All fair value measures presented are categorized within Level 2 of the fair value hierarchy.

	As of December 31,			
	2020		2019	
	Carrying Value [1]	Fair Value	Carrying Value [1]	Fair Value
Term Loan	$ 456,096	$ 454,955	$ 460,725	$ 464,181
4.875% Senior Notes	$ 500,000	$ 538,750	$ 500,000	$ 532,500
5.625% Senior Notes	$ 400,000	$ 448,000	$ 400,000	$ 444,000
5.0% Senior Notes	$ 700,000	$ 777,000	$ 700,000	$ 759,500
6.25% Senior Notes	$ 750,000	$ 778,125	$ 750,000	$ 808,125
4.375% Senior Notes	$ 450,000	$ 487,125	$ 450,000	$ 457,875
3.75% Senior Notes	$ 750,000	$ 776,250	$ —	$ —

(1) Excluding any related debt discounts and deferred financing costs.

In addition to the above, we hold certain equity investments that do not have readily determinable fair values for which we use the measurement alternative prescribed in FASB ASC Topic 321. Such investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. There were no impairments or changes resulting from observable transactions for any of these investments, and no adjustments have been made to their carrying values.

Refer to the table below for the carrying values of equity investments using the measurement alternative, which are presented as a component of other assets in the consolidated balance sheets.

	As of December 31,	
	2020	2019
Quanergy Systems, Inc	$ 50,000	$ 50,000
Other	15,000	3,700
Total	$ 65,000	$ 53,700

19. Derivative Instruments and Hedging Activities

We utilize derivative instruments that are designated and qualify as hedges of our exposure to variability in expected future cash flows. Hedge accounting generally provides for the matching of the timing of gain or loss recognition on these hedging instruments with the earnings effect of the hedged forecasted transactions. We may enter into other derivative contracts that are intended to economically hedge certain risks, even though we elect not to apply hedge accounting under FASB ASC Topic 815. Derivative financial instruments not designated as hedges are used to manage our exposure to certain risks, not for trading or speculative purposes. Refer to Note 2, "Significant Accounting Policies," for additional information related to the valuation techniques and accounting policies regarding derivative instruments and hedging activities.

Foreign Currency Risk

We are exposed to fluctuations in the values of certain foreign currencies relative to our functional currency, the USD. We enter into forward contracts to manage this exposure. We currently have outstanding foreign currency forward contracts that qualify as cash flow hedges intended to offset the effect of exchange rate fluctuations on forecasted sales and certain manufacturing costs. We also have outstanding foreign currency forward contracts that are intended to preserve the economic value of foreign currency denominated monetary assets and liabilities, which are not designated for hedge accounting treatment in accordance with FASB ASC Topic 815.

For each of the years ended December 31, 2020, 2019, and 2018, amounts excluded from the assessment of effectiveness of our foreign currency forward contracts were not material. As of December 31, 2020, we estimate that $9.7 million of net losses will be reclassified from accumulated other comprehensive loss to earnings during the twelve month period ending December 31, 2021.

As of December 31, 2020, we had the following outstanding foreign currency forward contracts:

Notional (in millions)	Effective Date(s)	Maturity Date(s)	Index (Exchange Rates)	Weighted-Average Strike Rate	Hedge Designation [(1)]
22.0 EUR	December 29, 2020	January 29, 2021	Euro ("EUR") to USD	1.23 USD	Not designated
317.3 EUR	Various from February 2019 to December 2020	Various from January 2021 to December 2022	EUR to USD	1.17 USD	Cash flow hedge
584.0 CNY	December 28, 2020	January 29, 2021	USD to Chinese Renminbi ("CNY")	6.57 CNY	Not designated
500.0 CNY	November 5, 2020	Various from January to December 2021	USD to CNY	6.74 CNY	Cash flow hedge
897.0 JPY	December 28, 2020	January 29, 2021	USD to Japanese Yen ("JPY")	103.53 JPY	Not designated
17,321.7 KRW	Various from March 2019 to December 2020	Various from January 2021 to December 2022	USD to Korean Won ("KRW")	1,167.03 KRW	Cash flow hedge
22.0 MYR	December 30, 2020	January 29, 2021	USD to Malaysian Ringgit ("MYR")	4.06 MYR	Not designated
284.0 MXN	December 29, 2020	January 29, 2021	USD to Mexican Peso ("MXN")	19.95 MXN	Not designated
2,963.5 MXN	Various from February 2019 to December 2020	Various from January 2021 to December 2022	USD to MXN	22.56 MXN	Cash flow hedge
6.0 GBP	December 29, 2020	January 29, 2021	British Pound Sterling ("GBP") to USD	1.35 USD	Not designated
48.9 GBP	Various from February 2019 to December 2020	Various from January 2021 to December 2022	GBP to USD	1.29 USD	Cash flow hedge

(1) Derivative financial instruments not designated as hedges are used to manage our exposure to currency exchange rate risk. They are intended to preserve the economic value, and they are not used for trading or speculative purposes.

Commodity Risk

We enter into commodity forward contracts in order to limit our exposure to variability in raw material costs that is caused by movements in the price of underlying metals. The terms of these forward contracts fix the price at a future date for various notional amounts associated with these commodities. These instruments are not designated for hedge accounting treatment in accordance with FASB ASC Topic 815.

As of December 31, 2020, we had the following outstanding commodity forward contracts:

Commodity	Notional	Remaining Contracted Periods	Weighted-Average Strike Price Per Unit
Silver	742,939 troy oz.	January 2021- December 2022	$ 20.54
Gold	7,326 troy oz.	January 2021-December 2022	$ 1,733.35
Nickel	165,037 pounds	January 2021-December 2022	$ 6.62
Aluminum	2,224,837 pounds	January 2021-December 2022	$ 0.86
Copper	1,803,323 pounds	January 2021-December 2022	$ 2.83
Platinum	7,440 troy oz.	January 2021-December 2022	$ 911.09
Palladium	831 troy oz.	January 2021-December 2022	$ 1,988.33

Financial Instrument Presentation

The following table presents the fair values of our derivative financial instruments and their classification in the consolidated balance sheets as of December 31, 2020 and 2019:

	Asset Derivatives			Liability Derivatives		
	Balance Sheet Location	As of December 31, 2020	As of December 31, 2019	Balance Sheet Location	As of December 31, 2020	As of December 31, 2019
Derivatives designated as hedging instruments:						
Foreign currency forward contracts	Prepaid expenses and other current assets	$ 11,281	$ 20,957	Accrued expenses and other current liabilities	$ 18,834	$ 1,055
Foreign currency forward contracts	Other assets	4,728	2,530	Other long-term liabilities	5,182	428
Total		$ 16,009	$ 23,487		$ 24,016	$ 1,483
Derivatives not designated as hedging instruments:						
Commodity forward contracts	Prepaid expenses and other current assets	$ 7,598	$ 3,069	Accrued expenses and other current liabilities	$ 149	$ 394
Commodity forward contracts	Other assets	1,304	554	Other long-term liabilities	161	68
Foreign currency forward contracts	Prepaid expenses and other current assets	154	74	Accrued expenses and other current liabilities	644	476
Total		$ 9,056	$ 3,697		$ 954	$ 938

These fair value measurements are all categorized within Level 2 of the fair value hierarchy. Refer to Note 18, "Fair Value Measures," for additional information related to the categorization of these fair value measurements within the fair value hierarchy.

The following tables present the effect of our derivative financial instruments on the consolidated statements of operations and the consolidated statements of comprehensive income for the years ended December 31, 2020 and 2019:

Derivatives designated as hedging instruments	Amount of Deferred (Loss)/Gain Recognized in Other Comprehensive (Loss)/Income — For the year ended December 31, 2020	2019	Location of Net Gain/(Loss) Reclassified from Accumulated Other Comprehensive Loss into Net Income	Amount of Net Gain/(Loss) Reclassified from Accumulated Other Comprehensive Loss into Net Income — For the year ended December 31, 2020	2019
Foreign currency forward contracts	$ (25,866)	$ 23,881	Net revenue	$ 10,785	$ 26,180
Foreign currency forward contracts	$ 2,140	$ 14,512	Cost of revenue	$ (3,397)	$ 2,397

Derivatives not designated as hedging instruments	Amount of Gain/(Loss) Recognized in Net Income — For the year ended December 31, 2020	2019	Location of Gain/(Loss) Recognized in Net Income
Commodity forward contracts	$ 10,027	$ 4,888	Other, net
Foreign currency forward contracts	$ (6,762)	$ 2,225	Other, net

Credit risk related contingent features

We have agreements with our derivative counterparties that contain a provision whereby if we default on our indebtedness and repayment of the indebtedness has been accelerated by the lender, then we could also be declared in default on our derivative obligations.

As of December 31, 2020, the termination value of outstanding derivatives in a liability position, excluding any adjustment for non-performance risk, was $25.1 million. As of December 31, 2020, we have not posted any cash collateral related to these agreements. If we breach any of the default provisions on any of our indebtedness as described above, we could be required to settle our obligations under the derivative agreements at their termination values.

20. Segment Reporting

In the three months ended June 30, 2020, we altered the way we measure segment operating income in order to align with a change to the performance measures provided to and used by our chief operating decision maker for purposes of assessing performance and deciding how to allocate resources to each segment. Whereas R&D and SG&A expenses related to our megatrend initiatives were historically allocated to our operating segments, beginning in fiscal year 2020 these amounts are presented within corporate and other. Prior period information has been recast to reflect this revised presentation.

We have historically operated in, and reported financial information for, the following two reportable segments: Performance Sensing and Sensing Solutions, each of which was also an operating segment. In the fourth quarter of 2020, a change in focus of the evaluation of our business by our chief operating decision maker in order to make decisions about resource allocation, among other factors such as solidification of a reporting structure to accommodate this focus, necessitated a reevaluation of our conclusion that Performance Sensing was an operating segment. Based on our assessment of these factors, we determined that the Performance Sensing operating segment should be divided into two operating segments, Automotive and HVOR. We also determined that each of these operating segments meet the criteria for aggregation in FASB ASC Topic 280, *Reportable Segments*. No change was made to Sensing Solutions, and it remains an operating segment. None of the preceding changes resulted in any impact on the overall composition of our reportable segments and prior periods were not required to be recast for this change.

An operating segment's performance is primarily evaluated based on segment operating income, which excludes amortization of intangible assets, restructuring and other charges, net, and certain corporate costs/credits not associated with the operations of the segment, including share-based compensation expense and a portion of depreciation expense associated with assets recorded in connection with acquisitions. Corporate and other costs excluded from an operating (and reportable) segment's performance are separately stated below and also include costs that are related to functional areas such as finance, information technology, legal, and human resources. We believe that segment operating income, as defined above, is an appropriate measure for evaluating the operating performance of our segments. However, this measure should be considered in addition to, and not as a substitute for, or superior to, operating income or other measures of financial performance prepared in accordance with U.S. GAAP. The accounting policies of each of our operating and reportable segments are materially consistent with those described in Note 2, "Significant Accounting Policies."

As discussed above, the Performance Sensing reportable segment represents the aggregation of the Automotive and HVOR operating segments, which primarily serve the automotive and HVOR industries, respectively, through development and manufacture of sensors, high-voltage contactors, and other solutions used in mission-critical systems and applications such as those in subsystems of automobiles, on-road trucks, and off-road equipment (e.g., tire pressure monitoring, thermal management, electrical protection, regenerative braking, powertrain (engine/transmission), and exhaust management). Our products are used in subsystems that, among other things, improve operating performance and efficiency, as well as contribute to environmentally sustainable and safe solutions as the world continues to pivot in those directions

Sensing Solutions primarily serves the industrial and aerospace industries through development and manufacture of a broad portfolio of application-specific sensor and electrical protection products used in a diverse range of industrial markets, including the appliance, HVAC, semiconductor, material handling, factory automation, and water management markets, as well as the aerospace market.

The following table presents net revenue and segment operating income for the reported segments and other operating results not allocated to the reported segments for the years ended December 31, 2020, 2019, and 2018 (prior periods have been recast as discussed above):

	For the year ended December 31,		
	2020	2019	2018
Net revenue:			
Performance Sensing	$ 2,223,810	$ 2,546,016	$ 2,627,651
Sensing Solutions	821,768	904,615	893,976
Total net revenue	$ 3,045,578	$ 3,450,631	$ 3,521,627
Segment operating income (as defined above):			
Performance Sensing	$ 532,529	$ 670,470	$ 728,251
Sensing Solutions	241,218	293,967	294,996
Total segment operating income	773,747	964,437	1,023,247
Corporate and other	(273,367)	(211,106)	(221,320)
Amortization of intangible assets	(129,549)	(142,886)	(139,326)
Restructuring and other charges, net	(33,094)	(53,560)	47,818
Operating income	337,737	556,885	710,419
Interest expense, net	(171,757)	(158,554)	(153,679)
Other, net	(339)	(7,908)	(30,365)
Income before taxes	$ 165,641	$ 390,423	$ 526,375

No customer exceeded 10% of our net revenue in any of the periods presented.

The following table presents net revenue by product category for the years ended December 31, 2020, 2019, and 2018:

	Performance Sensing	Sensing Solutions	For the year ended December 31,		
			2020	2019	2018
Net revenue:					
Sensors	X	X	$ 2,380,608	$ 2,712,926	$ 2,755,280
Electrical Protection [(1)]	X	X	504,001	573,631	522,172
Other [(1)]	X	X	160,969	164,074	244,175
Net revenue			$ 3,045,578	$ 3,450,631	$ 3,521,627

(1) Beginning in the year ended December 31, 2020, we adjusted our product categories to better reflect how we view our products. The product category we previously referred to as "controls" was renamed to "electrical protection," and our GIGAVAC products, which were previously grouped in "other," have been recast into "electrical protection." The amount of revenue recast from "other" to "electrical protection" in the years ended December 31, 2019 and 2018 was $91.9 million and $13.4 million, respectively. The "sensors" product category was unchanged.

The following table presents depreciation and amortization expense for our reportable segments for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
	2020	2019	2018
Depreciation and amortization:			
Performance Sensing	$ 91,522	$ 85,511	$ 72,067
Sensing Solutions	16,564	16,678	16,798
Corporate and other [(1)]	147,143	156,559	156,475
Total depreciation and amortization	$ 255,229	$ 258,748	$ 245,340

(1) Included within corporate and other is depreciation and amortization expense associated with the fair value step-up recognized in prior acquisitions and accelerated depreciation recognized in connection with restructuring actions. We do not allocate the additional depreciation and amortization expense associated with the step-up in the fair value of the PP&E and intangible assets associated with these acquisitions or accelerated depreciation related to restructuring actions

to our segments. This treatment is consistent with the financial information reviewed by our chief operating decision maker.

The following table presents total assets for our reportable segments as of December 31, 2020 and 2019:

	As of December 31,	
	2020	2019
Assets:		
Performance Sensing	$ 1,447,885	$ 1,515,396
Sensing Solutions	459,544	479,455
Corporate and other[(1)]	5,936,773	4,839,668
Total assets	$ 7,844,202	$ 6,834,519

(1) The following is included within corporate and other as of December 31, 2020 and 2019: goodwill of $3,111.3 million and $3,093.6 million, respectively; other intangible assets, net of $691.5 million and $770.9 million, respectively; cash and cash equivalents of $1,862.0 million and $774.1 million, respectively; and PP&E, net of $41.7 million and $41.2 million, respectively. This treatment is consistent with the financial information reviewed by our chief operating decision maker.

The following table presents additions to PP&E and capitalized software for our reportable segments for the years ended December 31, 2020, 2019, and 2018:

	For the year ended December 31,		
	2020	2019	2018
Additions to property, plant and equipment and capitalized software:			
Performance Sensing	$ 79,252	$ 125,412	$ 130,234
Sensing Solutions	16,885	19,520	12,492
Corporate and other	10,582	16,327	17,061
Total additions to property, plant and equipment and capitalized software	$ 106,719	$ 161,259	$ 159,787

Geographic Area Information

The following tables present net revenue by geographic area and by significant country for the years ended December 31, 2020, 2019, and 2018. In these tables, net revenue is aggregated according to the location of our subsidiaries.

	For the year ended December 31,		
	2020	2019	2018
Net revenue:			
Americas	$ 1,197,846	$ 1,460,101	$ 1,480,567
Europe	816,287	969,470	1,028,534
Asia and rest of world	1,031,445	1,021,060	1,012,526
Net revenue	$ 3,045,578	$ 3,450,631	$ 3,521,627

	For the year ended December 31,		
	2020	2019	2018
Net revenue:			
United States	$ 1,082,671	$ 1,333,532	$ 1,360,590
Netherlands	482,020	576,804	585,036
China	641,516	575,211	560,938
Korea	172,229	188,226	188,114
United Kingdom	122,403	151,674	163,963
All other	544,739	625,184	662,986
Net revenue	$ 3,045,578	$ 3,450,631	$ 3,521,627

The following tables present PP&E, net, by geographic area and by significant country as of December 31, 2020 and 2019. In these tables, PP&E, net is aggregated based on the location of our subsidiaries.

	As of December 31,	
	2020	2019
Property, plant and equipment, net:		
Americas	$ 266,378	$ 289,300
Europe	196,132	192,772
Asia and rest of world	341,315	348,926
Property, plant and equipment, net	$ 803,825	$ 830,998

	As of December 31,	
	2020	2019
Property, plant and equipment, net:		
United States	$ 108,615	$ 97,226
China	257,935	266,161
Mexico	157,576	191,861
Bulgaria	147,103	138,644
United Kingdom	34,453	40,003
Malaysia	78,752	78,310
All other	19,391	18,793
Property, plant and equipment, net	$ 803,825	$ 830,998

21. Unaudited Quarterly Data

A summary of the unaudited quarterly results of operations for the years ended December 31, 2020 and 2019 is as follows:

	For the three months ended			
	December 31, 2020	September 30, 2020	June 30, 2020	March 31, 2020
Net revenue	$ 906,491	$ 788,313	$ 576,505	$ 774,269
Gross profit	$ 296,551	$ 258,058	$ 164,062	$ 207,863
Net income	$ 121,667	$ 76,729	$ (42,541)	$ 8,431
Basic net income per share	$ 0.77	$ 0.49	$ (0.27)	$ 0.05
Diluted net income per share	$ 0.77	$ 0.49	$ (0.27)	$ 0.05

	For the three months ended			
	December 31, 2019	September 30, 2019	June 30, 2019	March 31, 2019
Net revenue	$ 846,691	$ 849,715	$ 883,726	$ 870,499
Gross profit	$ 290,209	$ 294,805	$ 308,491	$ 289,693
Net income	$ 53,538	$ 70,675	$ 73,436	$ 85,065
Basic net income per share [(1)]	$ 0.34	$ 0.44	$ 0.45	$ 0.52
Diluted net income per share	$ 0.34	$ 0.44	$ 0.45	$ 0.52

(1) The sum of net income per share for the four quarters does not equal the full year net income per share due to rounding.

COVID-19

The decline in revenue in the first, second, and third quarters of 2020 compared to the corresponding quarters of 2019 relates in large part to the impact of the COVID-19 pandemic on our business. The second quarter of 2020 was most significantly impacted, and we experienced partial recovery in the third quarter of 2020.

Restructuring and other charges, net

The below table presents amounts recognized in restructuring and other charges, net in the periods presented:

	For the three months ended			
	December 31,	September 30,	June 30,	March 31,
2020	$ 897	$ (10,519)	$ 38,218	$ 4,498
2019	$ 25,520	$ 6,421	$ 16,310	$ 5,309

On June 30, 2020, we initiated the Q2 2020 Global Restructure Program and recognized approximately $24.1 million of severance charges related to that program in the second quarter of 2020. In the third quarter of 2020, we settled intellectual property litigation brought against Schrader by Wasica, which resulted in the derecognition of nearly the entire $12.1 million liability that we recorded in the second quarter of 2020 resulting from a prejudgment interest-related award granted by the court on behalf of Wasica.

In fiscal year 2019, restructuring and other charges net includes a $17.8 million loss related to the termination of a supply agreement in connection with the Metal Seal litigation in the fourth quarter, $6.5 million of termination benefits provided under a one-time benefit arrangement related to the shutdown and relocation of an operating site in Germany in the third quarter, and $12.7 million of benefits provided under a voluntary retirement incentive program offered to a limited number of eligible employees in the U.S., in the second quarter.

Refer to Note 5, "Restructuring and Other Charges, Net," for additional information related to restructuring and other charges.

Income taxes

In response to the global financial and health crisis caused by the COVID-19 pandemic, the U.S. federal government enacted the Coronavirus Aid, Relief, and Economic Security Act on March 27, 2020. Federal limitations on interest deductions were reduced in connection with this legislation, and we recorded a deferred tax benefit of $7.5 million in the three months ended March 31, 2020, as we were able to utilize additional interest expense that was previously subject to a valuation allowance.

In the fourth quarter of 2020 we recognized a net income tax benefit of $54.2 million related to intangible property transfers.

Litigation

In the first quarter of 2020, we recognized a $29.2 million loss in cost of revenue as a result of a judgment issued against us for damages in intellectual property litigation brought against Schrader by Wasica. We settled this litigation in the third quarter of 2020. Additional amounts recognized related to this litigation are presented in restructuring and other charges, net as discussed above. See Note 15, "Commitments and Contingencies," for additional information regarding the intellectual property litigation with Wasica.

22. Subsequent Events

On February 3, 2021, we announced that we intended to redeem in full the $750.0 million aggregate principal amount outstanding on our 6.25% Senior Notes due 2026 in March 2021. This resulted in classification of the Senior Notes as current on our December 31, 2020 consolidated balance sheet. Refer to Note 14, “Debt,” for additional information on the terms of this redemption.

On February 11, 2021, we entered into a securities purchase agreement (the "SPA") to acquire all of the outstanding equity interests of Xirgo Technologies, LLC ("Xirgo") for an aggregate purchase price of $400 million, subject to adjustment for certain closing and post-closing items. Xirgo is a leading provider of telematics and data insight, headquartered in Camarillo, California. The product offerings and technology of Xirgo will augment our existing portfolio in advancing our Smart & Connected megatrend initiative. We expect to integrate Xirgo into our Performance Sensing reportable segment. The transaction contemplated by the SPA is expected to close in the first quarter of 2021, subject to clearance under the Hart-Scott-Rodino Act and the satisfaction of certain customary closing conditions.

SCHEDULE I—CONDENSED FINANCIAL INFORMATION OF THE REGISTRANT

SENSATA TECHNOLOGIES HOLDING PLC
(Parent Company Only)
Balance Sheets
(In thousands)

	As of December 31,	
	2020	**2019**
Assets		
Current assets:		
Cash and cash equivalents	$ 664	$ 238
Intercompany receivables	837	—
Intercompany notes receivable from subsidiaries	65,972	43,673
Prepaid expenses and other current assets	1,821	1,246
Total current assets	69,294	45,157
Deferred income tax assets	506	570
Other non-current assets	51	—
Investment in subsidiaries	2,726,216	2,554,954
Total assets	$ 2,796,067	$ 2,600,681
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	$ 414	$ 572
Intercompany accounts payable to subsidiaries	12,937	1,909
Intercompany notes payable to subsidiaries	76,482	23,216
Accrued expenses and other current liabilities	748	1,229
Total current liabilities	90,581	26,926
Total liabilities	90,581	26,926
Total shareholders' equity	2,705,486	2,573,755
Total liabilities and shareholders' equity	$ 2,796,067	$ 2,600,681

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

SENSATA TECHNOLOGIES HOLDING PLC
(Parent Company Only)
Statements of Operations
(In thousands)

	For the year ended December 31,		
	2020	2019	2018
Net revenue	$ —	$ —	$ —
Operating costs and expenses:			
Selling, general and administrative	12,477	8,860	10,153
Total operating costs and expenses	12,477	8,860	10,153
Loss from operations	(12,477)	(8,860)	(10,153)
Intercompany dividend income	—	700,000	—
Intercompany interest expense, net	(479)	(23,294)	(4,709)
Other, net	115	(21)	474
(Loss)/income before income taxes and equity in net income of subsidiaries	(12,841)	667,825	(14,388)
Equity in net income/(loss) of subsidiaries	182,733	(401,715)	613,383
(Provision for)/benefit from income taxes	(5,606)	16,604	—
Net income	$ 164,286	$ 282,714	$ 598,995

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

SENSATA TECHNOLOGIES HOLDING PLC
(Parent Company Only)
Statements of Comprehensive Income
(In thousands)

	For the year ended December 31,		
	2020	**2019**	**2018**
Net income	$ 164,286	$ 282,714	$ 598,995
Other comprehensive (loss)/income, net of tax:			
Defined benefit plan	—	—	535
Subsidiaries' other comprehensive (loss)/income	(29,051)	5,694	36,451
Other comprehensive (loss)/income	(29,051)	5,694	36,986
Comprehensive income	$ 135,235	$ 288,408	$ 635,981

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

SENSATA TECHNOLOGIES HOLDING PLC
(Parent Company Only)
Statements of Cash Flows
(In thousands)

	For the year ended December 31,		
	2020	2019	2018
Net cash used in operating activities	$ (7,911)	$ (14,989)	$ (14,253)
Cash flows from investing activities:			
Dividends received from subsidiary	—	700,000	—
Net cash provided by investing activities	—	700,000	—
Cash flows from financing activities:			
Proceeds from exercise of stock options and issuance of ordinary shares	15,457	15,150	6,093
Proceeds from/(payments on) intercompany borrowings	30,966	(344,018)	410,190
Payments to repurchase ordinary shares	(35,175)	(350,004)	(399,417)
Payments of employee restricted stock tax withholdings	(2,911)	(6,990)	(3,674)
Net cash provided by/(used in) financing activities	8,337	(685,862)	13,192
Net change in cash and cash equivalents	426	(851)	(1,061)
Cash and cash equivalents, beginning of year	238	1,089	2,150
Cash and cash equivalents, end of year	$ 664	$ 238	$ 1,089

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

1. Basis of Presentation and Description of Business

Sensata Technologies Holding plc (Parent Company)—Schedule I—Condensed Financial Information of Sensata Technologies Holding plc ("Sensata plc"), included in this Annual Report on Form 10-K (this "Report"), provides all parent company information that is required to be presented in accordance with the United States (the "U.S.") Securities and Exchange Commission ("SEC") rules and regulations for financial statement schedules. The accompanying condensed financial statements have been prepared in accordance with the reduced disclosure requirements permitted by the SEC. Sensata plc and subsidiaries' audited consolidated financial statements are included elsewhere in this Report.

On September 28, 2017, the Board of Directors of Sensata Technologies Holding N.V. ("Sensata N.V.") unanimously approved a plan to change our location of incorporation from the Netherlands to the United Kingdom (the "U.K."). To effect this change, on February 16, 2018 the shareholders of Sensata N.V. approved a cross-border merger between Sensata N.V. and Sensata plc, a newly formed, public limited company incorporated under the laws of England and Wales, with Sensata plc being the surviving entity (the "Merger").

We received approval of the Merger by the U.K. High Court of Justice, and the Merger was completed, on March 28, 2018. As a result thereof, Sensata plc became the publicly-traded parent of the subsidiary companies that were previously controlled by Sensata N.V., with no changes made to the business being conducted by us prior to the Merger. Due to the fact that the Merger was a business combination between entities under common control, the assets and liabilities exchanged were accounted for at their carrying values.

Sensata plc conducts limited separate operations and acts primarily as a holding company. Sensata plc has no direct outstanding debt obligations. However, Sensata Technologies B.V., an indirect, wholly-owned subsidiary of Sensata plc, is limited in its ability to pay dividends or otherwise make distributions to its immediate parent company and, ultimately, to Sensata plc, under its senior secured credit facilities and the indentures governing its senior notes. For a discussion of the debt obligations of the subsidiaries of Sensata plc, refer to Note 14, "Debt," of Sensata plc and subsidiaries' audited consolidated financial statements included elsewhere in this Report (the "Consolidated Financial Statements").

All U.S. dollar amounts presented except per share amounts are stated in thousands, unless otherwise indicated.

2. Commitments and Contingencies

For a discussion of the commitments and contingencies of the subsidiaries of Sensata plc, refer to Note 15, "Commitments and Contingencies," of the Consolidated Financial Statements.

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

	Balance at the Beginning of the Period	Additions: Charged, Net of Reversals, to Expenses/ Against Revenue	Deductions	Balance at the End of the Period
For the year ended December 31, 2020				
Accounts receivable allowances	$ 15,129	$ 5,654	$ (1,750)	$ 19,033
For the year ended December 31, 2019				
Accounts receivable allowances	$ 13,762	$ 3,005	$ (1,638)	$ 15,129
For the year ended December 31, 2018				
Accounts receivable allowances	$ 12,947	$ 2,194	$ (1,379)	$ 13,762

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

The required certifications of our Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer are included as Exhibits 31.1, 31.2, and 31.3 to this Annual Report on Form 10-K. The disclosures set forth in this Item 9A contain information concerning the evaluation of our disclosure controls and procedures, management's report on internal control over financial reporting, and changes in internal control over financial reporting referred to in these certifications. These certifications should be read in conjunction with this Item 9A for a more complete understanding of the matters covered by the certifications.

Evaluation of Disclosure Controls and Procedures

With the participation of our Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer, we have evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2020. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2020, our Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fourth quarter of the year ended December 31, 2020 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control over Financial Reporting

Management of Sensata Technologies Holding plc (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). The Company’s internal control system was designed to provide reasonable assurance to the Company’s management, Board of Directors, and shareholders regarding the preparation and fair presentation of the Company’s published financial statements in accordance with generally accepted accounting principles. The Company’s 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 the assets of the Company;
- 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 are being made only in accordance with authorizations of management of the Company; 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 the financial statements.

There are inherent limitations to the effectiveness of any system of internal control over financial reporting. Accordingly, even an effective system of internal control over financial reporting can only provide reasonable assurance with respect to financial statement preparation and presentation in accordance with accounting principles generally accepted in the United States of America. Our internal controls over financial reporting are subject to various inherent limitations, including cost limitations, judgments used in decision making, assumptions about the likelihood of future events, the soundness of our systems, the possibility of human error, and the risk of fraud. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may be inadequate because of changes in conditions and the risk that the degree of compliance with policies or procedures may deteriorate over time.

Management assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2020. In making its assessment of internal control over financial reporting, management used the criteria issued by the Committee of Sponsoring Organizations ("COSO") of the Treadway Commission in May 2013.

Based on the results of this assessment, management, including our Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer, has concluded that, as of December 31, 2020, the Company’s internal control over financial reporting was effective.

The Company’s independent registered public accounting firm, Ernst & Young LLP, has also issued an audit report on the Company’s internal control over financial reporting, which is included elsewhere in this Annual Report on Form 10-K.

Swindon, United Kingdom
February 12, 2021

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
Sensata Technologies Holding plc

Opinion on Internal Control over Financial Reporting

We have audited Sensata Technologies Holding plc's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Sensata Technologies Holding plc (the Company) maintained, in all material aspects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, cash flows and changes in shareholders' equity for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedules listed in the Index at Item 15(a) (collectively referred to as the "financial statements"), and our report dated February 12, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Boston, Massachusetts
February 12, 2021

ITEM 9B. OTHER INFORMATION

On February 12, 2021, Sensata Technologies, Inc., a wholly-owned indirect subsidiary of Sensata Technologies Holding plc ("the Company"), announced the entry into a securities purchase agreement (the "SPA") to acquire Xirgo Technologies Intermediate Holdings, LLC and Xirgo Holdings, Inc. (collectively, "Xirgo") for $400 million. Xirgo's annual revenue is expected to exceed $100 million in 2021 with projected revenue growth in excess of 20% over the next several years. The transaction is expected to be accretive to Sensata's adjusted net income per share in 2021. The acquisition price is subject to working capital and other adjustments. The SPA contains customary representations, warranties, and covenants. We expect to complete the transaction contemplated by the SPA in the first quarter of 2021, subject to the satisfaction of customary closing conditions, including, among others, clearance under the Hart-Scott-Rodino Act. The Company intends to fund the transaction using available cash on hand.

The Company will conduct a conference call on February 12, 2021 at 8:00 AM eastern time to discuss the acquisition of Xirgo. The dial-in numbers for the call are 1-844-784-1726 or +1-412-380-7411. Callers should reference the "Sensata Xirgo acquisition Conference Call." A live webcast and a replay of the conference call will also be available on the investor relations page of Sensata's website at http://investors.sensata.com. Additionally, a replay of the call will be available until February 18, 2021. To access the replay, dial 1-877-344-7529 or 1-412-317-0088 and enter confirmation code: 10152411.

The foregoing description of the SPA is qualified in its entirety by reference to the full text of the SPA, which is attached to this Annual Report on Form 10-K as Exhibit 10.42 and is incorporated in this report by reference. A copy of the press release announcing entry into the SPA is attached as Exhibit 99.1 and is incorporated in this report by reference.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required by this Item 10 is incorporated herein by reference from the Definitive Proxy Statement of Sensata Technologies Holding plc (the "Company"), to be filed with the Securities and Exchange Commission within 120 days of the Company's fiscal year ended December 31, 2020.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated herein by reference from the Company's Definitive Proxy Statement, to be filed with the Securities and Exchange Commission within 120 days of the Company's fiscal year ended December 31, 2020.

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

The information required by this Item 12 is incorporated herein by reference from the Company's Definitive Proxy Statement, to be filed with the Securities and Exchange Commission within 120 days of the Company's fiscal year ended December 31, 2020.

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

The information required by this Item 13 is incorporated herein by reference from the Company's Definitive Proxy Statement, to be filed with the Securities and Exchange Commission within 120 days of the Company's fiscal year ended December 31, 2020.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item 14 is incorporated herein by reference from the Company's Definitive Proxy Statement, to be filed with the Securities and Exchange Commission within 120 days of the Company's fiscal year ended December 31, 2020.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)

1. **Financial Statements** — See "Financial Statements" under Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.
2. **Financial Statement Schedules —** See "Financial Statement Schedules" under Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.
3. **Exhibits**

EXHIBIT INDEX

2.1	Common Draft Terms of the Cross-Border Legal Merger by and among Sensata Technologies Holding N.V. and Sensata Technologies Holding plc dated October 26, 2017 (incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K filed on November 1, 2017).
2.2	Merger Proposal by the boards of directors of Sensata Technologies Holding N.V. and Sensata Technologies Holding plc (incorporated by reference to Annex A to the registration statement on Form S-4/A (Commission File No. 333-220735) filed by Sensata Technologies Holding plc on December 22, 2017).
3.1	Articles of Association of Sensata Technologies Holding plc (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed on March 28, 2018).
4.1	Indenture, dated as of April 17, 2013, among Sensata Technologies B.V., the Guarantors named therein, and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (Commission File No. 001-34652) filed on April 18, 2013).
4.2	Form of 4.875% Senior Note due 2023 (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K (Commission File No. 001-34652) filed on April 18, 2013) (included as Exhibit A to Exhibit 4.1 thereof).
4.3	Indenture, dated as of October 14, 2014, among Sensata Technologies B.V., the Guarantors named therein, and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (Commission File No. 001-34652) filed on October 17, 2014).
4.4	Form of 5.625% Senior Note due 2024 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (Commission File No. 001-34652) filed on October 17, 2014) (included as Exhibit A thereto).
4.5	Indenture, dated as of March 26, 2015, among Sensata Technologies B.V., the Guarantors named therein, and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on April 1, 2015).
4.6	Form of 5.0% Senior Notes due 2025 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on April 1, 2015) (included as Exhibit A thereto).
4.7	Indenture, dated as of November 27, 2015, among Sensata Technologies UK Financing Co. plc, the Guarantors named therein, and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on December 2, 2015).
4.8	Form of 6.25% Senior Notes due 2026 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on December 2, 2015) (included as Exhibit A thereto).
4.9	Sixth Supplemental Indenture dated as of October 10, 2017, amending the indenture dated as of April 17, 2013 pursuant to which the 4.875% Senior Notes were issued, among Sensata Technologies B.V., the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on October 13, 2017).
4.10	Fifth Supplemental Indenture dated as of October 10, 2017, amending the indenture dated as of October 14, 2014 pursuant to which the 5.625% Senior Notes were issued, among Sensata Technologies B.V., the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K filed on October 13, 2017).
4.11	Sixth Supplemental Indenture dated as of October 10, 2017, amending the indenture dated as of March 26, 2015 pursuant to which the 5.000% Senior Notes were issued, among Sensata Technologies B.V., the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K filed on October 13, 2017).

4.12	Third Supplemental Indenture dated as of October 10, 2017, amending the indenture dated as of November 27, 2015 pursuant to which the 6.250% Senior Notes were issued, among Sensata Technologies UK Financing Co. plc, the guarantors party thereto and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.4 of the Registrant's Current Report on Form 8-K filed on October 13, 2017).
4.13	Indenture, dated as of September 20, 2019, among Sensata Technologies, Inc., the Guarantors named therein, and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on September 26, 2019).
4.14	Form of 4.375% Senior Notes due 2030 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on September 26, 2019) (included as Exhibit A thereto).
4.15	Description of Sensata Technologies Holding plc Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.15 of the Registrant's Annual Report on Form 10-K filed on February 11, 2020).
4.16	Indenture, dated as of August 17, 2020, among Sensata Technologies, Inc., the Guarantors named therein, and The Bank of New York Mellon, as the Trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on August 20, 2020).
4.17	Form of 3.750% Senior Notes due 2031 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K filed on August 20, 2020) (included as Exhibit A thereto).
10.1	Cross-License Agreement, dated April 27, 2006, among Texas Instruments Incorporated, Sensata Technologies B.V. and Potazia Holding B.V. (incorporated by reference to Exhibit 10.10 of the Registration Statement on Form S-4 of Sensata Technologies B.V. filed on December 29, 2006).
10.2	Form of Indemnification Agreement, entered among Sensata Technologies Holding N.V. (formerly known as Sensata Technologies Holding B.V.) and certain of its executive officers and directors listed on a schedule attached thereto (incorporated by reference to Exhibit 10.51 of Amendment No. 2 of the Registrant's Registration Statement on Form S-1 filed on January 22, 2010).†
10.3	Credit Agreement, dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., Morgan Stanley Senior Funding, Inc., as administrative agent, the initial l/c issuer and initial swing line lender named therein, and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.4	Domestic Guaranty, dated as of May 12, 2011, made by each of Sensata Technologies Finance Company, LLC, Sensata Technologies, Inc., Sensata Technologies Massachusetts, Inc. and each of the Additional Guarantors from time to time made a party thereto in favor of the Secured Parties (as defined therein) (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.5	Guaranty, dated as of May 12, 2011, made by Sensata Technologies B.V. in favor of the Secured Parties (as defined therein) (incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.6	Foreign Guaranty, dated as of May 12, 2011, made by each of Sensata Technologies Holding Company US B.V., Sensata Technologies Holland, B.V., Sensata Technologies Holding Company Mexico, B.V., Sensata Technologies de México, S. de R.L. de C.V., Sensata Technologies Japan Limited, Sensata Technologies Malaysia Sdn. Bhd. and each of the Additional Guarantors from time to time made a party thereto in favor of the Secured Parties (as defined therein) (incorporated by reference to Exhibit 10.4 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.7	Patent Security Agreement, dated as of May 12, 2011, made by each of Sensata Technologies Finance Company, LLC, Sensata Technologies, Inc. and Sensata Technologies Massachusetts, Inc. to Morgan Stanley Senior Funding, Inc., as collateral agent (incorporated by reference to Exhibit 10.5 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.8	Trademark Security Agreement, dated as of May 12, 2011, made by each of Sensata Technologies Finance Company, LLC, Sensata Technologies, Inc. and Sensata Technologies Massachusetts, Inc. to Morgan Stanley Senior Funding, Inc., as collateral agent (incorporated by reference to Exhibit 10.6 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.9	Domestic Pledge Agreement, dated as of May 12, 2011, made by each of Sensata Technologies B.V. and Sensata Technologies Holding Company US B.V. to Morgan Stanley Senior Funding, Inc., as collateral agent (incorporated by reference to Exhibit 10.7 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).

10.10	Domestic Security Agreement, dated as of May 12, 2011, made by each of Sensata Technologies Finance Company, LLC, Sensata Technologies, Inc. and Sensata Technologies Massachusetts, Inc. to Morgan Stanley Senior Funding, Inc., as collateral agent (incorporated by reference to Exhibit 10.8 of the Registrant's Current Report on Form 8-K filed on May 17, 2011, Commission File Number 001-34652).
10.11	Form of Director Options Agreement (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q filed on July 27, 2012, Commission File No. 001-34652).†
10.12	Amendment No. 1 to Credit Agreement dated as of December 6, 2012, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc., and Barclays Bank PLC (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on December 10, 2012, Commission File No. 001-34652).
10.13	Employment Agreement, dated January 1, 2013, between Sensata Technologies, Inc. and Steven Beringhause (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed on January 4, 2013, Commission File No. 001-34652).†‡
10.14	Amendment No. 2 to Credit Agreement dated as of December 11, 2013, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, and Morgan Stanley Senior Funding, Inc. (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on December 11, 2013, Commission File No. 001-34652).
10.15	Employment Agreement, entered into on February 4, 2014 between Sensata Technologies, Inc. and Paul S. Vasington (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on February 4, 2014, Commission File No. 001-34652).†‡
10.16	Amendment No. 3 to Credit Agreement dated as of October 14, 2014, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Barclays Bank PLC and the other lenders party thereto, and Morgan Stanley Senior Funding, Inc. (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on October 17, 2014, Commission File No. 001-34652).
10.17	Amendment No. 4 to Credit Agreement, dated as of November 4, 2014, to the Credit Agreement, dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc. and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on November 10, 2014, Commission File No. 001-34652).
10.18	Amendment No. 5 to Credit Agreement, dated as of March 26, 2015, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc. and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on April 1, 2015).
10.19	Amendment No. 6 to Credit Agreement dated as of May 11, 2015, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., Morgan Stanley Senior Funding, Inc. and Barclays Bank PLC as joint lead arrangers and bookrunners, Morgan Stanley Senior Funding, Inc. as administrative agent on behalf of the lenders party to the Credit Agreement, and the lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on May 14, 2015).
10.20	Amendment No. 7 to Credit Agreement, dated as of September 29, 2015, to the Credit Agreement, dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc. and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on October 2, 2015).
10.21	Amendment No. 8 to Credit Agreement, dated as of November 7, 2017, to the Credit Agreement, dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc. and the other lenders party thereto. (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on November 14, 2017).
10.22	Sensata Technologies Holding plc Second Amended and Restated 2006 Management Option Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on March 28, 2018).
10.23	Sensata Technologies Holding plc First Amended and Restated 2010 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on March 28, 2018).

10.24	Amendment No. 9 to Credit Agreement, dated as of March 27, 2019, to the Credit Agreement, dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC, Sensata Technologies Intermediate Holding B.V., the subsidiary guarantors party thereto, Morgan Stanley Senior Funding, Inc. and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on April 2, 2019, Commission File Number 001-34652).
10.25	Technical Amendment to Credit Agreement dated as of June 13, 2019, to the Credit Agreement dated as of May 12, 2011, by and among Sensata Technologies B.V., Sensata Technologies Finance Company, LLC and Morgan Stanley Senior Funding, Inc. as administrative agent on behalf of the lenders party to the Credit Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on July 30, 2019).
10.26	Letter Agreement dated August 1, 2019 between Steven Beringhause and Sensata Technologies, Inc. (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on October 30, 2019). †
10.27	Amendment No. 10 to Credit Agreement and Amendment No. 1 to Domestic Guaranty and Foreign Guaranty, dated as of September 20, 2019, by and among Sensata Technologies Inc., Sensata Technologies Intermediate Holding B.V., Sensata Technologies B.V., the other guarantors party thereto, Morgan Stanley Senior Funding, Inc., and the other lenders party thereto (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on September 26, 2019).
10.28	Third Amended and Restated Employment Agreement between Jeffrey Cote and Sensata Technologies Inc., dated March 1, 2020 (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.29	Third Amended and Restated Employment Agreement between Martha Sullivan and Sensata Technologies Inc., dated March 1, 2020 (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.30	Amendment to Martha Sullivan Award Agreements with Sensata Technologies Holding plc, dated February 29, 2020 (incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.31	Amended and Restated Employment Agreement between Yann Etienvre and Sensata Technologies Inc., dated March 5, 2020 (incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.32	Amended and Restated Employment Agreement between Vineet Nargolwala and Sensata Technologies Inc., dated March 5, 2020 (incorporated by reference to Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.33	Amended and Restated Employment Agreement between Hans Lidforss and Sensata Technologies Inc., dated March 5, 2020 (incorporated by reference to Exhibit 10.6 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.34	Form of Consent to Reduction in Salary April 1, 2020 through June 30, 2020 for Executive Officers (incorporated by reference to Exhibit 10.7 of the Registrant's Quarterly Report on Form 10-Q filed on April 29, 2020).†
10.35	Employment Agreement between Shannon Votava and Sensata Technologies Inc., dated May 26, 2020 (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q filed on July 28, 2020).†
10.36	Employment Agreement between Lynne Caljouw and Sensata Technologies Inc., dated June 15, 2020 (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q filed on July 28, 2020).†
10.37	Letter Agreement Amending Employment Agreement between Allisha Elliott and Sensata Technologies, Inc., dated May 15, 2020 (incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q filed on July 28, 2020).†
10.38	Separation and Release of Claims Agreement between Paul Chawla and Sensata Technologies, Inc. dated July 24, 2020 (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K/A filed on August 5, 2020).†
10.39	Employment Agreement between Juan Picon and Sensata Technologies Inc., dated August 16, 2020 (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q filed on October 27, 2020).†
10.40	Form of 2020 Amended Award Agreement for Restricted Stock Units under the Sensata Technologies Holding plc First Amended and Restated 2010 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q filed on October 27, 2020).†

10.41	Form of 2020 Amended Award Agreement for Performance Restricted Stock Units under the Sensata Technologies Holding plc First Amended and Restated 2010 Equity Incentive Plan.†*
10.42	Securities Purchase Agreement, dated February 11, 2021, by and among Xirgo Technologies Intermediate Holdings, LLC, Xirgo Holdings, Inc., the Persons, Sellers, and Option Holder Identified Herein, Sensata Technologies, Inc., and the Seller Representative Identified Herein. *
21.1	Subsidiaries of Sensata Technologies Holding plc*
23.1	Consent of Ernst & Young LLP.*
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.3	Certification of Chief Accounting Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32.1	Certification of Chief Executive Officer, Chief Financial Officer, and Chief Accounting Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. *
99.1	February 12, 2021 press release entitled "Sensata Technologies Signs Definitive Agreement to Acquire Xirgo Technologies."*
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document. *
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document. *
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document. *
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document. *
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document. *
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Filed herewith.
† Indicates management contract or compensatory plan, contract or arrangement.
‡ There have been non-material modifications to this contract since inception

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.

SENSATA TECHNOLOGIES HOLDING PLC

/s/ JEFF COTE

By: **Jeff Cote**

Its: **Chief Executive Officer and President**

Date: February 12, 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/ JEFF COTE Jeff Cote	Chief Executive Officer, President, and Director *(Principal Executive Officer)*	February 12, 2021
/s/ PAUL VASINGTON Paul Vasington	Executive Vice President and Chief Financial Officer *(Principal Financial Officer)*	February 12, 2021
/s/ MARIA FREVE Maria Freve	Vice President and Chief Accounting Officer *(Principal Accounting Officer)*	February 12, 2021
/s/ ANDREW TEICH Andrew Teich	Chairman of the Board of Directors	February 12, 2021
/s/ JOHN ABSMEIER John Absmeier	Director	February 12, 2021
/s/ DANIEL BLACK Daniel Black	Director	February 12, 2021
/s/ LORRAINE BOLSINGER Lorraine Bolsinger	Director	February 12, 2021
/s/ JAMES HEPPELMANN James Heppelmann	Director	February 12, 2021
/s/ CHARLES PEFFER Charles Peffer	Director	February 12, 2021
/s/ CONSTANCE SKIDMORE Constance Skidmore	Director	February 12, 2021
/s/ STEVEN SONNENBERG Steven Sonnenberg	Director	February 12, 2021
/s/ MARTHA SULLIVAN Martha Sullivan	Director	February 12, 2021
/s/ THOMAS WROE Thomas Wroe	Director	February 12, 2021
/s/ STEPHEN ZIDE Stephen Zide	Director	February 12, 2021
/s/ JEFF COTE Jeff Cote	Authorized Representative in the United States	February 12, 2021

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Corporate Information

MANAGEMENT TEAM

Jeffrey J. Cote
Chief Executive Officer
and President

Yann L. Etienvre
Executive Vice President and
Chief Supply Chain Officer

Vineet A. Nargolwala
Executive Vice President,
Sensing Solutions

Paul S. Vasington
Executive Vice President and
Chief Financial Officer

Lynne J. Caljouw
Senior Vice President and
Chief Human Resources Officer

Jing Chang
Senior Vice President, Asia,
Performance Sensing and
Sensing Solutions

Holger Jetses
Senior Vice President,
Performance Sensing Automotive

Hans G. Lidforss
Senior Vice President and
Chief Strategy & Corporate
Development Officer

Juan E. Picon
Senior Vice President,
Performance Sensing Automotive

George Verras
Senior Vice President and
Chief Technology Officer

Shannon M. Votava
Senior Vice President and
Chief Legal Officer

BOARD OF DIRECTORS

Andrew C. Teich [3,4,5,6]
Chairman of the Board
Sensata Technologies,
Retired President and CEO
FLIR Systems

Jeffrey J. Cote
Chief Executive Officer and President
Sensata Technologies

John P. Absmeier [1,5]
Chief Technology Officer
Lear Corporation

Daniel L. Black [1,2,4]
Managing Partner
The Wicks Group

Lorraine A. Bolsinger [2,4]
Retired Executive
General Electric Company

James E. Heppelmann [2,3,5,6]
President and Chief Executive Officer
PTC, Inc.

Charles W. Peffer [1]
Retired Partner
KPMG LLP

Constance E. Skidmore [1,2,3,6]
Retired Partner
PricewaterhouseCoopers

Steven A. Sonnenberg [3,5]
Retired Executive
Emerson Electric Co.

Martha N. Sullivan [5]
Executive Advisor, Former CEO
Sensata Technologies

Thomas Wroe Jr.
Former CEO
Apex Tool Group, Sensata Technologies

Stephen M. Zide [4,6]
Former Senior Advisor
Bain Capital

[1] Member of the Audit Committee
[2] Member of the Compensation Committee
[3] Member of the Nominating and Governance Committee
[4] Member of the Finance Committee
[5] Member of the Growth and Innovation Committee
[6] Member of the Health and Economic Response Committee

STOCKHOLDER INFORMATION

Corporate Headquarters
Interface House
Interface Business Park
Bincknoll Lane
Royal Wootton Bassett
Swindon, Wiltshire SN4 8SY
United Kingdom

U.S. Headquarters
529 Pleasant Street
Attleboro, MA 02703
Telephone: 508-236-3800
Web: www.sensata.com

Investor Relations
Sensata Technologies
529 Pleasant Street
Attleboro, MA 02703
Email: investors@sensata.com

Independent Auditors
Ernst & Young LLP
Boston, Massachusetts

Stock Listing
Sensata Technologies
Common stock is traded on the NYSE
under symbol “ST”

Transfer Agent
Computershare
PO Box 505000
Louisville, KY 40233-5000
Telephone: 866-644-4127
Web: www.computershare.com

The 2020 Annual Report, Form 10-K
and other investor information can be
viewed at www.sensata.com

sensata.com

Driving value in a world increasingly dependent on sensors

CORPORATE HEADQUARTERS

Interface House, Interface Business Park
Bincknoll Lane
Royal Wootton Bassett
Swindon, Wiltshire SN4 8SY
United Kingdom

U.S. HEADQUARTERS

Sensata Technologies
529 Pleasant Street
Attleboro, MA 02703
Telephone: +1-508-236-3800