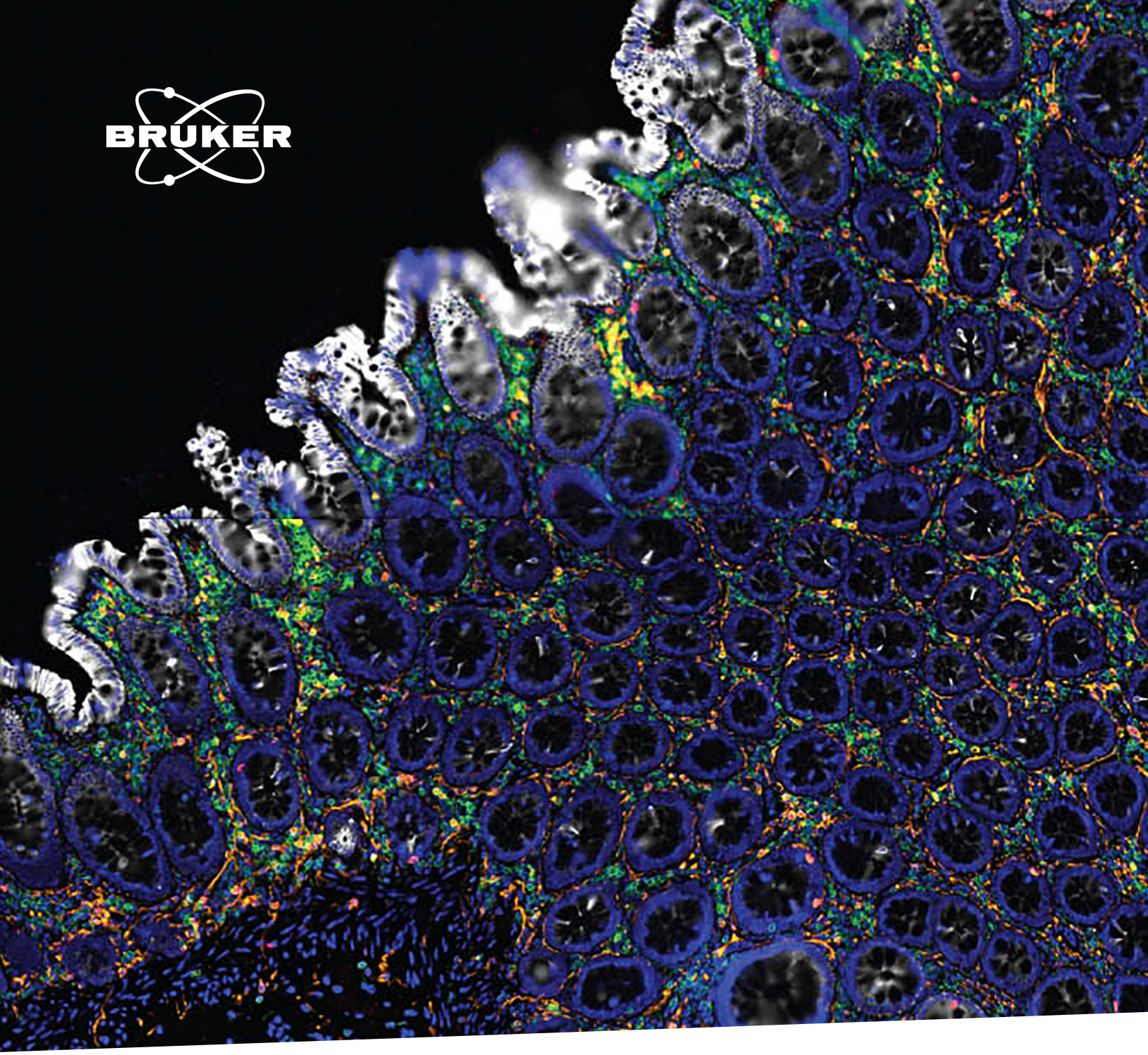


High-plex targeted spatial proteomic imaging for quantitative characterization of human cancer tissue with subcellular resolution using Canopy ChipCytometry™

2021

ANNUAL REPORT

Innovation with Integrity

Dear Fellow Bruker Shareholders,

Bruker delivered exceptional financial and operating performance improvements in 2021, by almost any definition or metric. As the global economy recovered from the COVID-19 pandemic, our teams captured strengthening demand for our innovative life science, diagnostics and biopharma, applied and industrial research and QC solutions. Despite supply chain and logistics challenges, Bruker delivered revenue growth of nearly 22% in 2021 compared to 2020. Non-GAAP operating margins reached a new high of 19.4% in 2021, contributing to non-GAAP diluted earnings per share (EPS) of $2.10, up over 50% from 2020. Our performance in 2021 reflected growth well beyond pre-pandemic levels, including revenue growth to 17% above and non-GAAP EPS 34% above 2019 pre-pandemic levels. During this year of significant growth, we also accelerated important strategic investments, particularly in our high growth, high margin *Project Accelerate 2.0* initiatives.

With stronger financial performance, Bruker's 2021 return on invested capital (ROIC), a non-GAAP measure, was near 28%(1), in the top-tier amongst our peer group. All in all, it was a year of significant progress and achievement, underscoring the advantages of our focused growth strategy and differentiated culture, which emphasizes customer collaborations, disciplined entrepreneurialism, and 'innovation with integrity' in everything we do.

Developing Leading Market Positions in High Growth Areas: Potential Breakout Opportunities

Our strategy focuses on accelerating revenue growth while continuing to deliver sustainable margin expansion. In 2021, we gained additional confidence that two of our *Project Accelerate 2.0* initiatives were poised for fast long-term growth, and should enable them to play a large role in our strategy. We call these two areas our potential breakout opportunities:

- Unbiased and Targeted Proteomics, and
- Spatial and Single-Cell Biology

In 2021, revenues from all six *Project Accelerate 2.0* initiatives represented more than 54% of Bruker's total revenue. We continue to expect our *Project Accelerate 2.0* initiatives to grow organically by high single digits to double digits annually over the next three years(2), and for our potential breakout opportunities, we anticipate double digit annual organic growth over the same period.

Let me share an update on our progress with these two key initiatives. In proteomics, we are unlocking the transformative power of unbiased, deep 4D-Proteomics and 4D-Epiproteomics with our flagship timsTOF platform. In 2021, the timsTOF family produced more than $100 million in revenues, up more than 30% over 2020. In June 2021, we introduced two new systems, the next generation timsTOF Pro 2, and the timsTOF SCP, which enables deep single-cell proteomics. These instruments helped drive our robust growth in the fast-growing proteomics market, including in areas such as 4D-Metabolomics and 4D-Lipidomics. We are adding more features such as sample prep capabilities and automation to this proteomics platform to address rapidly increasing demand.

In spatial and single-cell biology, an area of widespread basic and translation research interest, our three platforms – Canopy Biosciences, Vutara and Acuity Spatial Genomics – are introducing significant innovations that leverage Bruker's strength in fluorescence imaging to enable spatial biology and cellular analysis in situ. Our technology can offer subcellular and even super-resolution, along with the high-plex targeted spatial proteomics enabled by our Canopy ChipCytometry™ kits, and Acuity is making strides in 3D genome analysis in situ.

Project Accelerate 2.0, Six Expanded High-Growth, High-Margin Initiatives

Consumables, Software, Service & Aftermarket

Consumables, assays, services, libraries & scientific software

Next-gen Nanomaterials Research & Semi Metrology

Enabling R&D and QC of next-gen logic, memory, displays, renewable energy, nanotools and nanomaterials

Spatial & Single-Cell Biology and Cellular Analysis

Next-gen super-res microscopy & cytometry for immunology, oncology, single-cell and subcellular spatial biology and targeted multiomics

Unbiased 4D Proteomics & 4D Multiomics, Functional Structural Biology

MS and NMR solutions for proteomics, multiomics, tissue SpatialOMx, functional structural biology, biomolecular condensates

Biopharma & Applied

High-value NMR, MS and FTIR/NIR solutions for drug discovery, development and pharma PAT; Applied food analysis and forensics

Microbiology, Viral & Molecular Diagnostics

High-value solutions for faster, accurate and broadly scalable infectious disease diagnostics, now including viral MDx

(1) For a reconciliation to GAAP, please see our Q4 2021 earnings press release at ir.bruker.com

(2) For the Company's outlook and organic revenue growth, we are not able to provide without unreasonable effort the most directly comparable GAAP financial measures, or reconciliations to such GAAP financial measures on a forward-looking basis.

Expanding our High-Growth, High-Margin Initiatives with *Project Accelerate 2.0*

In addition to our focus on two potential breakout opportunities, we invest in other *Project Accelerate 2.0* initiatives. Let me share a few examples of our success:

We are proud that in 2021 we achieved further U.S. bookings for our Ultra-High Field GHz-class NMR systems, which can enable functional structural biology and advanced materials science research. In 2021, the National Science Foundation funded a consortium, the Network for Advanced NMR (NAN), with a $40 million award, and we received GHz-class system orders from the University of Wisconsin-Madison's National Magnetic Resonance Facility for solid-state NMR research and from the University of Georgia for solution-state NMR studies.

In clinical microbiology, we received U.S. Food & Drug Administration (FDA) approval for the launch of our MALDI BioTyper Sepsityper® kit at the end of 2020. Sepsityper's ability to quickly identify more than 425 microorganisms from a positive blood culture seems appealing to U.S. customers, and with this launch our MALDI BioTyper platform in North America saw order growth year-over-year of more than 50% in 2021. We sold more than 600 MALDI Biotyper units globally in 2021, leading to an installed base of over 5,000 units.

Lastly, we endeavor to also democratize the use of NMR with next-generation, high performance, automated benchtop Fourier™ 80 FT-NMR systems. Early signs are promising with more than 50 units sold in 2021. We anticipate the worldwide roll-out of the Fourier™ 80 in 2022, aided by additional functionality and new automation capabilities, and we are encouraged to see strong demand also in industrial and applied markets.

Sustained Focus on Operational Excellence

Combined with our strategic focus on revenue growth through Project Accelerate 2.0, we continue an unrelenting focus on Operational Excellence, the second pillar of our strategy. This pillar concentrates our commercial, R&D, and operations teams on productivity enhancements and operational efficiency improvements in every area of our business. Importantly, these changes also contribute to further improving the quality and robustness of our systems and to expanding our operating margins in the future.

Environmental, Social and Governance Update

At Bruker, we have a rich history of supporting environmental sustainability initiatives across our businesses. Recently, in our BioSpin Group, our newly expanded facilities in Germany and Switzerland introduced significant changes to reduce CO2 emissions and lower energy consumption, reliquefy helium, and reduce single-use plastics across the group. At the corporate level, we continue to strengthen corporate governance practices, including a long-standing commitment to gender diversity. In 2022, we intend to formalize our company-wide reporting on ESG topics, with the aim of publishing our first Sustainability Report in 2022.

Capital Deployment

In 2021 we continued the disciplined pursuit of M&A opportunities; late in the year, our BioSpin group acquired MOLECUBES, a Belgian company with innovative benchtop, preclinical nuclear molecular imaging systems. Early in 2022, we already completed several technology and business acquisitions in proteomics, biopharma and applied markets to grow our solutions portfolio in these areas.

Stronger cash flow in 2021 supported $92 million in capital investments, designed to add production capacity, improve efficiency, and advance innovation. For 2022, our Board of Directors approved an increase to our annual dividend by 25% to $0.20, and in 2021, we returned more than $177 million to shareholders through dividends and share repurchases, after in May 2021, our Board approved a two-year share repurchase authorization for up to $500 million.

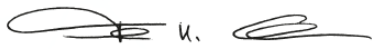
Taking advantage of historically low interest rates, in December 2021 we issued $500 million in 10-year senior notes denominated in Swiss Francs and Euros in a private placement offering locking in fixed rates around 1% for 10 years, securing capital for further strategic investments. Lastly, we were pleased that Bruker Corporation was added to the S&P MidCap 400 index, affirming our company's growth and market performance.

Financial Outlook for 2022

We entered 2022 with the highest backlog in our history, more than $2 billion, a testament to strong customer demand for our solutions as well as our careful navigation of on-going supply chain challenges. The 2022 outlook we provided in mid-February anticipates high single-digit organic revenue growth for the year, which is in line with our mid-term outlook for revenue of $2.7 - $3.0 billion by 2024. We intend to continue key investments in our *Project Accelerate 2.0* initiatives and further build-out our commercial capabilities to respond to growing new customer needs and growing market opportunities. We expect moderate expansion in our non-GAAP operating margins, as well as strong year-over-year non-GAAP EPS growth in 2022.

I would like to thank our valued customers, our committed Bruker colleagues, our shareholders, collaborators and business partners for their dedication and support over the past year, and we are looking forward to reporting on our future progress.

Sincerely,



Frank H. Laukien, Ph.D.

Chairman, President and Chief Executive Officer
April, 2022

Forward-Looking Statements

Any statements contained in this letter which do not describe historical facts may constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our *Project Accelerate 2.0* initiatives, our future sales and our future non-GAAP operating margins and non-GAAP EPS growth. Any forward-looking statements contained herein are based on current expectations, but are subject to risks and uncertainties that could cause actual results to differ materially from those indicated, including, but not limited to, those risks and uncertainties identified in our filings with the SEC, including, without limitation, our annual report on Form 10-K for the year ended December 31, 2021, as may be updated by our quarterly reports on Form 10-Q. We expressly disclaim any intent or obligation to update these forward-looking statements other than as required by law.

Microbiology and Diagnostics – Bruker's broad range of specialized technologies sheds light on the microbial world

Meeting a new Milestone in Clinical Microbiology for MALDI Biotyper®

2021 saw the MALDI Biotyper® sirius and sirius one become the leading systems of our MBT portfolio for microbial identification. These new systems demonstrate clear improvements to our prior systems as well as strong differentiation to our competitors resulting from upgrades to the electronics, faster speed to results, higher through-put, and improved user interface with an LED strip, while remaining a true bench top system. The increased adoption of our latest systems further enforces our position as the market leader for MALDI-based microbial identification with respect to market share and technology leadership. In November 2021 we passed an important milestone of 5,000 paid-for MALDI Biotyper® systems in the field. We benefited from large modernization projects in the healthcare systems especially in the U.S. and China, where we delivered to both the hospital market as well as large reference laboratories in these regions.

Our installed MALDI Biotyper® systems are often workhorses in the central clinical microbiology laboratories and are often used seven days per week. With the increasing use and throughput of our systems, we see our associated consumables demand increasing year on year and our solutions are responsible for providing in excess of 100,000,000 microbial identifications every year.

Late December 2020 we received FDA clearance of our MBT Sepsityper® Kit US IVD and in 2021 we made the formal product launch in the US market to provide a solution of our fast microbial identification from positive blood culture samples. This supports our fight against Sepsis, which is a life-threatening condition caused by the body's immune response to an infection and results in nearly 270,000 deaths in the U.S. every year. Our Sepsityper® Kit is cost-effective for the laboratories, improves the turnaround time of urgent patient samples, conserves healthcare resources and improves patient outcomes. We also believe that this compelling workflow creates significant tailwind for our MBT system sales in the USA.

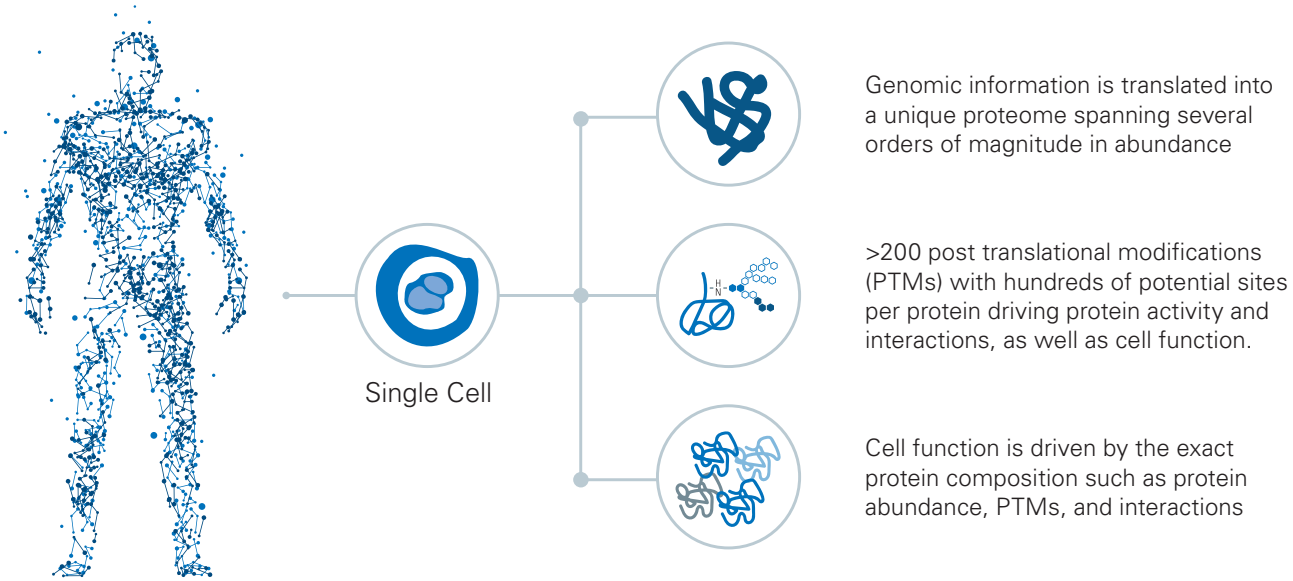
Bruker Microbiology & Diagnostics have built expertise in MALDI-TOF technology, software development and microbial library knowledge as well as a deep understanding of microbiology. Providing these skills, expertise and knowledge under a single roof enables Bruker to drive our mass spectrometry technology deeper in the microbiology space and beyond microbial identification. Clinical Microbiology relevant solutions include rapid sepsis testing with the Sepsityper kit, selective testing of antibiotic resistance with MBT-STAR® assay family and we continued to expand our portfolio in 2021 with the launch of the MBT Mycobacterial Kit (RUO) for mycobacteria sample preparation and the MBT Lipid XtractTM Kit (RUO) as a solution for lipid-based antibiotic resistance testing for colistin-resistance gram-negative bacteria. The MBT Lipid XtractTM Kit leverages the unique negative ion mode of MALDI Biotyper® sirius which again allows us to continue to change microbiology.

Expanding the Horizons of Single Cell Research

Generally considered impossible just several years ago, the deep, unbiased proteomics analysis of single cells is a rapidly developing field with the potential to make important contributions to the understanding of cellular biology and heterogeneity. "Single-cell proteomics takes centre stage" was the headline of the Nature Technology Feature on September 20, 2021. Unlike other omics technologies, single cell proteomics is hindered by a lack of amplification techniques for protein molecules so that any technique to detect proteins must be sensitive enough to identify them in the tiny amounts present in a single cell.

In June 2021, Bruker Daltonics launched the timsTOF SCP mass spectrometer, which enables ultra-high unbiased sensitivity analysis with the ground-breaking design of a novel ion source. CCS-enabled TIMS (Trapped Ion Mobility Spectrometry) accumulates and concentrates ions of a given mass and mobility, while removing chemical noise, yielding increases in sensitivity and speed. The ultimate sensitivity of the timsTOF SCP is further enhanced by the speed and sensitivity of the TIMS-based PASEF and dia-PASEF methods, making the timsTOF SCP ideally suited for the task of identifying the very small quantities of proteins present in a single cell. Bruker has acquired new tools for high-capacity sample separation using PepSep columns and the nanoElute II nanoflow UPLC system. These developments enable unbiased proteomics at the true single cell level with excellent reproducibility, robustness, and unbiased identification and quantification of about 1500 different protein groups per cell for the first time.

Nature https://www.nature.com/articles/d41586-021-02530-6



Harness the power of 4D-Proteomics for single cell research.

With a new ion source concept for 5 times greater ion-transfer together with the TIMS based time-focusing effect and higher fidelity separation of noise from signal as well as the proven acquisition speed in PASEF (> 100 Hz), the timsTOF SCP is unique in it's class. Taking single cell proteomics research, PTM analysis, and immunopeptidomics to the next level for a holistic approach in proteogenomics.

Enabling Deeper, Quantitative Analysis in Spatial Biology

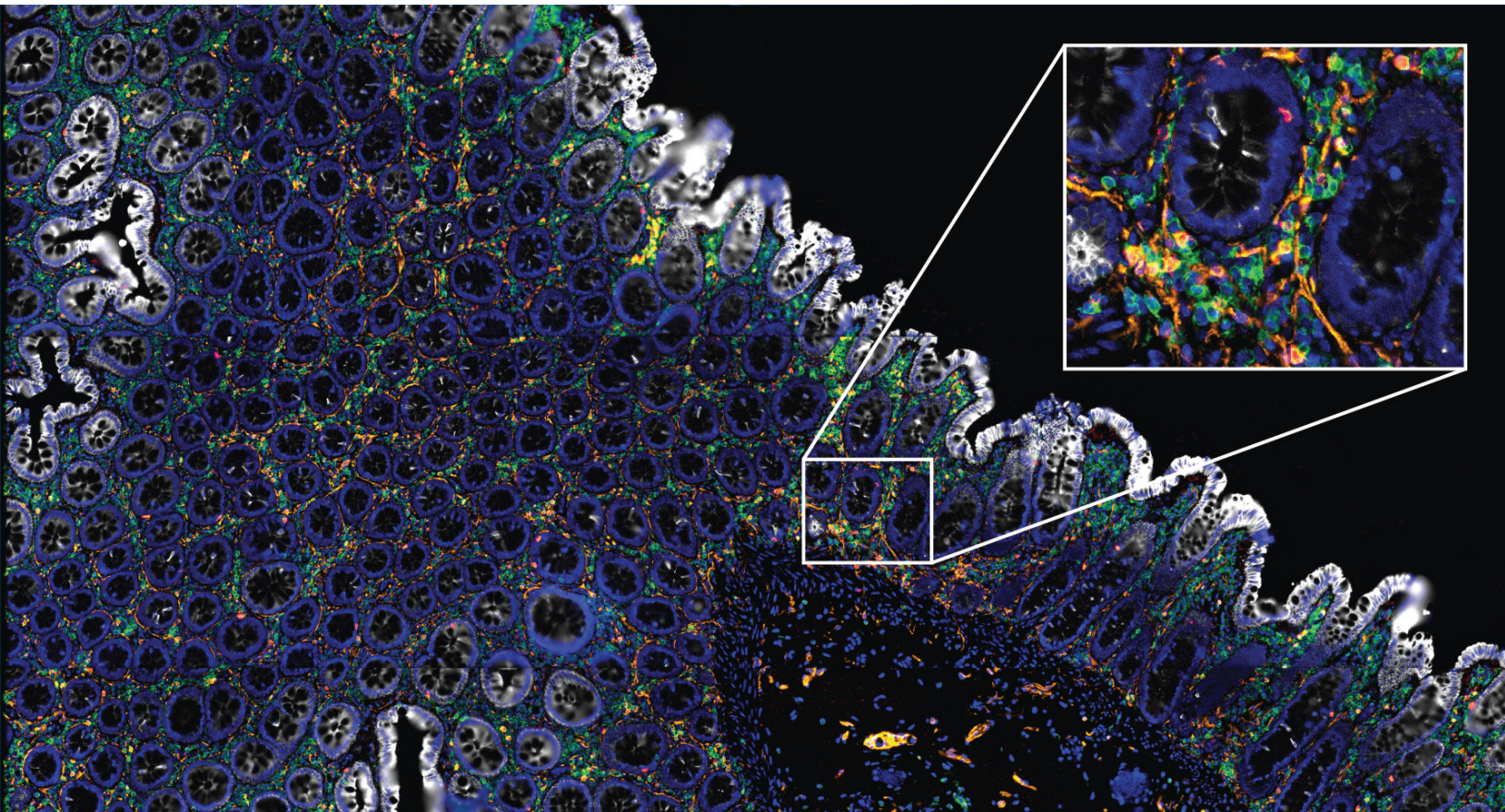
Bruker continues to expand its rich portfolio of life sciences technologies into the realm of spatial biology, a growing field that is mapping the geography of cells and tissues. Our spatial biology offerings transcend the central dogma of biology – the flow of genetic information from DNA to RNA, to protein – enabling a holistic and correlative view of biological processes. Our rapid technological advances have supported progressively sophisticated and robust genomic, transcriptomic, and proteomic analyses.

With the acquisition of Canopy Biosciences, we are enabling researchers to perform highly multiplexed, targeted spatial proteomics measurements on tissues and single-cell proteomic phenotyping of suspended cells. Canopy's ChipCytometry™ instruments and assay kits provide quantitative imaging of high-plex targeted protein biomarkers on a single tissue section at single-cell and sub-cellular spatial resolution. The proprietary and unique 8-log high dynamic range combined with superior high-resolution imaging technology allows researchers to perform best-in-class, quantitative spatial biology yielding absolute cell counts and identification of rare cells. CellScape™, the next-generation ChipCytometry™ instrument, advances the cutting-edge in quantitative in situ spatial phenotyping. This system delivers single-cell, targeted spatial proteomics for high-throughput whole-tissue analysis of the tumor microenvironment, as well as deep immune profiling for applications in immunology, neuroscience, and infectious disease.

While our technologies continue to enable the expansion of spatial proteomics applications, we are also paving the way for emerging 3D spatial genomics research within the nucleus. Acuity Spatial Genomics is a new venture that is developing the technologies to provide the much-needed direct measurement and 3D visualization of genome organization in situ, at the single-cell and sub-cellular level, in a timely and cost-effective way with OligoFISSEQ technology. Researchers will gain a deeper understanding of 3D chromatin architecture and the transcription regulatory programs that drive cell type, state, pathogenesis, and function. These genomic insights can help further the understanding of complex questions in oncology, neuroscience, infectious disease, and cell development.

Bruker is also enhancing basic academic spatial omics research efforts with super-resolution imaging solutions. The Vutara VXL™ is a versatile, single-molecule localization microscope for fundamental nanoscale spatial investigations in the genome, transcriptome, and proteome, delivering nanoscale resolution imaging and quantitative analysis.

Canopy's ChipCytometry platform enables high-plex, quantitative spatial imaging with sub-cellular resolution. Image below shows a human colon cancer FFPE sample imaged with Canopy's Spatial Immune Profiling Kit.



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

Form 10-K

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

For the fiscal year ended December 31, 2021

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

Commission File Number 000-30833

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

Delaware	**04-3110160**
(State or other jurisdiction of Incorporation or organization)	**(I.R.S. Employer Identification No.)**
40 Manning Road, Billerica, MA	**01821**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code:
(978) 663-3660

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	**BRKR**	**Nasdaq Global Select Market**

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, 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 voting and non-voting stock held by non-affiliates of the registrant as of June 30, 2021 (the last business day of the registrant's most recently completed second fiscal quarter) was $4,039,944,813 based on the reported last sale price on the Nasdaq Global Select Market. The number of shares of the registrant's common stock outstanding as of February 23, 2022 was 150,773,407.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the information required by Part III of this report (Items 10, 11, 12, 13 and 14) are incorporated by reference from the registrant's Definitive Proxy Statement on Schedule 14A for its 2022 Annual Meeting of Stockholders to be filed within 120 days of the close of the registrant's fiscal year.

BRUKER CORPORATION
ANNUAL REPORT ON FORM 10-K
TABLE OF CONTENTS

Any statements contained in this Annual Report on Form 10-K that are not statements of historical fact may be deemed to be forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. Without limiting the foregoing, the words "believe," "anticipate," "plan," "expect," "seek," "may," "will," "intend," "estimate," "should," and similar expressions are intended to identify forward-looking statements. Any forward-looking statements contained herein are based on current expectations but are subject to a number of risks and uncertainties. Forward-looking statements include, but are not limited to, statements regarding the impact of COVID-19 on our business operations, the impact of supply chain challenges, expectations regarding the global economy and geopolitical tensions, our intentions regarding our intellectual property, the impact of government contracts and government regulation, our working capital requirements and sufficiency of cash, our competition, the seasonality of our business, the sufficiency of our facilities, our employee relations, the impact of legal or intellectual property proceedings, the impact of changes to tax and accounting rules and changes in law, our anticipated tax rate, our expectations regarding cash dividends, share repurchases, interest expense, interest rate swap agreements, expenses and capital expenditures, the impact of foreign currency exchange rates and changes in commodity prices, the impact of our restructuring initiatives and our expectations regarding backlog and revenue. The factors that could cause actual future results to differ materially from current expectations include, but are not limited to, risks and uncertainties related to the length and severity of the COVID-19 pandemic, the impact of the pandemic on global economic conditions, the length and severity of any resulting recession, the impact of supply chain challenges including inflationary pressures, the impact of geopolitical tensions and any resulting sanctions, continued volatility in the capital markets, the integration and assumption of liabilities of businesses we have acquired or may acquire in the future, our restructuring and cost-control initiatives, changing technologies, product development and market acceptance of our products, the cost and pricing of our products, manufacturing and outsourcing, competition, dependence on collaborative partners, key suppliers and third party distributors, capital spending and government funding policies, changes in governmental regulations, intellectual property rights, litigation, exposure to foreign currency fluctuations, our ability to service our debt obligations and fund our anticipated cash needs, the effect of a concentrated ownership of our common stock, loss of key personnel, payment of future dividends and other factors. Many of these factors are described in more detail in this Annual Report on Form 10-K under Item 1A. "Risk Factors" and from time to time in other filings we may make with the Securities and Exchange Commission (the "SEC"). While we may elect to update forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and readers should not rely on those forward-looking statements as representing our views as of any date subsequent to the date of the filing of this report.

References to "we," "us," "our," "management" or the "Company" refer to Bruker Corporation and, in some cases, its subsidiaries, as well as all predecessor entities.

Our principal executive offices are located at 40 Manning Road, Billerica, MA 01821, and our telephone number is (978) 663-3660. Information about Bruker Corporation is available at *www.bruker.com*. The information on our website is not incorporated by reference into and does not form a part of this report. All trademarks, trade names or copyrights referred to in this report are the property of their respective owners.

PART I

ITEM 1 *BUSINESS*

Our Business

We are a developer, manufacturer and distributor of high-performance scientific instruments and analytical and diagnostic solutions that enable our customers to explore life and materials at microscopic, molecular and cellular levels. Many of our products are used to detect, measure and visualize structural characteristics of chemical, biological and industrial material samples. Our products and solutions address the rapidly evolving needs of a diverse array of customers in life science research, pharmaceuticals, biotechnology, applied markets, cell biology, clinical research, microbiology, in-vitro diagnostics, nanotechnology and materials science research. Our technology platforms include magnetic resonance technologies, mass spectrometry technologies, gas and liquid chromatography, triple quadrupole mass spectrometry technologies, X-ray technologies, spark-optical emission spectroscopy, atomic force microscopy, stylus and optical metrology technology, fluorescence optical microscopy, and infrared and Raman molecular spectroscopy technologies. Our product portfolio also includes testing solutions used in microbiology and infectious disease diagnostics, including our MALDI Biotyper rapid pathogen identification platform and related test kits, DNA test strips and fluorescence-based polymerase chain reaction (PCR) technology for selected infectious disease applications. We develop, manufacture and distribute a range of field analytical systems for chemical, biological, radiological, nuclear and explosives, or CBRNE, detection. We also develop, manufacture and market low temperature superconducting materials and devices based primarily on metallic low temperature superconductors. Our corporate headquarters are located in Billerica, Massachusetts. We maintain major technical and manufacturing centers in Europe, North America and Southeast Asia, and have sales offices located throughout the world.

We originally were incorporated in Massachusetts in February 1991, as Bruker Federal Systems Corporation. In February 2000, we reincorporated in Delaware as Bruker Daltonics Inc. In July 2003, we merged with Bruker AXS Inc., and we were the surviving corporation in that merger. In connection with that merger, we changed our name to Bruker BioSciences Corporation and formed two operating subsidiaries, Bruker Daltonics and Bruker AXS. In July 2006, we acquired Bruker Optics Inc. In February 2008, we acquired the Bruker BioSpin group of companies and changed our name to Bruker Corporation.

Business Segments

We have four operating segments, *Bruker BioSpin Group, Bruker CALID Group, Bruker Scientific Instruments (BSI) Nano Segment* and *Bruker Energy & Supercon Technologies (BEST)*. We have three reportable segments*, BSI Life Science*, *BSI Nano*, and *BEST*. For financial reporting purposes, the Bruker BioSpin and Bruker CALID Groups are aggregated into the BSI Life Science reportable segment because they have similar economic characteristics, production processes, service offerings, types and classes of customers, methods of distribution and regulatory environments.

BSI Life Science Segment

Bruker BioSpin Group

The Bruker BioSpin Group comprises the Bruker Magnetic Resonance, Applied Industrial and Clinical, Preclinical Imaging and Service and Lifecycle Support Divisions and designs, manufactures and distributes enabling life science tools based on magnetic resonance technology. Magnetic resonance is a natural phenomenon occurring when a molecule placed in a magnetic field gives off a signature radio frequency. The signature radio frequency is characteristic of the particular molecule and provides a multitude of precise chemical and structural information. Depending on the intended application, we market and sell to our customers an NMR system or an EPR system (each as defined below).

Bruker BioSpin also manufactures and sells single and multiple modality systems using MRI, PET, SPECT, CT and MPI technologies (each as defined below). Bruker BioSpin's products, which have particular application

in structural proteomics, drug discovery, pharmaceutical and biotechnology research and production, and the food and materials science fields, provide customers with the ability to determine the structure, dynamics, and function of specific molecules, such as proteins, and to characterize and determine the composition of mixtures.

The majority of Bruker BioSpin's customers are academic and government research facilities. Other customers include pharmaceutical and biotechnology companies; chemical, food and beverage, clinical and polymer companies; and nonprofit laboratories.

During 2021, we further expanded our business with additional GHz class systems, which represent the top end of our product portfolio. We obtained customer acceptance on four such systems (two 1.2 GHz and two 1.0 GHz). We also achieved major technical milestones in the automatic diagnosis and calibration capabilities of our systems, enabling new services like predictive maintenance. During 2021, we also successfully scaled up our benchtop Fourier NMR platform. With these Fourier NMR systems and solutions we address multiple end markets including teaching, academic research, pharmaceuticals, food and various industrial applications.

Bruker BioSpin Group's instruments are based on the following technology platforms:

- **NMR**—Nuclear magnetic resonance;
- **EPR**—Electron paramagnetic resonance;
- **MRI**—Magnetic resonance imaging;
- **MPI**—Magnetic particle imaging;
- **PET**—Positron emission tomography;
- **SPECT**—Single photon emission tomography; and
- **CT**—Computed tomography.

NMR is a qualitative and quantitative analytical technique that is used to determine the molecular structure and purity of a sample. Molecules are placed in a magnetic field and give off a radio frequency signature that is recorded by a sensitive detector. Analysis software helps to determine the molecular structure of the sample. The NMR technique is used in academia, by pharmaceutical, biotechnology, food and beverage and clinical companies, and by other industrial users in life science and material science research.

EPR is a process of absorption of microwave radiation by paramagnetic ions or molecules with at least one unpaired electron that spins in the presence of a static magnetic field. EPR detects unpaired electrons unambiguously, whereas other techniques can only provide indirect evidence of their presence. In addition, EPR can identify the paramagnetic species that are detected, which present information on the molecular structure near the unpaired electron and give insight into dynamic processes such as molecular motions or fluidity. Our EPR instruments are used for a wide range of applications, including advanced materials research, materials analysis and quality control.

MRI is a process of creating an image from the manipulation of hydrogen atoms in a magnetic field. In the presence of an external magnetic field, atoms will align with or against the external magnetic field. Application of a radio frequency causes the atoms to jump between high and low energy states. MRI and magnetic resonance spectroscopy, or MRS, include many methods including diffusion-weighted, perfusion-weighted, molecular imaging and contrast-enhance. MRI offers high resolution morphologic information, as well as functional, metabolic or molecular information. Customers use our MRI systems in pharmaceutical research, including metabolomics, to study a number of diseases, including diabetes, neurology, oncology and cardiovascular disorders.

MPI is a process of creating an image from magnetic particles administered to the body of an animal. The magnetic particles are manipulated in a combination of oscillating magnetic fields exhibiting a field free zone.

The response of the particles allows a real time 3D data set acquisition of the whole body of an animal, showing the contrast agent distributing in and flowing through the body. This imaging modality is used to detect cardiovascular disorders.

PET is a process of creating an image from positrons after administration of a positron emitting radionuclide to the body of an animal. Annihilation of the positron produces two photons which show an angle of 180° between them, distinguishing these photons from photons originating from other sources. The PET tracer enriches in certain regions of interest within the body and gains molecular information from the animal *in vivo*. This has widespread applications, most importantly for oncology, inflammation, neurology and cardiovascular disorders, as well as metabolic disease, drug discovery and bone disease.

SPECT uses a contrast agent containing radionuclides which directly emit single photons. The contrast agent enriches in certain parts of the body of an animal and generates images of the radionuclide distribution in the body. SPECT has widespread application in animal investigations *in vivo*, most importantly in oncology, neurology and cardiovascular disorders.

CT is a technology based on X-rays which are used to generate a complete 3D data set. The most important applications are tissue sample analysis or non-invasive *in vivo* animal imaging. CT offers the highest spatial resolution of all preclinical imaging modalities and is especially useful to generate morphological information about the object or animal under investigation. CT is being used in a wide range of preclinical investigations in the fields of bone-orthopedics, cardiology, pulmonology, oncology and metabolism among others.

The Bruker BioSpin Group also offers a range of services, product lifecycle support, scientific software and workflow solutions to customers who use Bruker BioSpin products.

Bruker CALID Group

The Bruker CALID Group comprises the Bruker Daltonics and Bruker Optics Divisions. The Bruker Daltonics Division primarily designs, manufactures and distributes life science mass spectrometry, or MS, instruments that can be integrated and used along with sample preparation or chromatography instruments to design an analytical workflow and mass spectrometry-based and molecular diagnostic solutions for microbiology and infectious disease diagnostics. Bruker CALID's life science mass spectrometry products are used in research, pharmaceutical and biotechnology development. Bruker CALID's microbiology and infectious disease solutions are used primarily in the human and veterinary clinical diagnostic and food microbiology settings.

Mass spectrometers are sophisticated devices that measure the mass or weight of a molecule and can provide accurate information on the identity, quantity and primary structure of the molecule. Mass spectrometry-based solutions often combine advanced mass spectrometry instrumentation, automated sampling and sample preparation robots, reagent kits and other disposable products used in conducting tests, or assays, and bioinformatics software. We offer mass spectrometry systems and integrated solutions for applications in multiple existing and emerging life science markets and chemical and applied markets, including expression proteomics, clinical proteomics research, metabolic and peptide biomarker profiling, drug discovery and development, molecular diagnostics research and molecular and systems biology, as well as basic molecular medicine research. Our timsTOF Pro mass spectrometer offers workflow solutions for proteomics research. Our MALDI Biotyper mass spectrometry solution and test kits, DNA test strips and fluorescence-based PCR technologies are designed for in-vitro diagnostic (IVD) use in clinical microbiology markets in certain configurations and certain countries, where regulatory approvals have been achieved. In addition to culture-based microbial identification with the MALDI Biotyper platform, the Genotype and Fluorotype molecular diagnostics (MDx) kits enable a culture-free detection and analysis of microbes and viruses directly from patient samples with a special focus on tuberculosis, transplant diagnostics and sexually-transmitted diseases.

Molecular Diagnostics utilize Polymerase Chain Reaction (PCR) assays and systems to provide diagnostic solutions for a number of different disease states, including Respiratory, Mycobacteria (including Tuberculosis),

Virology, Safety of Immunocompromised patients, Sexually Transmitted Infections, Gastroenteric Diseases as well as other Microbiology tests. Depending on the assay being used, the technology enables users to ascertain basic identification of a certain infection, distinguish infections which can cause similar symptoms and detect specific microbial resistance, all from a single sample. The GenoType portfolio has been established for over 30 years and has been successful in mycobacteria and tuberculosis detection, differentiation, and identification of antibiotic resistance markers. The portfolio now includes FluoroType®, using fluorescence-based real-time PCR technology, and more recently we have also developed LiquidArray® assays based on melt curve analysis for optimized asymmetrical PCR technology. LiquidArray® uses light-on-off probes, providing a powerful technology to identify a broad number of indicators for different infections or resistance markers from a single sample, providing greater depth of information. We are applying this approach to a new portfolio of syndromic panels in development. As a producer of extraction chemistry and instrumentation alongside integrated thermocyclers, software and a range of assays, Bruker brings complete diagnostic solutions to the Molecular Diagnostics market.

The Bruker Optics Division manufactures and distributes research, analytical and process analysis instruments and solutions based on infrared and Raman molecular spectroscopy technologies. These products are utilized in industry, government and academia for a wide range of applications and solutions for life science, pharmaceutical, food and agricultural analysis, quality control and process analysis applications. Infrared and Raman spectroscopy are widely used in both research and industry as simple, rapid, nondestructive and reliable techniques for applications ranging from basic sample identification and quality control to advanced research. The Bruker Optics Division also utilizes Fourier transform and dispersive Raman measurement techniques on an extensive range of laboratory and process spectrometers. The Bruker Optics Division's products are complemented by a wide range of sampling accessories and techniques, which include, among others, microanalysis and high-throughput screening to help users find suitable solutions to analyze their samples effectively.

Customers of our Bruker CALID Group include pharmaceutical, biotechnology and diagnostics companies, contract research organizations, academic institutions, medical schools, nonprofit or for-profit forensic laboratories, agriculture, food and beverage safety, environmental and clinical microbiology laboratories, hospitals and government departments and agencies.

During 2021, we launched a number of new mass spectrometry-based solutions and additional workflows, including the timsTOF SCP (Single Cell Proteomics) mass spectrometer enabling researchers to analyze proteins within a single cell. In our microbiology and molecular diagnostics markets, we introduced the MALDI Biotyper Sirius broadly into the market. In our molecular diagnostics portfolio we launched two assays in the field of respiratory disease testing, primarily covering SARS-CoV 2 testing for the diagnosis of COVID-19 infection. The Fluorotyper-SARS-CoV 2 plus kit allows for a real-time PCR detection of the SARS-CoV 2 virus. It detects two viral genes in parallel as a mechanism for high sensitivity. The additional FluoroType® SARS-CoV-2/Flu/RSV assay is a multiplex real-time PCR kit that detects four viruses of clinical significance causing respiratory disease during the winter season: SARS-CoV 2, influenza A, influenza B and respiratory syncytial virus (RSV). During 2020, the Bruker Optics division launched LUMOS II, a fully automated stand-alone FTIR imaging microscope. LUMOS II provides ultrafast FTIR imaging capabilities based on modern focal plane array (FPA) detector technology. The novel LUMOS II is designed to identify particles, to determine coatings and contaminations, and to reveal the polymeric composition of plastics.

The Bruker CALID Group's instruments are based on the following technology platforms:

- **MALDI-TOF**—Matrix-assisted laser desorption ionization time-of-flight mass spectrometry, including tandem time-of-flight systems (MALDI-TOF);
- **ESI-TOF**—Electrospray ionization time-of-flight spectrometry, including trapped ion mobility (TIMS) based on ESI-quadrupole-TOF mass spectrometry (timsTOF);

- **MRMS**—Magnetic resonance mass spectrometry, including hybrid systems with a quadrupole front end (Q-q-MRMS);
- **ITMS**—Ion trap mass spectrometry;
- **GC-MS**—Gas chromatography-mass spectrometry systems utilizing triple-quadrupole time-of-flight mass spectrometry;
- **LC-MS**—Liquid chromatography-mass spectrometry systems utilizing triple-quadrupole time-of flight mass spectrometry;
- **FT-IR**—Fourier transform-infrared spectroscopy;
- **NIR**—Near-infrared spectroscopy; and
- **Raman**—Raman spectroscopy.

MALDI-TOF mass spectrometers utilize an ionization process to analyze solid samples using a laser that combines high sample throughput with high mass range and sensitivity. Our MALDI-TOF mass spectrometers are particularly useful for applications in clinical diagnostics, environmental and taxonomical research and food processing and quality control. Specific applications include: oligonucleotide and synthetic polymer analysis; protein identification and quantification; peptide de novo sequencing; determination of post-translational modifications of proteins; interaction proteomics and protein function analysis; drug discovery and development; and fast body fluid and tissue peptide or protein biomarker detection. MALDI mass spectrometry allows users to classify and identify microorganisms quickly and reliably with minimal sample preparation efforts and life cycle costs. Our MALDI Biotyper solution, which serves the clinical microbiology market, enables identification, taxonomical classification or dereplication of microorganisms like bacteria, yeasts and fungi.

ESI-TOF mass spectrometers utilize an electrospray ionization process to analyze liquid samples. This ionization process, which does not dissociate the molecules, allows for rapid data acquisition and analysis of large biological molecules. ESI-TOF mass spectrometers are particularly useful for: identification, protein analysis and functional complex analysis in proteomics and protein function; molecular identification in metabolomics, natural product and drug metabolite analysis; combinatorial chemistry high throughput screening; and fast liquid chromatography mass spectrometry, or liquid chromatography mass spectrometry (LC-MS), in drug discovery and development.

MRMS systems utilize high-field superconducting magnets to offer the highest resolution, selectivity, and mass accuracy currently achievable in mass spectrometry. Our systems based on this technology often eliminate the need for time-consuming separation techniques in complex mixture analyses. In addition, our systems can fragment molecular ions to perform exact mass analysis on all fragments to determine molecular structure. MRMS systems are particularly useful for: the study of the structure and function of biomolecules, including proteins, DNA and natural products; complex mixture analysis including body fluids or combinatorial libraries; high-throughput proteomics and metabolomics; and top-down proteomics of intact proteins without the need for enzymatic digestion of the proteins prior to analysis. We offer next-generation hybrid MRMS systems that combine a traditional external quadrupole mass selector and hexapole collision cell with a high-performance MRMS for further ion dissociation, top-down proteomics tools and ultra-high resolution detection.

ITMS systems collect all ions simultaneously, which improves sensitivity relative to previous quadrupole mass spectrometers. Ion trap mass spectrometers are particularly useful for sequencing and identification based on peptide structural analysis, quantitative liquid chromatography mass spectrometry, identification of combinatorial libraries and generally enhancing the speed and efficiency of the drug discovery and development process.

GC-MS systems combine the features of gas chromatography and mass spectrometry to identify different substances within a test sample. The two components, used together, allow for a finer degree of substance

identification than either system when used separately. The result is a quantitative analysis of the components and the mass spectrum of each component. Our GC-MS systems are available in triple quadrupole configurations and can be configured with a variety of options to suit a range of applications. Our GC-MS systems have applications in food and product safety, forensics, clinical and toxicology testing and environmental, pharmaceutical and chemical analysis.

LC-MS systems combine the separation features of liquid chromatography with the molecular identification features of mass spectrometry to separate, identify and quantify different substances within a test sample. As a complementary technique to GC-MS, which analyzes volatile compounds, LC-MS can be used to analyze a wide range of non-volatile compounds in complex samples. Our LC-MS systems are available in a wide range of configurations to suit a user's specific needs. Although primarily used for life science applications, our LC-MS systems also have applications in food and product safety, forensics and clinical and toxicology testing, as well as environmental, pharmaceutical and chemical analysis.

FT-IR spectrometers utilize the mid- and far-infrared regions of the electromagnetic spectrum. Our FT-IR systems are commonly used for various quality control and materials research applications.

NIR spectrometers utilize the near-infrared region of the electromagnetic spectrum. Our NIR instruments are primarily used for quality and process control applications in the pharmaceutical, food and agriculture and chemical industries. The pharmaceutical industry is the leading user of NIR instruments, and applications include quality control, research and development and process analytical technology. The food and agricultural industry is the second largest user of NIR instrumentation, with an increasing demand for food, feed and beverage quality control.

Raman spectroscopy provides information on molecular structure. The mechanism of Raman scattering is different from that of infrared absorption, in that Raman and IR spectra provide complementary information. Raman is useful for the identification of both organic and inorganic compounds and functional groups. It is a nondestructive technique and can be used for the analysis of both liquids and solids. Raman is well suited for use in the polymer and pharmaceutical industries, and has applications in the metals, electronics and semiconductors industries. The technique also has applications in life sciences, forensics and artwork authentication.

Additionally, the Bruker Detection product line offers a wide range of portable analytical and bioanalytical detection systems and related products for CBRNE detection. Our customers use these devices for nuclear, biological agent and chemical agent defense applications, anti-terrorism, law enforcement and process and facilities monitoring. Our CBRNE detection products use many of the same technology platforms as our life science products, as well as additional technologies, including infrared stand-off detection and ion mobility spectrometry, for handheld chemical detectors. We also provide integrated, comprehensive detection suites that include our multiple detection systems, consumables, training and simulators.

BSI Nano Segment

The BSI Nano Segment comprises the Bruker AXS, Bruker Nano Analytics, Bruker Nano Surfaces and Metrology, Fluorescence Microscopy and Canopy Divisions. The Bruker AXS Division designs, manufactures and distributes advanced X-ray instruments that use electromagnetic radiation with extremely short wavelengths to determine the characteristics of matter and the three-dimensional structure of molecules. This includes a product portfolio of instruments based on X-ray fluorescence spectroscopy (XRF), X-ray diffraction (XRD) and X-ray micro computed tomography (μCT), or X-ray microscopy, as well as spark optical emission spectroscopy systems (S-OES) used to analyze the concentration of elements in metallic samples.

The Bruker Nano Analytics Division manufactures and markets analytical tools for electron microscopes, including energy-dispersive X-ray spectrometers (EDS), electron backscatter diffraction systems (EBSD) and μCT accessories, as well as mobile and bench top micro X-ray fluorescence (μXRF), total reflection X-ray

fluorescence spectrometers (TXRF) and handheld, portable and mobile X-ray fluorescence (HMP-XRF) spectrometry instruments.

The Bruker Nano Surfaces and Metrology Division's products include atomic force microscopy instrumentation (AFM). Such instruments provide atomic or near atomic resolution of surface topography and nanoscale, mechanical, electrical and chemical information using nano scale probes. The Bruker Nano Surfaces and Metrology Division also provides non-contact nanometer resolution solution topography through white light interferometry and stylus profilometry. In addition, the division manufacturers and markets automated X-ray metrology, automated AFM defect-detection and photomask repair and cleaning equipment for semiconductor process control.

The Fluorescence Microscopy Division provides advanced optical fluorescence microscopy instruments with multi-photon, multipoint scanning confocal 3D super-resolution, light-sheet modalities for studies in life science applications.

The Canopy Division provides products and services to support the multi-omics needs of researchers in translational research, drug and biomarker discovery.

Customers of our BSI Nano Segment include academic institutions, governmental customers, nanotechnology companies, semiconductor companies, raw material manufacturers, industrial companies, biotechnology and pharmaceutical companies and other businesses involved in materials analysis.

During 2021, we launched several new products including IconIR, nanoIR, NanoWizard V BioAFM, InSight CAP-HP automated AFM, Sirius XRD -X-Ray CD metrology, Sirius RF, WC-2200 Wafer Clean, Q4 POLO elemental analysis and multiphoton 3P. We acquired Scientific Computing International (SCI), which was a leading innovator and provider of advanced metrology systems and analysis software to major companies in the semiconductor, optoelectronics, data storage, display, MEMS, and optical coating industries. And we also acquired SVXR, Inc. which engages in researching, developing, designing, engineering, and manufacturing automated x-ray inspection technology and providing analysis toolkits, bringing high speed inspection and metrology technology to the semiconductor packaging industry with its revolutionary HR-AXI technology.

The BSI Nano Segment systems are based on the following technology platforms:

- **XRD**—Polycrystalline X-ray diffraction, often referred to as X-ray diffraction;
- **XRF**—X-ray fluorescence, also called X-ray spectrometry, including handheld XRF systems;
- **SC-XRD—**Single crystal X-ray diffraction, often referred to as X-ray crystallography;
- **µCT—**X-ray micro computed tomography, X-ray microscopy;
- **EDS—**Energy dispersive X-ray spectroscopy on electron microscopes;
- **EBSD—**Electron backscatter diffraction on electron microscopes;
- **S-OES—**Spark optical emission spectroscopy;
- **CS/ONH—**Combustion analysis for carbon, sulfur, oxygen, nitrogen, and hydrogen in solids;
- **AFM**—Atomic force microscopy;
- **FM**—Fluorescence microscopy;
- **SOM**—Stylus and optical metrology;
- **TMT**—Tribology and mechanical test systems for analysis of friction and wear;
- **NanoIR**—Nanoscale infrared spectroscopy;

- **Alicona**—Focus variation optical technology for non-contact dimensional metrology; and
- **Canopy**—Multiplexed fluorescence-based single cell imaging for suspended cells and tissues as well as multi-omics sample characterization.

XRD systems investigate polycrystalline samples or thin films with single wavelength X-rays. The atoms in the polycrystalline sample scatter the X-rays to create a unique diffraction pattern recorded by a detector. Computer software processes the pattern and produces a variety of information, including stress, texture, qualitative and quantitative phase composition, crystallite size, percent crystallinity and layer thickness, composition, defects and density of thin films and semiconductor material. Our XRD systems contribute to a reduction in the development cycles for new products in the catalyst, polymer, electronic, optical material and semiconductor industries. Customers also use our XRD systems in academic and government research, as well as in a variety of other fields, including forensics, art and archaeology.

XRF systems determine the elemental composition of a material and provide a full qualitative and quantitative analysis. Our XRF systems direct X-rays at a sample, and the atoms in the sample absorb the X-ray energy. The elements in the sample then emit X-rays that are characteristic for each element. The system collects the X-rays, and the software analyzes the resulting data to determine the elements that are present. Our XRF products provide automated solutions on a turn-key basis for industrial users that require automated, controlled production processes that reduce product and process cost, increase output and improve product quality. Our XRF products cover substantially all of the periodic table and can analyze solid, powder or liquid samples.

SC-XRD systems determine the three-dimensional structures of molecules in a chemical, mineral, or biological substance being analyzed. SC-XRD systems have the capability to determine structure in both small chemical molecules and larger biomolecules. SC-XRD systems direct an X-ray beam at a solid, single crystal sample. The atoms in the crystal sample scatter the X-rays to create a precise diffraction pattern recorded by an electronic detector. Software then reconstructs a model of the structure and provides the unique arrangement of the atoms in the sample. This information on the exact arrangement of atoms in the sample is a critical part of molecular analysis and can provide insight into a variety of areas, including how a protein functions or interacts with a second molecule. Our SC-XRD systems are designed for use in the life sciences industry, academic research and a variety of other applications.

µCT is X-ray imaging in 3D, by the same method used in hospital CT scans, but on a small scale with massively increased resolution. 3D microscopy allows users to image the internal structure of objects non-destructively on a very fine scale. Bruker µCT is available in a range of easy-to-use desktop instruments, which generate 3D images of the sample's morphology and internal microstructure with resolution down to the sub-micron level. Our µCT systems are used for numerous applications in materials research and in the life sciences industry.

EDS systems analyze the chemical composition of materials under investigation in electron microscopes by utilizing the fact that atoms of different chemical elements, when exposed to the high energy electron beam generated by the microscope, irradiate X-rays of different characteristic energy. The evaluation of the energy spectrum collected by our spectrometer allows the determination of the qualitative and quantitative chemical sample composition at the current beam position. EDS systems allow for simultaneous analysis of all elements in the periodic table, beginning with atomic number 4 (beryllium). Our EDS systems are used for a range of applications, including nanotechnology and advanced materials research, as well as materials analysis and quality control. Customers for EDS systems include industrial customers, academia and government research facilities.

EBSD systems are used to perform quantitative microstructure analysis of crystalline samples in electron microscopes. The microscope's electron beam strikes the tilted sample and diffracted electrons form a pattern on a fluorescent screen. This pattern is characteristic of the crystal structure and orientation of the sample region from which it was generated. It provides the absolute crystal orientation with sub-micron resolution. EBSD can

be used to characterize materials with regard to crystal orientation, texture, stress, strain and grain size. EBSD also allows the identification of crystalline phases and their distribution and is applied to many industries such as metals processing, aerospace, automotive, microelectronics and earth sciences.

S-OES instruments are used for analyzing metals. S-OES covers a broad range of applications for metals analysis from pure metals trace analysis to high alloyed grades and allows for analysis of a complete range of relevant elements simultaneously. S-OES instruments pass an electric spark onto a sample, which burns the surface of the sample and causes atoms to jump to a higher orbit. Our detectors quantify the light emitted by these atoms and help our customers to determine the elemental composition of the material. This technique is widely used in production control laboratories of foundries and steel mills.

CS/ONH carrier gas systems incorporate a furnace and infrared or thermal conductivity detection to analyze inorganic materials for the determination of carbon, sulfur, nitrogen, oxygen and hydrogen. Combustion and inert gas fusion analyzers are used for applications in metal production and processing, chemicals, ceramics and cement, coal processing, oil refining and semiconductors.

AFM systems provide atomic or near-atomic resolution of material surface topography using a nano-scale probe that is brought into light contact with the sample being investigated. In addition to presenting a surface image, AFM can also provide quantitative nano-scale measurements of feature sizes, material properties, electrical information, chemical properties and other sample characteristics. Our AFM systems are used for applications in academic and governmental materials and biological research and semiconductor, data storage hard drive, LED, battery, solar cells, polymers, and pharmaceutical product development and manufacturing.

FM products use fluorescence microscopy to determine the structure and composition of life science samples. Our products include two-photon microscopes, multipoint scanning confocal microscopes, super-resolution microscopes, light-sheet microscopes, laser illumination sources, photoactivation, photostimulation and photoablation accessories and synchronization and analysis software. Two-photon microscopes allow imaging deep into tissues and cells and are used widely in neuroscience. Multipoint scanning confocal systems allow live cell imaging with rapid acquisition of images for structural and composition analysis. Super-resolution and single-molecule localization microscopy products allow imaging below the optical diffraction limit by an order of magnitude. Light-sheet based products allow fast 3D volume imaging with very low phototoxicity and photo-damage effects enabling live cell and large volume imaging.

SOM systems provide atomic or near-atomic two dimensional and three-dimensional surface resolution using white light interferometry, confocal optical and stylus profilometry methods. SOM profilers range from low-cost manual tools for single measurements to advanced, highly automated systems for production line quality assurance and quality control applications where the combination of throughput, repeatability and reproducibility is essential. SOM profilers support a range of applications in research, product development, tribology, quality control and failure analysis related to materials and machining in the automotive, orthopedic, ophthalmic, high brightness LED, semiconductor, data storage, optics and other markets.

TMT systems provide a platform for all types of common mechanical, friction, durability, scratch and indentation tests for a wide spectrum of materials. Tribology systems are utilized for both academic research of the fundamental material properties and industrial applications in the semiconductor, aerospace, petroleum, automotive and other industries.

NanoIR systems perform infrared (IR) spectroscopy at the nanoscale. Our systems use nanoprobe technology similar to what is used in our atomic force microscopes to deliver quantitative chemical information from the nanoscale to the sub-micron and macro scales. The NanoIR measurement gives the user varying physical and chemical properties with nanoscale spatial resolution in a diverse range of fields, including polymers, 2D materials, materials science, life science and the micro-electronics industry. Our systems allow nanoscale IR absorption spectroscopy with interpretable IR spectra that directly correlates to FTIR as well as the

complementary technique of nanoscale s-SNOM. With our broadband sources, these systems allow broadband scientific spectroscopy.

Alicona systems combine the functionalities of a micro coordinate measurement machine (CMM) with those of a surface measurement system. These dimensional metrology systems are based on the pioneering development of optical Focus-Variation measurement algorithms and provide the noncontact measurement of form and roughness of complex, miniaturized geometries. These systems serve many quality assurance application areas requiring precision measurement and dimensional metrology, including aerospace, automotive, precision medical products, additive manufacturing, and micro precision manufacturing.

Canopy provides digital spatial profiling services and instruments which include both our ChipCytometry profiling instrument and ChipCytometry (single cell and spatial targeted proteomics) and other services. These technologies, along with Canopy's more basic IHC and FISH services, allow researchers to elucidate gene and protein expression in a spatial context, which is useful for deep biological insight into gene expression and for the development of biomarkers. Canopy also provides transcriptional profiling services covering a variety of assays, including RNASeq and qPCR. Our multi-omic services provide data elucidating gene expression, signaling pathways, and differential expression trends on customer provided biological samples. These services generally incorporate a data analysis service as well and can be utilized with multiple types of samples from very early discovery research through clinical trials.

BEST Segment

The BEST Segment designs, manufactures and distributes superconducting materials, primarily metallic low temperature superconductors, for use in magnetic resonance imaging, nuclear magnetic resonance, fusion energy research and other applications. Additionally, BEST develops, manufactures and markets sophisticated devices and complex tools based primarily on metallic low temperature superconductors that have applications in "big science" research, including radio frequency accelerator cavities and modules, power couplers and linear accelerators. BEST also manufactures and sells non-superconducting high technology tools, such as synchrotron and beamline instrumentation, principally to customers engaged in materials research and "big science" research projects.

Sales and Marketing

We maintain direct sales forces throughout North America, Europe, Russia, China, Japan, and elsewhere in the Asia Pacific region. We also utilize indirect sales channels to reach customers. We have various international distributors, independent sales representatives and various other representatives in parts of Asia, Latin America, Africa, the Middle East and Eastern Europe. These entities augment our direct sales force and provide coverage in areas where we do not have direct sales personnel. In addition, we have adopted a distribution business model in which we engage in strategic distribution alliances with other companies to address certain market segments. The sales cycle for our products is dependent on the size and complexity of the system and budgeting cycles of our customers. Our sales cycle is typically three to twenty-four months for academic and high-end research products and two weeks to six months for industrial products. The sales cycle of our low temperature superconducting materials is typically four to twelve months, with cycles of certain high-end materials exceeding one year. Sales of our high-end NMR and superconducting devices typically take more than one year and certain large, complex contracts can take more than two years to complete.

We have well-equipped applications and demonstration facilities and qualified application personnel who assist customers and provide product demonstrations in specific application areas. We maintain our primary demonstration facilities at our production facilities, as well as in other key market locations.

Seasonal Nature of Business

Historically, we have higher levels of revenue in the fourth quarter and lower levels of revenues in the first quarter of the year, which we believe is influenced by our customers' budgeting cycles.

Major Customers

We have a broad and diversified customer base and we do not depend on any single customer. No single customer accounted for more than 10% of revenue in any of the last three fiscal years or more than 10% of accounts receivable as of December 31, 2021 or 2020.

Competition

Our existing products and solutions and any products and solutions that we develop in the future may compete in multiple, highly competitive markets. In addition, there has been a trend towards consolidation in our industries and many of our competitors have substantially greater financial, technical and marketing resources than we do. Our competitors may succeed in developing and offering products that could render our products or those of our strategic partners obsolete or noncompetitive. Our competitors may also have cost and price advantages based upon the value of their currencies compared with the U.S. Dollar or Euro. In addition, many of these competitors have significantly more experience in the life sciences, chemical and materials markets. Our ability to compete successfully will depend on our ability to develop proprietary products that reach our target markets in a timely manner and are technologically superior to and/or less expensive, or more cost effective, than products marketed by our competitors. Current competitors or other companies may possess or develop technologies and products that are more effective than ours. Our technologies and products may be rendered obsolete or uneconomical by technological advances or by entirely different approaches developed by one or more of our competitors.

We also compete with companies that provide analytical or automation tools based on technologies other than those we offer. These technologies may prove to be more successful in meeting demands in the markets that our products and solutions are intended to serve. In addition, other companies may choose to enter our fields in the future. We believe that the principal competitive factors in our markets are technology-based applications expertise, product specifications, functionality, reliability, marketing expertise, distribution capability, proprietary patent portfolios and cost effectiveness.

BSI Life Science Segment Competition

The Bruker BioSpin Group competes with companies that offer magnetic resonance spectrometers, mainly JEOL and Oxford Instruments. In the field of preclinical imaging, Bruker BioSpin competes with PerkinElmer Inc., Mediso, Trifoil, MR Solutions and others. The Bruker CALID Group competes with a variety of companies that offer mass spectrometry-based systems. Bruker CALID's competitors in the life science markets and chemical and applied markets include Danaher, Agilent, GE-Healthcare, Waters, Thermo Fisher Scientific, Shimadzu, Hitachi and JEOL. In the microbiology market, Bruker CALID competes with Biomerieux. In molecular diagnostics, Bruker CALID competes with a number of companies offering products for infectious disease diagnostics. Bruker CALID also competes with a variety of companies that offer molecular spectrometry-based systems, including Thermo Fisher Scientific, PerkinElmer, Agilent, Foss, ABB Bomem, Buchi, Shimadzu and Jasco. Bruker CALID's CBRNE detection customers are highly fragmented, and it competes with a number of companies in this area, of which the most significant competitor is Smiths Detection.

BSI Nano Segment Competition

The BSI Nano Segment competes with companies that offer analytical X-ray solutions, OES systems, AFM and SOM systems and optical fluorescence systems, primarily Rigaku, Oxford Instruments, Agilent, Thermo Fisher Scientific, Ametek's Spectro and Edax divisions, PANalytical, Park Systems, Olympus, Nikon, Zeiss and Danaher's Leica business.

BEST Segment Competition

BEST competes with Luvata, Western Superconducting Technologies Co., Ltd. (WST), and Jastec Co., Ltd. in low temperature superconducting materials. BEST further competes with Zanon, Mitsubishi Electric and AES

in the development and supply of accelerator cavities, with Thales, Toshiba and CPI International in the development and supply of radio frequency couplers, with Mitsubishi Heavy Industries in the development and supply of superconducting accelerator modules and with AES and Thales for electron linear accelerators.

Manufacturing and Supplies

Several of our manufacturing facilities are certified under ISO 9001:2008 and ISO 13485, international quality standards. We manufacture and test our magnetic resonance products at our facilities in Faellanden, Switzerland; Wissembourg, France; and Karlsruhe, Germany. We manufacture and test our preclinical imaging products at our facilities in Ettlingen, Germany; Wissembourg, France; Kontich, Belgium; and Faellanden, Switzerland. We manufacture and test our mass spectrometry products at our facilities in Bremen, Germany. We principally manufacture and test our molecular spectroscopy products, including CBRNE detection products, at our facilities in Ettlingen, Germany. We manufacture and test our X-ray, OES and AFM products at our facilities in Penang, Malaysia; Karlsruhe, Germany; Berlin, Germany; Santa Barbara, California, U.S.A.; and Migdal Ha'Emek, Israel. We manufacture and test the majority of our energy and superconducting products at our facilities in Hanau, Germany; Bergisch Gladbach, Germany; Perth, Scotland; and Carteret, New Jersey, U.S.A. Manufacturing processes at our facilities in Europe, Israel and California, U.S.A. include all phases of manufacturing, such as machining, fabrication, subassembly, system assembly, and final testing. Our other facilities primarily perform high-level assembly, system integration and final testing. We typically manufacture critical components in-house to ensure key competence and outsource to third party manufacturers non-critical components.

We purchase materials and components from various suppliers that are either standard products or built to our specifications. We obtain some of the components included in our products from a limited group of suppliers or from a single-source supplier for items such as charge coupled device area detectors, X-ray tubes, robotics, infrared optics and others. BEST has an ongoing collaboration and a joint technology development agreement with Allegheny Technologies Incorporated to advance state-of-the-art niobium-based superconductors, including those used in MRI magnets for the medical industry, and preclinical MRI magnets used in the life-science tools industry.

Research and Development

We commit substantial capital and resources to internal and collaborative research and development projects in order to provide innovative products and solutions to our customers. We conduct research primarily to enhance system performance and improve the reliability of existing products, and to develop revolutionary new products and solutions. Our research and development efforts are conducted for the relevant products within each of the operating segments, as well as in collaboration with others on areas such as microfluidics, automation and workflow management software. We have been the recipient of government grants from Germany and the United States for various projects related to early-stage research and development. We have generally retained, at a minimum, non-exclusive rights to any items or enhancements we develop under these grants. The German government requires that we use and market technology developed under grants in order to retain our rights to the technology. We have also accepted some sponsored research contracts from private sources.

BSI Life Science Segment Research and Development

The research and development performed in the Bruker BioSpin Group and in the CALID Group is primarily conducted at our facilities in Bremen and Ettlingen, Germany; Faellanden, Switzerland and Wissembourg, France. The Bruker BioSpin Group maintains technical competencies in core magnetic resonance technologies and single- and multimodal imaging technologies and capabilities, including NMR, EPR, MRI, MPI, PET and CT. The most recent technological innovations included Bruker's ultra-high-field class in the NMR and MRI product line and the benchtop Fourier NMR platform. In 2021, we achieved major technical milestones in automatic diagnosis and calibration capabilities of our systems, enabling new services like predictive maintenance.

The Bruker CALID Group maintains technical competencies in core mass spectrometry technologies and capabilities, including: MALDI, ESI and EI/CI ion source, TOF, TOF/TOF, ion traps, MRMS, quadrupole and IMS analyzers and bioinformatics. Recent projects include the innovative timsTOF mass spectrometer for separation and analysis of unresolved compounds and conformations. The Bruker CALID Group also maintains technical competencies in core vibrational spectroscopy technologies and capabilities, including FT-IR, NIR and Raman.

BSI Nano Segment Research and Development

The research and development performed in the BSI Nano Segment is primarily conducted at our facilities in Karlsruhe, Berlin and Leipzig, Germany; Penang, Malaysia; Madison, Wisconsin, Eden Prairie, Minnesota, San Jose and Santa Barbara, California, and St. Louis, Missouri, U.S.A. The BSI Nano Segment maintains technical competencies in core X-ray technologies and capabilities, including detectors used to sense X-ray and X-ray diffraction patterns, X-ray sources and optics that generate and focus the X-rays, robotics and sample handling equipment that holds and manipulates the experimental material, and software that generates the structural data. Recent projects include fluorescence microscopy with simultaneous, all-optical stimulation and imaging platforms for optogenetics neuroscience research and light sheet cell microscopy systems, which enable brain research and high-resolution live cell research. The BSI Nano Segment also has competencies in AFM technology, which involve sub-angstrom level position and motion control, as well as sub-pico newton force control. The BSI Nano Segment technologies also include 3D optical inference-based microscopy, stylus profilometry, tribology testing, nano-indentation, optical fluorescence two-photon microscopy, multipoint scanning microscopy, high-speed, 3D super-resolution florescence microscopy and spatial biology and single-cell targeted proteomics technologies. Recent innovations include elemental analyzer systems for advanced applications and research and simultaneous, all-optical stimulation and imaging platforms for neuroscience applications.

BEST Segment Research and Development

The research and development performed in the BEST Segment is primarily conducted at our facilities in Hanau and Bergisch Gladbach, Germany; and Carteret, New Jersey, U.S.A. BEST maintains technical competencies in the production and development of low and high temperature superconducting materials and devices.

Intellectual Property

Our intellectual property consists of patents, copyrights, trade secrets, know-how, and trademarks. Protection of our intellectual property is a strategic priority for our businesses because of the length of time and expense associated with bringing new products through the development process and to the marketplace. We have a substantial patent portfolio, and we intend to file additional patent applications as appropriate. We believe our owned and licensed patent portfolio provides us with a competitive advantage. This portfolio permits us to maintain access to a number of key technologies. We license our owned patent rights where appropriate. We intend to enforce our patent rights against infringers, if necessary. The patent positions of life sciences tools companies involve complex legal and factual questions. As a result, we cannot predict the enforceability of our patents with certainty. In addition, we are aware of the existence from time to time of patents in certain countries, which, if valid, could impair our ability to manufacture and sell products in these countries.

We also rely upon trade secrets, know-how, trademarks, copyright protection and licensing to develop and maintain our competitive position. We generally require the execution of confidentiality agreements by our employees, consultants, and other scientific advisors. These agreements provide that all confidential information made known during the course of a relationship with us will be held in confidence and used only for our benefit. In addition, these agreements provide that we own all inventions generated during the course of the relationship.

Government Contracts

We are a party to various government contracts. Under some of these government contracts, the government may receive license or similar rights to intellectual property developed under the contract. However, under government contracts we enter we generally receive at least non-exclusive rights to any items or technologies we develop. Although we transact business with various government agencies, we believe that no government contract is of such magnitude that a renegotiation of profits or termination of the contract or subcontracts at the election of the government would have a material adverse effect on our financial results.

Government Regulation

We are required to comply with federal, state, and local environmental protection regulations. We do not expect this compliance to have a significant impact on our capital spending, earnings or competitive position.

Our products are subject to the U.S. Food and Drug Administration's, or the FDA's, requirements for electronic radiation emitting products, which include requirements related to record-keeping and reporting; labeling; notification; product repairs, replacements and refunds; importations; and performance standards. For example, prior to introducing a product in the United States, our Bruker AXS subsidiary provides notice to the FDA in the form of a Radiation Safety Initial Product Abbreviated Report, which provides identification information and operating characteristics of the product. If the FDA finds that the report is complete, it provides approval in the form of what is known as an accession number. Bruker AXS may not market a product until it has received an accession number. In addition, Bruker AXS submits an annual report to the FDA that includes the radiation safety history of all products it sells in the United States. Bruker AXS is required to report to the FDA incidents of accidental exposure to radiation arising from the manufacture, testing, or use of any of its products. Bruker AXS also reports installations of its products to state government regulatory agencies responsible for the regulation of radiation emitting devices. For sales in Germany, Bruker AXS registers each system with the local authorities. In some countries where Bruker AXS sells systems, Bruker AXS uses the license we obtained from the federal authorities in Germany to assist it in obtaining a license from the country in which the sale occurs.

Our Bruker AXS subsidiary possesses low-level radiation materials licenses from the local radiation safety authority, Gewerbeaufsichtsamt Karlsruhe, for its facility in Karlsruhe, Germany; and from the local radiation safety authority, Kanagawa Prefecture, for its facility in Yokohama, Japan, as well as from various other countries in which it sells its products. Our Bruker Daltonics subsidiary possesses low-level radiation licenses for facilities in Billerica, Massachusetts and Leipzig, Germany. The U.S. Nuclear Regulatory Commission also has regulations concerning the exposure of our employees to radiation.

Certain of our clinical products are subject to regulation as medical devices in the United States by the FDA and by similar regulatory bodies in other countries where such products are sold. The regulatory requirements imposed by the FDA and other regulatory bodies govern a wide variety of product-related activities, from quality management, design and development to labeling, manufacturing, promotion, sales, and distribution. As such, we continually invest in our manufacturing infrastructure to gain and maintain certifications and registrations necessary for the relevant level of regulatory clearance. We also are required to maintain processes and systems for medical device product submissions. For example, our MALDI Biotyper CA system is subject to regulation by the FDA as a medical device and requires FDA premarket review and clearance via the 510(k) premarket notification process and our IVD-CE Certified MALDI BioTyper system is subject to regulation in the European Union under the provisions of Directive 98/79/EC. In addition, certain product changes, including changes to the product indications or label claims, could trigger the requirement for a new 510(k) or other FDA or foreign regulatory premarket submission. The process of obtaining marketing approval, authorization, or clearance from the FDA and comparable foreign regulatory authorities for new products, or for enhancements or modifications to existing products, could take a significant amount of time, require the expenditure of substantial financial and other resources, and require rigorous and expensive pre-clinical and clinical testing. Additionally, the FDA or

comparable foreign regulatory authorities could impose limitations on the indications for use of our products. Should we pursue an FDA or comparable foreign regulatory authority clearance, authorization, or approval for a new device or device modification, we cannot be certain that we will receive required clearance, authorization, or approval on a timely basis or at all. The failure to receive clearance, authorization, or approval for significant new products or modifications to existing products on a timely basis or at all could have a material, adverse effect on our financial condition and results of operations.

Both before and after a medical device product is commercially released, we have ongoing responsibilities under FDA and foreign regulations. For example, we are required to comply with the FDA's Quality System Regulation, which sets forth the good manufacturing requirements for medical devices. These include requirements related to design controls, production and process controls, process validation, purchasing controls, supplier oversight, complaint handling and investigation, corrective and preventative actions, and record-keeping. In addition, the FDA's medical device reporting regulation requires us to provide information to the FDA whenever we become aware that there is evidence that reasonably suggests that a device may have caused or contributed to a death or serious injury or, that a malfunction occurred which would be likely to cause or contribute to a death or serious injury upon recurrence. The FDA and comparable foreign regulatory authorities also regulate the promotion and marketing of medical devices and require that manufacturers only make promotional claims or statements that are consistent with the indications and labeling cleared, authorized, or approved by the FDA or other regulatory authorities. The FDA and comparable foreign regulatory authorities may take enforcement action against us, should the FDA determine we have engaged in "off-label" promotion or other violative marketing activities.

The European Union Directive will be replaced in May 2022 by the IVD Regulation (EU) 2017/746. The regime changes significantly with the new Regulation, which requires clinical evidence to demonstrate the claimed benefits and safety of the device in relation to its stated purpose, stricter classification and CE-marking requirements and ongoing post-market follow-up to ensure conformity. The Regulation requires new databases to be set up to track which devices are CE marked and to register clinical studies and post-market monitoring. In addition, tracing is enhanced by a Unique Device Identification (UDI) System and through requirements on other economic operators in the supply chain. Our products currently approved under the Directive, and not already placed on the market or put into service, must be recertified under the Regulation by May 2024.

Backlog

Our backlog consists of firm orders under non-cancellable purchase orders received from customers. Total system backlog as of December 31, 2021 and 2020 was approximately $2,077.2 million and $2,006.7 million, respectively. The increase in our backlog in 2021 when compared to 2020 is due to strengthening demand in our BSI order bookings as of December 31, 2021. We anticipate that approximately 70% of the backlog as of December 31, 2021 will be recognized in revenue in 2022. We generally experience variable and fluctuating revenues in the first three quarters of the year, while our fourth quarter revenues have historically been stronger than the rest of the year. As a result, backlog on any particular date can be indicative of our short-term revenue performance but is not necessarily a reliable indicator of long-term revenue performance.

Human Capital

We are committed to enabling scientists to make breakthrough discoveries and develop new applications that improve the quality of human life. Our employees are a critical component of that mission. We endeavor to attract, develop and retain top talent by offering our employees a challenging but rewarding work experience, as well as competitive compensation and benefits. Further, we strive to create a work environment that promotes integrity, respect and trust among our employees.

As of December 31, 2021 and 2020, we had approximately 7,765 and 7,400 full-time employees worldwide, respectively. Of these employees, approximately 1,230 and 1,180 were located in the United States at December 31, 2021 and 2020, respectively. Our senior leadership team is 75% male and 25% female.

The table below provides our employees by functional area.

	Number of Employees	
	2021	2020
Production and distribution	3,690	3,570
Selling and marketing	1,900	1,770
General and administrative	885	825
Research and development	1,290	1,235
Total	7,765	7,400

Diversity, Talent Retention and Development

Bruker has initiatives and programs to attract, develop and retain our talent tailored to specific employee populations and geographies, including leadership development programs, technical training, and other skill-based training.

We have an established global performance management process in which managers provide regular feedback and coaching to develop employees. Throughout the year, managers and employees engage in annual objective setting, mid-year reviews of performance as well as a year-end performance evaluation. We also have certain employee populations piloting the use of our Talent Management system to capture career development goals as well as certifications achieved, projects completed, languages spoken and mobility preferences in order to promote internal career opportunities.

Additionally, we are focused on promoting diversity across our organization. Our people come from diverse backgrounds all over the world. We are united by a shared purpose—innovation with integrity. We hope that the work we do every day inspires and impacts global scientific research—and our diverse and dynamic team of people inspire each other to achieve their full potential. We build cross-functional teams to support collaboration and enable the creation of new ideas by actively identifying and recruiting talent with diverse professional experiences, skills and backgrounds including from diverse gender, racial and ethnic backgrounds.

Employee Health and Safety

Ensuring the safety and well-being of our employees is a top priority for Bruker. In response to the COVID-19 pandemic, we implemented additional health and safety protocols at our sites including enhanced cleaning procedures and social distancing requirements. We implemented a remote work policy for all employees whose job allowed them to do so. Additional personal protective equipment (PPE) was provided to employees, and work procedures were modified to reduce risk. Also, we engaged with a vendor to offer at home COVID-19 testing kits for those employees who needed to travel to customer sites as well as implemented an enhanced Employee Assistance Program to promote mental and physical wellness. We continue to refine these measures as new information about the virus becomes available.

Available Information

We maintain a website at *www.bruker.com*. We make available on our website documents describing our corporate governance and our Code of Conduct. We are not including the information contained on our website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge through our website our annual reports on Form 10-K, our proxy statements, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports filed with or furnished to the SEC pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. The SEC also maintains an internet site that contains reports, proxy and information statements and other information regarding our filings at *www.sec.gov*.

ITEM 1A RISK FACTORS

The following risk factors should be considered in conjunction with the other information included in this Annual Report on Form 10-K. This report may include forward-looking statements that involve risks and uncertainties. In addition to those risk factors discussed elsewhere in this report, we identify the following risk factors, which could affect our actual results and cause actual results to differ materially from those in the forward-looking statements.

Risk Factor Summary

Our business is subject to numerous risks and uncertainties, including those described in Item 1A *"*Risk Factors.*"* These risks include, but are not limited to, the following:

- Our financial condition and results of operations for fiscal 2022 may continue to be adversely affected by the COVID-19 pandemic;
- Supply chain issues, including increasing demand for certain components used in our products and production delays, has and could continue to result in significant additional costs and manufacturing inefficiencies, which could adversely impact our revenue, increase our manufacturing costs and have a material adverse effect on our operating results.
- Unfavorable economic or political conditions in the countries in which we operate may have an adverse impact on our business results or financial condition;
- We derive a significant portion of our revenue from international sales and are subject to the operational risks of doing business in foreign countries;
- Adverse global economic conditions, geopolitical tensions and other conditions that impact our increasingly global operations could have a negative effect on our business, results of operations and financial condition and liquidity.
- If our products fail to achieve and sustain sufficient market acceptance across their broad intended range of applications, we will not generate expected revenue;
- Our products compete in markets that are subject to rapid technological change, and one or more of the technologies underlying our products could be made obsolete by new technology;
- If investment in life and material science research spending declines, our ability to generate revenue may suffer;
- Any reduction in the capital resources or government funding of our customers could reduce our sales and impede our ability to generate revenue;
- Disruptions at any of our manufacturing facilities could adversely affect our business;
- In addition to the risks applicable to our life science and materials analysis products, our CBRNE detection products are subject to a number of additional risks, including lengthy product development and contract negotiation periods and certain risks inherent in long-term government contracts;
- Our debt may adversely affect our cash flow and may restrict our investment opportunities or limit our activities;
- The transition away from LIBOR may adversely affect our cost to obtain financing;
- If we lose our strategic partners, our marketing and sales efforts could be impaired;
- We face risks related to sales through distributors and other third parties that we do not control, which could harm our business;
- Our operations are dependent upon a limited number of suppliers and contract manufacturers;

- Supply shortages and increasing prices of raw materials could adversely affect the gross profit of the Bruker BioSpin Group and the BEST Segment;
- If we are unable to effectively protect our intellectual property, third parties may use our technology, which would impair our ability to compete in our markets;
- We may be involved in lawsuits to protect or enforce our patents that are brought by us which could be expensive and time consuming and, if determined adversely, could adversely affect our patent position;
- Our manufacture and sale of products could lead to product liability claims for which we could have substantial liability;
- We are subject to environmental laws and regulations, which may impose significant compliance or other costs on us; and
- We operate as an entrepreneurial, decentralized company, which presents both benefits and certain risks. In particular, significant growth in a decentralized operating model may put strain on certain business group resources and our corporate functions, which could materially and adversely affect our business, financial condition and results of operations.

Risks Related to Our Business and Industry

Our financial condition and results of operations for fiscal 2022 may continue to be adversely affected by the COVID-19 pandemic.

The impact of the worldwide COVID-19 pandemic has been and will likely continue to be extensive in many geographies and aspects of society. The pandemic has resulted in and will likely continue to result in disruptions to the global economy, as well as businesses, supply chains and capital markets around the world.

Impacts to our business have included temporary closures of many of our government and university customers and our suppliers, disruptions or restrictions on our employees' and customers' ability to travel, and delays in product installations or shipments to and from affected countries. In an effort to halt the outbreak of COVID-19, a number of countries, including the United States, implemented and some continue to implement significant restrictions on travel, shelter in place or stay at home orders, and business closures. While some of these restrictions were loosened in certain jurisdictions, some markets have returned to restrictions in the face of increases in new COVID-19 cases, particularly as more contagious strains of the virus emerge. Many of our employees in jurisdictions in which we have significant operations continue to work remotely. In addition, certain Asia Pacific geographies where we operate are continuing to experience significant disruptions relating to COVID-19. Much of the commercial activity in sales and marketing, and customer demonstrations and applications training, is still either being conducted remotely or postponed. Even where customers have re-opened their sites, some still operate at productivity levels that are below pre-pandemic levels in an effort to accommodate safety protocols and as a result of pandemic-related supply chain disruptions. Any resurgence of the virus or the emergence of new strains of the virus, particularly any new strains which are more easily transmitted or which are resistant to existing vaccines, may require us or our customers to close or partially close operations once again. These travel restrictions, business closures and operating reductions at Bruker, our customers, our distributors, and/or our suppliers have in the past adversely impacted and may continue to adversely impact our operations worldwide, including our ability to manufacture, sell or distribute our products, as well as cause temporary closures of our foreign distributors, or the facilities of suppliers or customers. Further, global supply chains, including for semiconductor chips, components and raw materials such as copper, continue to be disrupted, causing shortages, which has impacted our ability to manufacture and supply our products. We could also experience increased compensation expenses associated with employee recruiting and employee retention to the extent employment opportunities continue to multiply post-pandemic, causing the search for and retention of talent to become more competitive. This disruption of our employees, distributors, suppliers and customers has historically impacted and may continue to impact our global sales and future operating results.

In September 2021, President Biden issued an Executive Order requiring certain COVID-19 precautions for government contractors and their subcontractors, including mandatory employee vaccination (subject to medical and religious exemptions). In November 2021, the Department of Labor's Occupational Safety and Health Administration, or OSHA, issued an Emergency Temporary Standard, or ETS, requiring that all employers with at least 100 employees ensure that their employees are fully vaccinated for COVID-19 or obtain a negative COVID-19 test at least once a week. The Executive Order was preliminarily enjoined by several U.S. federal district courts, the U.S. Supreme Court preliminarily stayed the OSHA ETS in January 2022, and OSHA subsequently withdrew the ETS. While we are not currently subject to any vaccine mandate, any requirement to mandate COVID-19 vaccination of our workforce or require our unvaccinated employees to be tested weekly could result in employee attrition and difficulty securing future labor needs and may have an adverse effect on future profit margins. In addition, any requirement to impose such obligations on our suppliers who are deemed government contractors and their subcontractors could impact the price and continuity of supply of raw materials and our results of operations and financial condition could be adversely affected. It continues to be our policy to encourage each of our employees to be fully vaccinated against COVID-19.

We are continuing to monitor and assess the ongoing effects of the COVID-19 pandemic on our commercial operations in 2022. However, we cannot at this time accurately predict what effects these conditions will ultimately have on our operations due to uncertainties relating to the severity of the disease, including the impact of any resurgence of the virus, the continued emergence of new strains of the virus, the effectiveness and availability of vaccines, the willingness of individuals to receive vaccines, (including to protect against any new strains of the virus), and the length or severity of travel restrictions, business closures, and other safety and precautionary measures imposed by the governments of impacted countries. The pandemic has also adversely affected the economies and financial markets of many countries, which has affected and may continue to affect demand for our products and our operating results.

The preparation of the consolidated financial statements requires us to make estimates, judgments and assumptions that may affect the reported amounts of assets, liabilities, equity, revenues and expenses and related disclosure of contingent assets and liabilities. We evaluate estimates, judgments and methodologies on an ongoing basis. Changes in estimates are recorded in the period in which they become known. We base estimates on historical experience and on various other assumptions that we believe are reasonable, the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity and the amount of revenues and expenses. The full extent to which the COVID-19 pandemic will directly or indirectly impact future business, results of operations and financial condition, including sales, expenses, reserves and allowances, manufacturing, research and development costs and employee-related amounts, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19, the continued emergence of new strains of the virus, the effectiveness and availability of vaccines, the willingness of individuals to receive vaccines (including to protect against any new strains of the virus), and the actions taken to contain or treat the virus, as well as the economic impact on local, regional, national and international customers and markets. We have made estimates of the impact of COVID-19 within the consolidated financial statements and there may be changes to those estimates in future periods. Actual results may differ from management's estimates if these results differ from historical experience.

Supply chain issues, including increasing demand for certain components used in our products and production delays, has and could continue result in significant additional costs and manufacturing inefficiencies, which could adversely impact our revenue, increase our manufacturing costs and have a material adverse effect on our operating results.

We have experienced supply chain interruptions as a result of the COVID-19 pandemic, general global economic conditions, a tight labor market and other factors, including natural events and disasters. Various factors, including increased demand for certain components and production delays, are contributing to shortages of certain components used in our products and increased difficulties in our ability to obtain a consistent supply of materials at stable pricing levels. Supply shortages and longer lead times for components used in our products,

including limited source components, can result in significant additional costs and inefficiencies in manufacturing. A shortage of key components may cause a significant disruption to our production activities, which could have a substantial adverse effect on our financial condition or results of operations. If we are unsuccessful in resolving any such component shortages in a timely manner, we could experience a significant adverse impact on the timing of our revenue, a possible loss of revenue, or an increase in manufacturing costs, any of which could have a material adverse impact on our operating results.

Unfavorable economic or political conditions in the countries in which we operate may have an adverse impact on our business results or financial condition.

Our businesses and results of operations are affected by international, national and regional economic and political conditions. Our businesses or financial results may be adversely impacted by unfavorable changes in economic or political conditions in the countries and markets in which we operate, including, among others, adverse changes in interest rates or tax rates, volatility in financial and commodity markets, contraction in the availability of credit in the marketplace, geopolitical tensions and changes in capital spending patterns.

Our revenue from U.S. operations represented approximately 25% and 23% of total consolidated revenue for fiscal 2021 and 2020, respectively. Our revenue from operations in Europe represented approximately 38% of total consolidated revenue for both fiscal years 2021 and 2020. Our revenue from operations in the Asia Pacific region represented approximately 30% and 32% of total consolidated revenue in each of the corresponding periods. Economic factors that could adversely influence demand for our products include the impact of geopolitical tensions and any related sanctions implemented, continued uncertainty about global economic conditions, including as a result of the pandemic, leading to ongoing reductions in investment, changes in government spending levels and/or priorities, the size and availability of government budgets, customers' and suppliers' access to credit and other macroeconomic factors affecting government, academic or industrial spending behavior. Slower economic growth or a deterioration in economic conditions could result in a decrease in government funding for scientific research, a delay in orders from current or potential customers or a reduction in purchases of our products.

We cannot predict how changes in economic conditions or political instability will affect our customers and suppliers or how any negative impact on our customers and suppliers might adversely impact our business results or financial condition.

Adverse global economic conditions, geopolitical tensions and other conditions that impact our increasingly global operations could have a negative effect on our business, results of operations and financial condition and liquidity.

As a global company, our performance is affected by global economic conditions as well as geopolitical tensions and other conditions with global reach. In recent years, concerns about the global economic outlook have adversely affected market and business conditions in general. Macroeconomic weakness and uncertainty make it more difficult for us to manage our operations and accurately forecast revenue, gross margin and expenses. Geopolitical tensions, such as Russia's recent incursion into Ukraine, ongoing conflicts between the United States and China, tariff and trade policy changes, economic sanctions, increasing potential of conflict involving countries in Asia that are critical to our supply chain operations, such as Taiwan and China, have resulted in increasing global tensions and create uncertainty for global commerce. As a result of economic sanctions on Russia we may face disruptions to our operations within Russia, among other challenges. Sustained or worsening of global economic conditions and increasing geopolitical tensions may increase our cost of doing business, materially disrupt our supply chain operations, cause our customers to reduce or delay spending and intensify pricing pressures. Any or all of these factors could negatively affect demand for our products and our business, financial condition and result of operations.

We derive a significant portion of our revenue from international sales and are subject to the operational risks of doing business in foreign countries.

International sales account, and are expected to continue to account, for a significant portion of our total revenues. Our revenue from non-U.S. operations represented approximately 75% and 77% of our total consolidated revenue for fiscal 2021 and 2020, respectively. Our international operations are, and will continue to be, subject to a variety of risks associated with conducting business internationally, many of which are beyond our control. These risks, which may adversely affect our ability to achieve and maintain profitability and our ability to sell our products internationally, include:

- changes in foreign currency translation rates;
- changes in regulatory requirements;
- legislation and regulation, including tariffs, relating to the import or export of high technology products, which legislation and regulation may conflict with U.S. law and may have an adverse impact on our business results;
- the imposition of government controls;
- political and economic instability, including the impact of COVID-19, the possibility of an economic recession in certain key markets such as Germany, international hostilities and resulting sanctions, acts of terrorism and governmental restrictions, inflation, trade relationships and military and political alliances;
- costs and risks of deploying systems in foreign countries;
- compliance with export laws and controls and trade embargoes in multiple jurisdictions, which may conflict with U.S. law and may have an adverse impact on our business results;
- limited intellectual property rights;
- the burden of complying with a wide variety of complex foreign laws and treaties, including unfavorable labor regulations, specifically those applicable to our European operations; and
- compliance with U.S. and local laws affecting the activities of U.S. companies abroad, including the United States Foreign Corrupt Practices Act, or FCPA, and local anti-bribery laws.

The United States has implemented tariffs on certain imported goods. These additional tariffs could include items imported by us from China or other countries. In addition, China has imposed tariffs on a wide range of American products in retaliation for these new American tariffs. As a result, there is a concern that the imposition of additional tariffs by the United States could result in the adoption of additional tariffs by China and other countries as well. Any resulting trade war could negatively impact the global market for scientific instruments and could have a significant adverse effect on our business. The imposition of tariffs on items imported by us from China or other countries could increase our costs and could result in lowering our gross margin on products sold. Conversely, China imposing tariffs on items that we export to China could adversely impact our customers' ability to purchase our products and our competitive position in China or increase our costs, which could have a material adverse effect on our business and results of operations.

We must also comply with the European Union General Data Protection Regulation (GDPR) and other similar regulations in other countries. The goal of the regulation is to increase individual rights and protections for personal data located in or originating from the European Union. GDPR is extraterritorial in that it applies to all business within the European Union and any business located outside of the European Union that processes personal data of individuals located within the European Union. There are significant fines associated with non-compliance. In 2020, the Court of Justice of the European Union invalidated the EU-US Privacy Shield Framework, removed a key mechanism for transfers of personal data from the European Union to the United States and altered the international data transfer under GDPR. The decision has caused uncertainty for multinational companies about how they can properly transfer personal data from the EU to the US and the cost and effort to comply with such decision could cause disruption of data transfers and have a material adverse effect on our business.

While the impact of these factors is difficult to predict, any one or more of these factors could adversely affect our operations in the future.

Our competitive position and reported financial results may be adversely affected when we exchange foreign currency received from international sales into U.S. Dollars and by fluctuations in currency exchange rates.

A significant portion of our business is conducted in currencies other than the U.S. Dollar, which is our reporting currency. As a result, currency fluctuations among the U.S. Dollar and the currencies in which we do business could cause the price of our products to be more or less competitive than our principal competitors' products. Currency fluctuations will increase or decrease our cost structure relative to those of our competitors, which could lessen the demand for our products and affect our competitive position. From time to time we enter into certain hedging transactions and/or option and foreign currency exchange contracts which are intended to offset some of the market risk associated with our sales denominated in foreign currencies. We cannot predict the effectiveness of these transactions or their impact upon our future operating results, and from time to time they may negatively affect our quarterly earnings.

In addition to the foreign currency exposure associated with differences between where our products are manufactured and sold by us and our competitors, our exposure to currency exchange rate fluctuations results from the currency translation exposure associated with the preparation of our consolidated financial statements, as well as from the exposure associated with transactions of our subsidiaries that are denominated in a currency other than the respective subsidiary's functional currency. While our financial results are reported in U.S. Dollars, the financial statements of many of our subsidiaries outside the U.S. are prepared using the local currency as the functional currency. During consolidation, these results are translated into U.S. Dollars by applying appropriate exchange rates. As a result, fluctuations in the exchange rate of the U.S. Dollar relative to the local currencies in which our foreign subsidiaries report could cause significant fluctuations in our reported results. Moreover, as exchange rates vary, revenue and other operating results may differ materially from our expectations. The effects of changes in currency exchange rates increased our 2021 revenue by approximately $43.3 million, or 2.2%, increased our 2020 revenue by approximately $29.4 million, or 1.4%, and decreased our 2019 revenue by approximately $50.3 million, or 2.7%. Adjustments resulting from financial statement translations are included as a separate component of shareholders' equity. In the years ended December 31, 2021 and 2020, we recorded net losses from currency translation adjustments of ($26.4) million and net gains of $22.0 million, respectively.

Additionally, to the extent monetary assets and liabilities, including cash and debt, are held in a different currency than the reporting subsidiary's functional currency, fluctuations in currency exchange rates may have a significant impact on our reported financial results, and may lead to increased earnings volatility. We may record significant gains or losses related to both the translation of assets and liabilities held by our subsidiaries into local currencies and the remeasurement of inter-company receivables and loan balances.

Goodwill, intangible assets and other long-lived assets are subject to impairment which could negatively impact our operating results.

We have recorded goodwill, intangible assets and other long-lived assets that must be periodically evaluated for potential impairment. We assess the realizability of the reported goodwill, intangible assets and other long-lived assets annually, as well as whenever events or changes in circumstances indicate that the assets may be impaired. These events or circumstances generally include operating losses or a significant decline in the earnings associated with the reporting unit these assets are reported within. A decline in our stock price and market capitalization may also cause us to consider whether goodwill, intangible assets and other long-lived assets may require an impairment assessment. Our ability to realize the value of these assets will depend on the future cash flows of the reporting unit in addition to how well we integrate the businesses we acquire. We did not record any impairment losses for the years ended December 31, 2021 and December 31, 2020. We recorded impairment losses of $1.7 million for the year ended December 31, 2019.

If our products fail to achieve and sustain sufficient market acceptance across their broad intended range of applications, we will not generate expected revenue.

Our business strategy depends on our ability to successfully commercialize a broad range of products based on our technology platforms, including magnetic resonance technology, pre-clinical imaging technology, mass spectrometry technology, X-ray technology, atomic force microscopy technology, ChipCytometry technology, stylus and optical metrology technology, fluorescence microscopy technology, infrared technology and superconducting magnet technologies for use in a variety of life science, chemistry and materials analysis applications. Some of our products have only recently been commercially launched and have achieved only limited sales to date. The commercial success of our products depends on obtaining and expanding market acceptance by a diverse array of industrial, academic, clinical, pharmaceutical, biotechnology, applied, medical research and governmental customers around the world. We may fail to achieve or sustain substantial market acceptance for our products across the full range of our intended applications or in one or more of our principal intended applications. Any such failure could decrease our sales and revenue. To succeed, we must convince substantial numbers of potential customers to invest in new systems or replace their existing techniques with techniques employing our systems. Limited funding available for capital acquisitions by our customers, as well as our customers' own internal purchasing approval policies, could hinder market acceptance of our products. Our intended customers may be reluctant to make the substantial capital investment generally needed to acquire our products or to incur the training and other costs involved with replacing their existing systems with our products. We also may not be able to convince our intended customers that our systems are an attractive and cost-effective alternative to other technologies and systems for the acquisition, analysis and management of molecular, cellular and microscopic information. Because of these and other factors, our products may fail to gain or sustain market acceptance.

Our products compete in markets that are subject to rapid technological change, and one or more of the technologies underlying our products could be made obsolete by new technology.

The market for discovery and analysis tools is characterized by rapid technological change and frequent new product introductions. Rapidly changing technology could make some or all of our product lines obsolete unless we are able to continually improve our existing products and develop new products. Because substantially all of our products are based on our technology platforms, including magnetic resonance technology, mass spectrometry technology, X-ray technology, atomic force microscopy technology, fluorescence microscopy technology, ChipCytometry technology, stylus and optical metrology technology and infrared technology, we are particularly vulnerable to any technological advances that would make these techniques obsolete as the basis for analytical systems in any of our markets. To meet the evolving needs of our customers, we must rapidly and continually enhance our current and planned products and services and develop and introduce new products and services. In addition, our product lines are based on complex technologies that are subject to rapid change as new technologies are developed and introduced in the marketplace. We may have difficulty in keeping abreast of the rapid changes affecting each of the different markets we serve or intend to serve. If we fail to develop and introduce products in a timely manner in response to changing technology, market demands or the requirements of our customers, our product sales may decline, and we could experience significant losses.

We face substantial competition. If we fail to compete effectively, it could harm our business results and materially impact the value of our company.

We face substantial competition in our industries and we expect that competition in all of our markets will increase further. Currently, our principal competition comes from established companies providing products using existing technologies that perform many of the same functions for which we market our products. A number of our competitors have expanded their market share in recent years through business combinations. Other companies also may choose to enter our fields in the future. Our competitors may develop or market products that are more effective or commercially attractive than our current or future products or that may render our products obsolete. Competition has in the past subjected, and is likely in the future to subject, our products to pricing pressure. Many of our competitors have more experience in the market and substantially greater financial,

operational, marketing and technical resources than we do, which could give them a competitive advantage in areas such as research and development, production, marketing and distribution. Our ability to compete successfully will depend, in part, on our ability to develop proprietary products that reach the market in a timely manner and are technologically superior to, less expensive than, or more cost-effective than, other currently marketed products.

If investment in life and material science research spending declines, our ability to generate revenue may suffer.

We are dependent, both directly and indirectly, upon general investment in life science research, particularly in the research and development budgets of the pharmaceutical and biotechnology industries, and in material science research as well as upon the financial condition and funding priorities of various governments and government agencies. Since our inception, both we and our academic collaborators and customers have benefited from various governmental contracts and research grants. Whether we or our academic collaborators will continue to be able to attract these grants depends not only on the quality of our products, but also on general spending patterns of public institutions.

Any reduction in the capital resources or government funding of our customers could reduce our sales and impede our ability to generate revenue.

A significant portion of our sales are capital purchases by our customers. The spending policies of our customers could have a significant effect on the demand for our products. These policies are based on a wide variety of factors, including the resources available to make purchases, the spending priorities among various types of equipment, policies regarding spending during recessionary periods and changes in the political climate.

Any changes in capital spending or changes in the capital budgets of our customers could significantly reduce demand for our products. The capital resources of our life science and other corporate customers may be limited by the availability of equity or debt financing. Any significant decline in research and development expenditures by our life science and material science customers could significantly decrease our sales. In addition, a substantial portion of our sales are to non-profit and government entities, which are dependent on government support for scientific research. Any decline in this support could decrease the ability of these customers to purchase our products.

Disruptions at any of our manufacturing facilities could adversely affect our business.

We have manufacturing facilities located in the United States, Europe, Israel and Malaysia. Many of our products are developed and manufactured at single locations, with limited alternate facilities. If we experience any significant disruption of those facilities for any reason, such as strikes or other labor unrest, power interruptions, fire, earthquakes, or other events beyond our control, we may be unable to manufacture the relevant products at previous levels or at all. A reduction or interruption in manufacturing could harm our customer relationships, impede our ability to generate revenues from our backlog or obtain new orders and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

If employees were to engage in a strike or other work stoppage or interruption, our business, results of operations, financial condition and liquidity could be materially adversely affected.

Many of our employees are represented by workers' councils and labor unions in certain jurisdictions, primarily in Germany and France. If disputes with these employees arise, or if our workers engage in a strike or other work stoppage or interruption, we could experience a significant disruption of, or inefficiencies in, our operations or incur higher labor costs, which could have a material adverse effect on our business, results of operations, financial condition and liquidity.

In addition to the risks applicable to our life science and materials analysis products, our CBRNE detection products are subject to a number of additional risks, including lengthy product development and contract negotiation periods and certain risks inherent in long-term government contracts.

Our CBRNE detection products are subject to many of the same risks associated with our life science products, including vulnerability to rapid technological change, dependence on mass spectrometry and other technologies and substantial competition. In addition, our CBRNE detection products and certain FT-IR products are generally sold to government agencies under long-term contracts. These contracts generally involve lengthy pre-contract negotiations and product development. We may be required to devote substantial working capital and other resources prior to obtaining product orders. As a result, we may incur substantial costs before we recognize revenue from these products. Moreover, in return for larger, longer-term contracts, our customers for these products often demand more stringent acceptance criteria. These criteria may also cause delays in our ability to recognize revenue from sales of these products. Furthermore, we may not be able to accurately predict in advance our costs to fulfill our obligations under these long-term contracts. If we fail to accurately predict our costs, due to inflation or other factors, we could incur significant losses. Also, the presence or absence of such contracts may cause substantial variation in our results of operations between fiscal periods and, as a result, our results of operations for any given fiscal period may not be predictive of our results for subsequent fiscal periods. The resulting uncertainty may have an adverse impact on our stock price.

We rely on information technology to support our operations and reporting environments. A security failure of that technology, including with respect to cybersecurity, could impact our ability to operate our businesses effectively, adversely affect our financial results, damage our reputation and expose us to potential liability or litigation.

We use information systems to carry out our operations and maintain our business records. Some systems are internally managed and some are maintained by third-party service providers. Our ability to conduct business could be materially and adversely affected if these systems or resources are compromised, damaged or fail. This could be a result of a cyber-incident, social engineering scam, hacking, phishing attempts, malware, natural disaster, hardware or software corruption, failure or error, telecommunications system failure, service provider error or failure, intentional or unintentional personnel actions or other disruption.

In the ordinary course of business, we collect and store sensitive data, including intellectual property, other proprietary information and personally identifiable information. Despite our security measures, our information technology and infrastructure may be vulnerable to cyber-attacks by hackers, including intrusions designed to access and exfiltrate information and to disrupt and lock-up access to systems for the purpose of demanding ransom payments, or breached due to employee error, malfeasance, or other disruptions. If this data is compromised, destroyed or inappropriately disclosed, it could have a material adverse effect, including damage to our reputation, loss of customers, significant expenses to address and resolve the issues, fines or litigation or other proceedings by affected individuals, business partners or regulatory authorities.

Our debt may adversely affect our cash flow and may restrict our investment opportunities or limit our activities.

As of December 31, 2021, we had outstanding an aggregate principal amount of debt totaling approximately $1,336.2 million. We also had the ability to borrow an additional $599.8 million available under our existing credit facility. Most of our outstanding debt is in the United States and there are substantial cash requirements in the United States to service debt interest obligations, fund operations, capital expenditures and our declared dividends and finance potential acquisitions or share repurchases. Our ability to satisfy our debt obligations and meet our other liquidity needs depends on our future operating performance and on economic, financial, competitive and other factors beyond our control. Our business may not generate sufficient cash flow to meet our debt obligations or provide sufficient funds for our other objectives. If we are unable to service our debt or obtain additional financing, we may be forced to delay strategic acquisitions, capital expenditures or research and development expenditures or suspend our dividend payments and share repurchases. We may not be able to obtain additional financing on terms acceptable to us or at all. Furthermore, a majority of our cash, cash

equivalents and short-term investments is generated from foreign operations, with $646.9 million, or 55.4% held by foreign subsidiaries as of December 31, 2021. We may incur significant tax consequences relocating cash from our foreign operations to the United States. Our financial condition and results of operations could be adversely impacted if we are unable to maintain a sufficient level of cash flow in the United States to address our funding requirements through cash from operations and timely repatriation of cash from overseas or other sources obtained at an acceptable cost.

Additionally, the agreements governing our debt require that we maintain certain financial ratios related to maximum leverage and minimum interest coverage and contain affirmative and negative covenants, including among others, timely provision of audited consolidated financial statements, restrictions on liens, indebtedness of the Company and its subsidiaries, asset sales, dividends and transactions with affiliates. Our ability to comply with these financial restrictions and covenants is dependent on our operations and performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control such as foreign currency translation rates and interest rates. Our failure to comply with any of these restrictions or covenants may result in an event of default under the applicable debt instrument, which could permit acceleration of the debt under the facility and require us to prepay the debt before its scheduled due date.

The transition away from LIBOR may adversely affect our cost to obtain financing.

On July 27, 2017, the U.K. Financial Conduct Authority announced that it intends to stop persuading or compelling banks to submit London Interbank Offered Rate, or LIBOR, rates. As a result of this change, certain LIBOR tenors and currencies were eliminated by the end of December 2021 with all other tenors and currencies of LIBOR to be eliminated by the end of June 2023. The Alternative Reference Rates Committee, a steering committee comprised of U.S. financial market participants, selected and the Federal Reserve Bank of New York started in May 2018 to publish the Secured Overnight Finance Rate, or SOFR, as an alternative to LIBOR. SOFR is a broad measure of the cost of borrowing cash in the overnight U.S. treasury repo market. At this time, it is impossible to predict whether the SOFR or another reference rate will become an accepted alternative to LIBOR. The manner and impact of this transition may materially adversely affect the trading market for LIBOR-based securities, which may result in an increase in borrowing costs under our credit agreements and term loan agreement. Any replacement for LIBOR may result in an effective increase in the applicable interest rate on our current or future debt obligations, including our credit agreements and term loan agreement.

Changes in our effective income tax rate could adversely affect our results of operations.

We are subject to income taxes in both the United States and various foreign jurisdictions and our domestic and international tax liabilities are largely dependent upon the distribution of income among these different jurisdictions. Various factors may have favorable or unfavorable effects on our effective income tax rate. These factors include interpretations of existing tax laws, the accounting for stock options and other share-based compensation, changes in tax laws and rates, future levels of research and development spending, changes in accounting standards, changes in the mix of earnings in the various tax jurisdictions in which we operate, the outcome of examinations by the U.S. Internal Revenue Service and other tax authorities, the accuracy of our estimates for unrecognized tax benefits and realization of deferred tax assets and changes in overall levels of pre-tax earnings. A change in tax laws, treaties or regulations, or their interpretation, of any country in which we operate could result in a higher tax rate on our earnings, which could result in a significant negative impact on our earnings and cash flow from operations. For example, the Biden administration has proposed significant changes to the tax laws of the United States, including proposals that would have the combined effect of increasing the U.S. taxation on profits earned outside the U.S. In addition to proposed tax law reforms in the United States, there are currently multiple initiatives for comprehensive tax reform underway in other key jurisdictions where we have operations. We assess the impact of various international tax reform proposals and modifications to existing tax treaties in all jurisdictions where we have operations that could result in a material impact on our income taxes. Beginning in 2022, the Tax Cuts and Jobs Act of 2017 (“TCJA”) eliminates the option to deduct research and development expenditures currently and requires taxpayers to amortize them over five years pursuant to the Internal Revenue Code. We cannot predict whether any other specific legislation that

would have an adverse impact on our income taxes will be enacted or the terms of any such legislation. However, if such proposals were enacted, or if modifications were to be made to certain existing treaties, the consequences could have a materially adverse impact on us, including increasing our tax burden, increasing costs of our tax compliance or otherwise adversely affecting our financial condition, results of operations and cash flows.

Various international tax risks could adversely affect our earnings and cash flows.

We are subject to international tax risks. We could be subject to double taxation on income related to operations in certain countries that do not have tax treaties with the country of the trading partner. In addition, we may have a higher effective income tax rate than that of other companies in our industry if losses incurred by one operating company are not available to offset the income of an operating company located in another country. Also, distributions of earnings and other payments received from our subsidiaries may be subject to withholding taxes imposed by the countries where they are operating or are incorporated. If these foreign countries do not have income tax treaties with the United States or the countries where our subsidiaries are incorporated, we could be subject to high rates of withholding taxes on these distributions and payments. Additionally, the amount of the credit that we may claim against our U.S. federal income tax for foreign income taxes paid or accrued is subject to many limitations which may significantly restrict our ability to claim a credit for all of the foreign taxes we pay.

We currently have reserves established for potential tax liabilities. If these reserves are challenged, and we are unable to successfully defend our tax positions, a negative impact to our cash flows could result.

The unpredictability and fluctuation of our quarterly results may adversely affect the trading price of our common stock.

Our revenues and results of operations have in the past and will in the future vary from quarter to quarter due to a number of factors, many of which are outside our control and any of which may cause our stock price to fluctuate. The primary factors that may affect us include the following:

- the timing of sales of our products and services;
- the timing of recognizing revenue and deferred revenue under U.S. GAAP;
- changes in our pricing policies or the pricing policies of our competitors;
- increases in sales and marketing, product development or administration expenses;
- the mix of services provided by us and third-party contractors;
- our ability to attain and maintain quality levels for our products; and
- costs related to acquisitions of technology or businesses.

We can experience quarter-to-quarter fluctuations in our operating results as a result of various factors, some of which are outside our control, such as:

- the timing of governmental stimulus programs and academic research budgets;
- the time it takes between the date customer orders and deposits are received, systems are shipped and accepted by our customers and full payment is received;
- foreign currency exchange rates;
- the time it takes for us to receive critical materials to manufacture our products;
- general economic conditions;
- the time it takes to satisfy local customs requirements and other export/import requirements;
- the time it takes for customers to construct or prepare their facilities for our products; and
- the time required to obtain governmental licenses.

These factors have in the past affected the amount and timing of revenue recognized on sales of our products and receipt of related payments and will likely continue to do so in the future. Accordingly, our operating results in any particular quarter may not necessarily be an indication of any future quarter's operating performance.

Historically we have higher levels of revenue in the fourth quarter of the year compared to the first, second and third quarters, which we believe is primarily the result of our customers' budgeting cycles. Quarter-to-quarter comparisons of our results of operations should not be relied upon as an indication of our future performance. It is likely that in some future quarters, our results of operations may be below the expectations of public market analysts and investors. In this event, the price of our common stock may fall.

The ownership of our shares is highly concentrated, which could cause or exacerbate volatility in our share price as well as have significant influence over us.

As of February 15, 2022, Laukien family members, including our Chairman, President and Chief Executive Officer ("CEO") Frank Laukien and his brother, Joerg Laukien, owned, in the aggregate, approximately 32% of our outstanding common stock. We may also repurchase shares in the future, which could further increase the concentration of our share ownership. Because of this reduced liquidity, the trading of relatively small quantities of shares by our shareholders could disproportionately influence the price of those shares in either direction. The price for our shares could, for example, decline precipitously if a large number of our shares were sold on the market without commensurate demand, as compared to a company with greater trading liquidity that could better absorb those sales without adverse impact on its share price. These stockholders may also exercise substantial influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This could have the effect of delaying or preventing a change in control of our company and will make some transactions difficult to accomplish without the support of these stockholders.

The loss of key personnel or an inability to attract and retain additional personnel could affect our ability to successfully grow our business.

We are highly dependent upon the continued service and performance of our CEO and other members of senior management and key finance, technical, scientific and production personnel, any of whom may cease their employment with us at any time with minimal advance notice. Because the expertise of these individuals is highly specific and takes years to develop, we face intense competition for these individuals from many other companies. The loss of one or more of our key employees may significantly delay or prevent the achievement of our business objectives, and our failure to attract and retain suitably qualified individuals or to adequately plan for succession could have an adverse effect on our ability to implement our business plan.

Dividends on our common stock could be reduced or eliminated in the future.

In recent years, we have paid dividends on our common stock. In February 2022, we announced that our Board of Directors ("Board") had declared a quarterly dividend of $0.05 per share that, will be payable in March 2022. There is no guarantee that such dividends will continue indefinitely. In the future, our Board may determine to reduce or eliminate our common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Risks Related to Our Dependence on Third Parties

If we lose our strategic partners, our marketing and sales efforts could be impaired.

A substantial portion of our sales of selected products consists of sales to third parties who incorporate our products into their systems. These third parties are responsible for the marketing and sales of their systems. We have little or no control over their marketing and sales activities or how they use their resources. Our present or future strategic partners may or may not purchase sufficient quantities of products from us or perform appropriate marketing and sales activities. In addition, if we are unable to maintain our relationships with strategic partners, our businesses may suffer. Failures by our present or future strategic partners, or our inability to maintain

existing or enter into new arrangements with strategic partners for product distribution, could materially impede the growth of our businesses and our ability to generate sufficient revenue and profits.

We face risks related to sales through distributors and other third parties that we do not control, which could harm our business.

We sell some products through third party agents, including distributors and value-added resellers. This exposes us to various risks, including competitive pressure, concentration of sales volumes, credit risks, and compliance risks. We may rely on one or a few key distributors for a product or market, and the loss of these distributors could reduce our revenue and net earnings. Distributors may also face financial difficulties, including bankruptcy, which could harm our collection of accounts receivable. Risks related to our use of distributors may reduce sales, increase expenses, and weaken our competitive position. Moreover, violations of the FCPA or similar anti-bribery laws by distributors or other third-party agents could materially and adversely impact our business, reputation and results of operations.

Dependence on contract manufacturing may adversely affect our ability to bring products to market and damage our reputation.

As part of our efforts to streamline our operations and reduce our operating costs, we outsource certain aspects of our manufacturing processes and continue to evaluate additional outsourcing. If our contract manufacturers fail to perform their obligations in a timely manner or at satisfactory quality levels, our ability to bring products to market and our reputation could suffer. For example, during a market upturn, our contract manufacturers may be unable to meet our demand requirements, which may preclude us from fulfilling our customers' orders on a timely basis. The ability of these manufacturers to perform is largely outside our control. Additionally, changing or replacing our contract manufacturers could cause disruptions or delays. Problems with outsourced manufacturing could result in lower revenues and unexecuted efficiencies, and adversely affect our financial condition and results of operations.

Our operations are dependent upon a limited number of suppliers and contract manufacturers.

We currently purchase components used in our products from a limited number of outside suppliers. Our reliance on a limited number of suppliers could result in time delays associated with redesigning a product due to an inability to obtain an adequate supply of required components and reduced control over pricing, quality and timely delivery. Any of these factors could adversely affect our revenues and profitability. In particular, our X-ray microanalysis business, which manufactures and sells accessories for electron microscopes, is partially dependent on cooperation from larger manufacturers of electron microscopes. Additionally, our elemental analysis business purchases certain optical detectors from a single supplier, PerkinElmer, Inc., the sole supplier of these detector components. Bruker CALID purchases detectors and power supplies from sole or limited source suppliers and its focal plane array detectors from a single supplier, Lockheed Martin Corporation. Similarly, Bruker BioSpin obtains various components from sole or limited source suppliers and BEST obtains various raw materials and uses key production equipment from sole or limited source suppliers or contract manufacturers. There are limited, if any, available alternatives to these suppliers. The existence of shortages of these components or the failure of delivery with regard to these components could have a material adverse effect upon our revenues and margins. In addition, price increases from these suppliers or contract manufacturers could have a material adverse effect upon our gross margins.

Because of the scarcity of some components, we may be unable to obtain an adequate supply of components, or we may be required to pay higher prices or to purchase components of lesser quality. Any delay or interruption in the supply of these or other components could impair our ability to manufacture and deliver our products, harm our reputation and cause a reduction in our revenues. In addition, any increase in the cost of the components that we use in our products could make our products less competitive and decrease our gross profits. We may not be able to obtain sufficient quantities of required components on the same or substantially the same terms. Additionally, consolidation among our suppliers could result in other sole source suppliers for us in the

future. Other events that could affect our ability to source materials, manufacture or distribute our products include fire, natural disaster or extreme weather or a pandemic and the impact of those events on our and our suppliers' and contract manufacturers' operations.

Supply shortages and increasing prices of raw materials could adversely affect our gross profit.

The last few years have seen periodic supply shortages and sharp increases in the prices for various raw materials, in part due to high demand from developing countries, which have been exacerbated by the COVID-19 pandemic. We rely on some of these materials for the production of our products. For example, in our superconducting magnet production, both for the horizontal and vertical magnet series, we rely on the availability of copper, steel and the metallic raw materials for traditional low-temperature superconducting wires. Similarly, our BEST Segment relies on the availability of niobium titanium for its production of low-temperature superconducting materials and devices. Higher prices for these commodities will increase the production cost of superconducting wires and superconducting magnets and may adversely affect gross profits.

The prices of copper and certain other raw materials used for superconductors have increased significantly over the last decade. Since copper is a main constituent of low temperature superconductors, this may affect the price of superconducting wire. This type of increase would have an immediate effect on the production costs of superconducting magnets and may negatively affect the profit margins for those products.

In order to operate superconducting magnets, we and our customers rely on liquid helium. Helium is controlled by the Federal Helium Reserve and is subject to price changes. Shortages of liquid helium associated with federal price controls or depleted natural reserves could drive increases in helium pricing and have an adverse impact on producing and operating our superconducting magnets, which may negatively impact the profit margins of those products.

Risks Related to Our Intellectual Property Rights

Our success depends on our ability to operate without infringing or misappropriating the proprietary rights of others.

Our commercial success depends on avoiding the infringement of other parties' patents and proprietary rights as well as avoiding the breach of any licenses relating to our technologies and products. Given that there may be patents of which we are unaware, particularly in the United States where patent applications are confidential, avoidance of patent infringement may be difficult. Various third parties hold patents which may relate to our technology, and we may be found in the future to infringe these or other patents or proprietary rights of third parties, either with products we are currently marketing or developing or with new products which we may develop in the future. If a third-party holding rights under a patent successfully asserts an infringement claim with respect to any of our current or future products, we may be prevented from manufacturing or marketing our infringing product in the country or countries covered by the patent we infringe, unless we can obtain a license from the patent holder. We may not be able to obtain such a license on commercially reasonable terms, if at all, especially if the patent holder is a competitor. In addition, even if we can obtain a license, it may be non-exclusive, which will permit others to practice the same technology licensed to us. We also may be required to pay substantial damages to the patent holder in the event of infringement. Under some circumstances in the United States these damages could include damages equal to triple the actual damages the patent holder incurs. If we have supplied infringing products to third parties for marketing by them or licensed third parties to manufacture, use or market infringing products, we may be obligated to indemnify these third parties for any damages they may be required to pay to the patent holder and for any losses the third parties may sustain themselves as the result of lost sales or license payments they are required to make to the patent holder. Any successful infringement action brought against us may also adversely affect marketing of the infringing product

in other markets not covered by the infringement action, as well as our marketing of other products based on similar technology. Furthermore, we will suffer adverse consequences from a successful infringement action against us even if the action is subsequently reversed on appeal, nullified through another action or resolved by settlement with the patent holder. The damages or other remedies awarded, if any, may be significant. As a result, any successful infringement action against us may harm our business.

If we are unable to effectively protect our intellectual property, third parties may use our technology, which would impair our ability to compete in our markets.

Our continued success will depend in significant part on our ability to obtain and maintain meaningful patent protection for our products throughout the world. We rely on patents to protect a significant part of our intellectual property and to enhance our competitive position. However, our presently pending or future patent applications may not issue as patents, and any patent previously issued to us may be challenged, invalidated, held unenforceable or circumvented. Furthermore, the claims in patents which have been issued, or which may be issued to us in the future, may not be sufficiently broad to prevent third parties from producing competing products similar to our products. In addition, the laws of various foreign countries in which we compete may not protect our intellectual property to the same extent as do the laws of the United States. Failure to obtain adequate patent protection for our proprietary technology could materially impair our ability to be commercially competitive.

In addition to patent protection, we also rely on the protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we generally seek to enter into confidentiality agreements with our employees, consultants and strategic partners upon the commencement of a relationship with us. However, we may not obtain these agreements in all circumstances. In the event of unauthorized use or disclosure of this information, these agreements, even if obtained, may not provide meaningful protection for our trade secrets or other confidential information. In addition, adequate remedies may not exist in the event of unauthorized use or disclosure of this information. The loss or exposure of our trade secrets and other proprietary information would impair our competitive advantages and could have a material adverse effect on our operating results, financial condition and future growth prospects. Furthermore, others may have, or may in the future independently develop, substantially similar or superior know-how and technology.

We may be involved in lawsuits to protect or enforce our patents that are brought by us which could be expensive and time consuming and, if determined adversely, could adversely affect our patent position.

In order to protect or enforce our patent rights, we may initiate patent litigation against third parties, and we may be similarly sued by others. We may also become subject to interference proceedings conducted in the patent and trademark offices of various countries to determine the priority of inventions. The defense and prosecution, if necessary, of intellectual property suits, interference proceedings and related legal and administrative proceedings is costly and diverts our technical and management personnel from their normal responsibilities. We may not prevail in any of these suits. An adverse determination of any litigation or defense proceedings could put our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments in the litigation. If securities analysts or investors perceive these results to be negative, it could have a substantial negative effect on the trading price of our common stock.

On September 25, 2019, in a complaint filed in the Düsseldorf, Germany, District Court, Carl Zeiss Microscopy GmbH, a subsidiary of Carl Zeiss AG (Zeiss), sued Luxendo GmbH (Luxendo), a subsidiary of Bruker Corporation, for infringement of a recently registered German utility model patent licensed to Zeiss pertaining to one specific Luxendo product category. We are vigorously defending against these claims.

Risks Related to Legal, Regulatory and Compliance

Our manufacture and sale of products could lead to product liability claims for which we could have substantial liability.

The manufacture and sale of our products expose us to product liability claims if any of our products cause injury or are found otherwise unsuitable during manufacturing, marketing, sale or customer use. In particular, if one of our CBRNE detection products malfunctions, this could lead to civilian or military casualties in a time of unrest, exposing us to increased potential for high-profile liability. If our CBRNE detection products malfunction by generating a false-positive to a potential threat, we could be exposed to liabilities associated with actions taken that otherwise would not have been required. Additionally, the nuclear magnetic resonance, research magnetic resonance imaging, Fourier transform mass spectrometry and certain electron paramagnetic resonance magnets of Bruker BioSpin utilize high magnet fields and cryogenics to operate at approximately 4 Kelvin, the temperature of liquid helium. There is an inherent risk of potential product liability due to the existence of these high magnetic fields, associated stray fields outside the magnet, and the handling of the cryogens associated with superconducting magnets. In addition, our MALDI Biotyper product has an IVD-CE mark and U.S. FDA approval and is used for the identification of microorganisms. Misidentification or a false-negative of certain viruses, bacteria, yeasts or fungi could lead to inappropriate treatment for patients and could expose us to product liability claims.

A successful product liability claim brought against us in excess of, or outside the coverage of, our insurance coverage could have a material adverse effect on our business, financial condition and results of operations. We may not be able to maintain product liability insurance on acceptable terms, if at all, and insurance may not provide adequate coverage against potential liabilities.

We are subject to environmental laws and regulations, which may impose significant compliance or other costs on us.

Our manufacturing, product development and research and development operations and processes involve the controlled use of certain hazardous materials. In addition, we own and/or lease a number of facilities, some of which have been in operation for many decades, where we or others may have used substances or generated and disposed of wastes which are considered hazardous or may be considered hazardous in the future. We also have acquired various companies which historically may have used certain hazardous materials and which may have owned and/or leased facilities at which hazardous materials have been used. For all of these reasons, we are subject to federal, state, foreign, and local laws and regulations governing the use, manufacture, storage, transportation, handling, treatment, remediation, and disposal of hazardous materials and certain waste products. We have potential liability under these laws and regulations with respect to the remediation of past contamination in certain of the facilities we now own or lease. Additionally, in the future our facilities and the disposal sites owned by others to which we send or sent waste, may be identified as contaminated and require remediation. Accordingly, we may become subject to additional compliance costs or environmental liabilities which may be significant and could materially harm our results of operations or financial condition.

Specifically, we use controlled hazardous and radioactive materials in our business and generate wastes that are regulated as hazardous wastes under U.S. federal, and Massachusetts, California, New Jersey, Washington and Wisconsin state environmental and atomic energy regulatory laws and under equivalent provisions of law in those and other jurisdictions in which our research and manufacturing facilities are located. Our use of these substances and materials is subject to stringent, and periodically changing, regulation that can impose costly compliance obligations on us and has the potential to adversely affect our manufacturing activities. The risk of accidental contamination or injury from these materials cannot be completely eliminated. If an accident with these substances occurs, we could be held liable for any damages that result, in addition to incurring clean-up costs and liabilities, which can be substantial. Additionally, an accident could damage our research and manufacturing facilities resulting in delays and increased costs.

We are subject to existing and potential additional regulation and government inquiry, which can impose burdens on our operations and narrow the markets for our products.

We are subject, both directly and indirectly, to the adverse impact of existing and potential future government regulation of our operations and markets. For example, the exportation of our products is subject to U.S. and non-U.S. export control, sanctions, customs, import and anti-boycott laws and regulations, including, as applicable, the International Traffic in Arms Regulations, the Export Administration Regulations and the sanctions laws, regulations and executive orders administered and enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control, and other laws and regulations adopted by the governments or agencies of other countries relating to the same subject matter as the U.S. laws and regulations described above.

The failure to satisfy export control criteria or obtain necessary clearances could delay or prevent shipment of products, which could adversely affect our revenues and profitability. Failure by us, our employees or others working on our behalf to comply with these laws and regulations could result in administrative, civil or criminal liabilities, including suspension, debarment from bidding for or performing government contracts, or suspension of our export privileges, which could have a material adverse effect on us. We frequently team with international subcontractors and suppliers who are also exposed to similar risks. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Violations of these laws and regulations could materially adversely affect our brand, international growth efforts and business.

In addition, as a result of our international operations, we are subject to compliance with various laws and regulations, including the FCPA and local anti-bribery laws in the jurisdictions in which we do business (including some higher risk countries according to the Transparency International Corruption Index), which generally prohibit companies and their intermediaries or agents from engaging in bribery or making improper payments to foreign officials or their agents. The FCPA also requires proper record keeping and characterization of such payments in our reports filed with the SEC. Despite maintaining policies and procedures that require our employees to comply with these laws and our standards of ethical conduct, we cannot ensure that these policies and procedures will always protect us from intentional, reckless or negligent acts committed by our employees or third-party agents.

Moreover, the life sciences industry, which is the market for our principal products, has historically been heavily regulated. Given the evolving nature of this industry, legislative bodies or regulatory authorities may adopt additional regulation that adversely affects our market opportunities. Our business is also directly affected by a wide variety of government regulations applicable to business enterprises generally and to companies operating in the life sciences industry in particular.

Our products are subject to the FDA's requirements for electronic radiation emitting products, which include requirements related to record-keeping and reporting; labeling; notification; product repairs, replacements, and refunds; importation; and performance standards. In addition, our clinical products are subject to regulation as medical devices by the FDA in the United States and by similar regulatory bodies in other countries where such products are sold. These regulations govern a wide variety of product related activities, from quality management, design, development, and testing to labeling, manufacturing, complaint handling, reporting, promotion, sales and distribution. Compliance with applicable regulatory requirements is subject to continual review and is monitored rigorously through periodic inspections by the FDA and other regulatory authorities, which may result in written inspectional observations. The FDA and comparable foreign regulatory authorities also monitor product promotion and marketing materials and activities. If we or any of our suppliers or distributors fail to comply with FDA or other applicable regulatory requirements, or are perceived to potentially have failed to comply, we may face, among other things, warning letters; adverse publicity affecting both us and our customers; investigations or notices of non-compliance, fines, injunctions, and civil penalties; import or export restrictions; partial suspensions or total shutdown of production facilities or the imposition of operating restrictions; increased difficulty in obtaining required FDA clearances or approvals or foreign equivalents; seizures or recalls of our products or those of our customers; or the inability to sell such products. Any such FDA or comparable foreign regulatory actions could disrupt our business and operations, lead to significant remedial costs and have a material adverse impact on our financial position and results of operations.

In addition, negative publicity and product liability claims resulting from any adverse regulatory action could have a material, adverse effect on our financial condition and results of operations. Further, the adoption of the European Union Directive by the IVD Regulation (EU) 2017/746, which will take effect in May 2022, imposes a stricter regime on manufacturers of IVDs and our products currently approved under the Directive must be recertified under the Regulation by May 2024.

We have been, are, and expect to be in the future, subject to inquiries from the government agencies that enforce these regulations, including the U.S. Department of State, the U.S. Department of Commerce, the U.S. FDA, the U.S. Internal Revenue Service, the U.S. Department of Labor, the U.S. Department of Homeland Security, the U.S. Department of Justice, the SEC, the Federal Trade Commission, U.S. Customs and Border Protection and the U.S. Department of Defense, among others, as well as from state or foreign governments and their departments and agencies. As a result, from time to time, the attention of our management and other resources may be diverted to attend to these inquiries. In addition, failure to comply with these regulations or obtain or maintain necessary permits and licenses could result in a variety of fines or other censures or an interruption in our business operations which may have a negative impact on our ability to generate revenues and could adversely affect our financial condition and results of operations.

Failure to maintain effective internal controls may cause a loss of investor confidence in the reliability of our financial statements or cause us to delay filing our periodic reports with the SEC and adversely affect our stock price.

The SEC, as directed by Section 404 of the Sarbanes-Oxley Act of 2002, adopted rules requiring public companies to include a report of management on internal control over financial reporting in their annual reports on Form 10-K that contain an assessment by management of the effectiveness of our internal control over financial reporting. In addition, our independent registered public accounting firm must attest to and report on the effectiveness of our internal control over financial reporting. Although we test our internal control over financial reporting in order to ensure compliance with the Section 404 requirements, our failure to maintain adequate internal controls over financial reporting could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements or a delay in our ability to timely file our periodic reports with the SEC, which ultimately could negatively impact our stock price.

We operate as an entrepreneurial, decentralized company, which presents both benefits and certain risks. In particular, significant growth in a decentralized operating model may put strain on certain business group resources and our corporate functions, which could materially and adversely affect our business, financial condition and results of operations.

Decentralization necessarily places significant control and decision-making powers in the hands of local management, which presents certain risks, including the risk that we may be slower to detect or react to compliance-related matters and that "company-wide" business initiatives may be more challenging or costly to implement, and the risk of noncompliance or failures higher than they may be in a more centralized operating environment. In addition, key business group resources and our corporate functions, which are leanly staffed but responsible for supporting our decentralized operations, may also not be able to detect or resolve financial, operational, and compliance matters on a timely basis. Our failure to adapt our financial, operational and compliance controls and systems to effectively manage our decentralized business and comply with our obligations as a public company could materially and adversely affect our business, financial condition or results of operations.

General Risks Factors

If we are not able to successfully integrate the businesses we acquire through mergers, acquisitions or strategic alliances, we may not be able to realize all of the cost savings and other benefits that we expect to result from the transactions and our financial results may be different than expected.

Our strategy includes expanding our technology base and product offerings through selected mergers, acquisitions and strategic alliances. For example, from January 1, 2019 to December 31, 2021, we have acquired 13 businesses to expand our technologies and product offerings.

Successful integration of the businesses we acquire involves a number of risks, including, among others, risks related to:

- coordinating or consolidating geographically separate organizations and integrating personnel with different business backgrounds and corporate cultures;
- integrating previously autonomous departments in sales and marketing, distribution, accounting and administrative functions;
- integrating financial information and management systems;
- the pace of our acquisition activity and the related diversion of already limited resources and management time;
- disruption of our ongoing business;
- potential impairment of relationships with customers as a result of changes in management or otherwise arising out of such transactions; and
- retention of key employees of the acquired businesses within the first one to two years after the acquisition, including the risk that they may compete with us subsequently.

We may have difficulty developing, manufacturing and marketing the products of a newly acquired company or business in a way that enhances the performance of our combined businesses or product lines. As a result, we may not realize the value from expected synergies. Acquisitions have resulted, and may in the future result, in unexpected significant costs and expenses, including disputes over contingent consideration and complicated accounting for complex transaction structures. In the future, we may be required to record charges to earnings during the period if we determine there is an impairment of goodwill or intangible assets, up to the full amount of the value of the assets.

We generally assume the liabilities of businesses we acquire, which could include liability for an acquired business' violation of law that occurred before we acquired it. In addition, we have historically acquired smaller, privately held companies that may not have strong cultures of legal compliance or the robust financial controls of a larger, publicly traded company, and if we fail to implement adequate training, controls, and monitoring of the acquired companies, we could also be liable for post-acquisition legal or accounting violations.

Other companies may have difficulty acquiring us, even if doing so would benefit our stockholders, due to provisions under our corporate charter and bylaws, as well as Delaware law.

Provisions in our restated certificate of incorporation, and our amended and restated bylaws, as well as Delaware law could make it more difficult for other companies to acquire us, even if doing so would benefit our stockholders. Our restated certificate of incorporation, and amended and restated bylaws contain the following provisions, among others, which may inhibit an acquisition of our company by a third party:

- a staggered Board of Directors, where stockholders elect only a minority of the board each year;
- advance notification procedures for matters to be brought before stockholder meetings;
- a limitation on who may call stockholder meetings; and
- the ability of our Board of Directors to issue up to 5,000,000 shares of preferred stock without a stockholder vote.

ITEM 1B *UNRESOLVED STAFF COMMENTS*

Not applicable.

ITEM 2 *PROPERTIES*

We believe that our existing principal facilities are well maintained and in good operating condition and that they are adequate for our foreseeable business needs.

In addition to the principal facilities noted below, we lease additional facilities for sales, applications and service support in various countries throughout the world including Australia, Austria, Belgium, Brazil, China, Czech Republic, France, Germany, Hong Kong, India, Israel, Italy, Japan, Kenya, Malaysia, Mexico, Netherlands, Norway, Poland, Portugal, Russia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, the United Kingdom and the United States. If we should require additional or alternative facilities, we believe that such facilities can be obtained on short notice at competitive rates.

The location and general character of our principal properties are as follows:

Location	Principal Use	Approximate Square Feet	Relationship
Principal Facilities Used in Current Operations for Bruker BioSpin:			
Ettlingen, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	360,000	Owned
Faellanden, Switzerland	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	422,000 61,000	Owned Leased
Wissembourg, France	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	189,000	Owned
Principal Facilities Used in Current Operations for Bruker CALID:			
Bremen, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	298,000	Owned
Ettlingen, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	182,000	Owned
Nehren, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	89,000	Owned/ Leased
Principal Facilities Used in Current Operations for BSI Nano:			
Karlsruhe, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	145,000	Owned
Berlin, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	243,000	Owned
Santa Barbara, CA, U.S.A.	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	100,000	Owned
Graz, Austria	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	30,000	Leased

Location	Principal Use	Approximate Square Feet	Relationship
Penang, Malaysia	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	100,000	Leased
Migdal Ha'Emek, Israel	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	22,000	Leased
Principal Facilities Used in Current Operations for BEST:			
Perth, Scotland	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	47,000	Owned
Hanau, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	138,000	Leased
Bergisch Gladbach, Germany	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	134,000	Leased
Carteret, NJ, U.S.A.	Manufacturing, Research and Development, Application and Demonstration, Marketing, Sales and Administrative	115,000	Leased
Shared Principal Facilities:			
Billerica, MA, U.S.A.	Research and Development, Application and Demonstration, Marketing, Sales and Administrative	200,000	Owned

ITEM 3 *LEGAL PROCEEDINGS*

We are involved in lawsuits, claims, and proceedings, including, but not limited to, patent and commercial matters, which arise in the ordinary course of business. There are no such matters pending that we currently believe are reasonably likely to have a material impact on our business or to our consolidated financial statements.

Details on recent legal matters can be found in Note 17 to our consolidated financial statements included in this Annual Report on Form 10-K under Item 8.

In addition, we are subject to regulation by national, state and local government agencies in the United States and other countries in which we operate. From time to time, we are the subject of governmental investigations often involving regulatory, marketing and other business practices. These governmental investigations may result in the commencement of civil and criminal proceedings, fines, penalties and administrative remedies which could have a material adverse effect on our financial position, results of operations and/or liquidity.

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 Prices

Our common stock is traded on the Nasdaq Global Select Market under the symbol "BRKR."

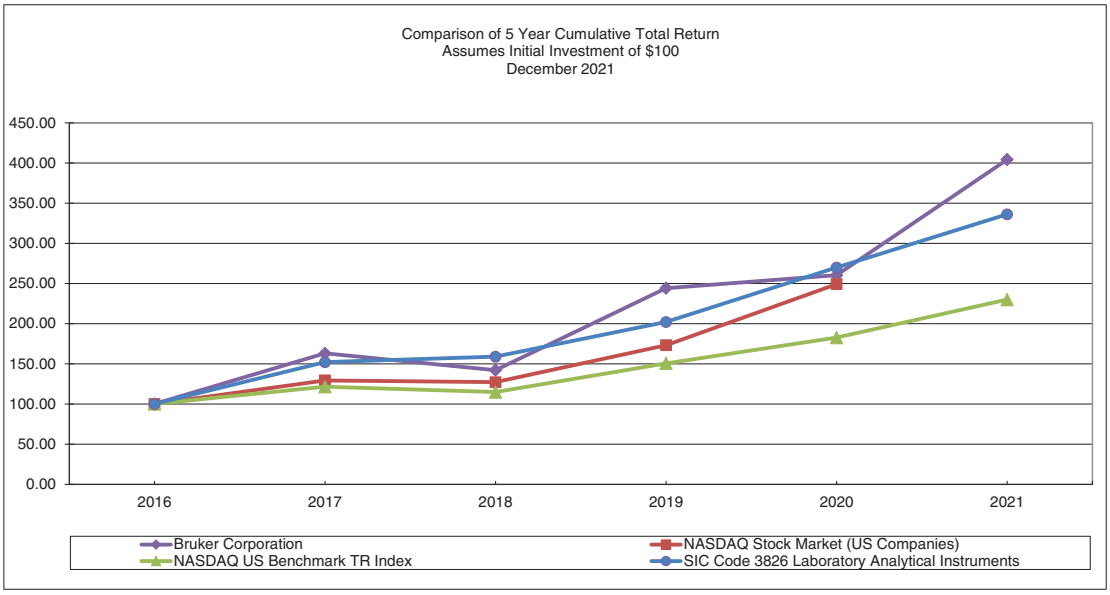
As of February 15, 2022, there were approximately 87 holders of record of our common stock. This number does not include individual beneficial owners of shares held in nominee name or within clearinghouse positions of brokerage firms and banks.

Dividends

In February 2016, we announced the establishment of a dividend policy and the declaration by our Board of Directors of an initial quarterly cash dividend in the amount of $0.04 per share of our issued and outstanding common stock. Beginning in 2022, we are targeting a quarterly cash dividend to our shareholders in the amount of $0.05 per share of our issued and outstanding common stock and in February 2022 announced that our Board had approved a quarterly dividend for the first quarter of 2022 of $0.05 per share, payable in March. Future dividend payments, if any, are subject to approval of our Board of Directors.

Stock Price Performance Graph

The graph below compares Bruker Corporation's annual percentage change in cumulative total return on common shares over the past five years with the cumulative total return of companies comprising the Nasdaq US Benchmark TR Index and the SIC Code 3826 Laboratory Analytical Instruments Index. This presentation assumes that $100 was invested in shares of the relevant issuers on December 31, 2016, and that dividends received were immediately invested in additional shares. The graph plots the value of the initial $100 investment at one-year intervals for the fiscal years shown. The Nasdaq US Benchmark TR Index replaces the CRSP Nasdaq Stock Market (US Companies) Index in this analysis and going forward, as the CRSP Index data is no longer accessible. The CRSP index has been included with data through 2020.



Cumulative Total Return Index for:	2016	2017	2018	2019	2020	2021
Bruker Corporation	$100.0	$162.96	$142.07	$244.14	$260.20	$404.24
Nasdaq US Benchmark TR Index	100.0	121.38	114.77	150.55	182.57	229.84
Nasdaq Stock Market (US companies)	100.0	129.30	127.19	173.11	249.17	—
SIC Code 3826 Laboratory Analytical Instruments	100.0	151.99	158.88	202.04	269.90	336.07

The data for this performance graph was compiled by Zack's Investment Research, Inc. and is used with its permission.

Issuer Purchases of Securities

The following table provides information about purchases made by or on behalf of the Company or any "affiliated purchaser," as defined in Rule 10b-18(a)(3) under the Exchange Act, during the quarter ended December 31, 2021 of shares of our common stock.

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs (2)
October 1—October 31, 2021	—	$ —	—	$463,380,168
November 1—November 30, 2021	634,855	$82.32	634,855	$411,119,634
December 1—December 31, 2021	371,659	$80.70	371,659	$381,127,281
	1,006,514	$81.72	1,006,514	$381,127,281

(1) The Company purchased shares of common stock in accordance with its share repurchase program approved by the Board of Directors and announced on May 12, 2021 (the "2021 Repurchase Program"). The shares were purchased on the open market at prevailing prices.

(2) The 2021 Repurchase Program authorizes the purchase of the Company's common stock of up to $500.0 million from time to time over a two-year period, in amounts, at prices, and at such times as management deems appropriate, subject to market conditions, legal requirements and other considerations. At February 23, 2022, $374.9 million remains for future purchase under the 2021 Repurchase Program.

In May 2019, the Company's Board of Directors approved a share repurchase plan (the "2019 Repurchase Program") authorizing the purchase of the Company's common stock of up to $300.0 million from time to time, in amounts, at prices, and at such times as management deems appropriate, subject to market conditions, legal requirements and other considerations. We purchased a total of 555,602 shares at an aggregate cost of $34.5 million under the 2019 Repurchase Program during the year ended December 31, 2021. We completed the 2019 Repurchase Program in April 2021, after reaching the maximum cumulative spend.

We purchased a total of 1,537,217 shares of common stock with an aggregate cost of approximately $118.9 million under the 2021 Repurchase Program during the year ended December 31, 2021. Any future purchases will be funded from cash on hand, future cash flows from operations and available borrowings under our revolving credit facility.

ITEM 6 ***RESERVED***

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and notes to those statements, appearing elsewhere in this report. This report contains forward-looking statements reflecting our current expectations that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. The cautionary statements made in this report should be read as applying to all related forward-looking statements wherever they appear in this report. Our actual results may differ materially from those indicated in the forward-looking statements due to a number of factors, including those discussed in Item 1A, Risk Factors and elsewhere in this report.

The following Management's Discussion and Analysis of Financial Condition and Results of Operations, or MD&A, describes the principal factors affecting the results of our operations, financial condition and changes in financial condition, as well as our critical accounting policies and estimates. Our MD&A is organized as follows:

- *Non-GAAP Measures.* This section provides appropriate disclosures regarding forward looking statements and our use of Non-GAAP financial measures.
- *Overview*. This section provides a brief discussion of our reportable segments' results of operations, significant recent developments in our businesses, and challenges and risks that may impact our businesses in the future.
- *Results of Operations.* This section provides our analysis of the significant line items on our consolidated statements of income and comprehensive income for the year ended December 31, 2021 compared to the year ended December 31, 2020.
- *Liquidity and Capital Resources.* This section provides an analysis of our liquidity and cash flow and a discussion of our outstanding debt and commitments.
- *Critical Accounting Policies and Estimates.* This section discusses the accounting estimates that are considered important to our financial condition and results of operations and require us to exercise subjective or complex judgments in their application. All of our significant accounting policies are summarized in Note 2 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K.
- *Recent Accounting Pronouncements.* This section provides a summary of recent accounting pronouncements and discusses their potential impact on our consolidated financial statements.

Non-GAAP Measures

Although our consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"), we believe describing revenue and expenses, excluding the effects of foreign currency, acquisitions and divestitures, as well as certain other charges, net, provides meaningful supplemental information regarding our performance. We rely internally on certain measures that are not calculated according to GAAP. These measures are organic revenue, free cash flow, non-GAAP gross profit margin and non-GAAP operating margin. Our management believes that these financial measures provide relevant and useful information that is widely used by equity analysts, investors and competitors in our industry, as well as by our management, in assessing both consolidated and business unit performance. We define the term organic revenue as GAAP revenue excluding the effect of foreign currency translation changes and the effect of acquisitions and divestitures. We define the term non-GAAP gross profit margin as GAAP gross profit margin with certain non-GAAP measures excluded and non-GAAP operating margin as GAAP operating margin with certain non-GAAP measures excluded. These non-GAAP measures exclude costs related to restructuring actions, acquisition and related integration expenses, amortization of acquired intangible assets, costs associated with our global information technology transition initiatives, and other non-operational costs and we believe these are useful measures to evaluate our continuing business.

We define free cash flow as net cash provided by operating activities less additions to property, plant, and equipment. We believe free cash flow is a useful measure to evaluate our business as it indicates the amount of cash generated after additions to property, plant, and equipment which is available for, among other things, investments in our business, acquisitions, share repurchases, dividends and repayment of debt. We regularly use these non-GAAP financial measures internally to understand, manage, and evaluate our business results and make operating decisions. We also measure our employees and compensate them, in part, based on such non-GAAP measures and use this information for our planning and forecasting activities. These measures may also be useful to investors in evaluating the underlying operating performance of our business. The presentation of these non-GAAP financial measures is not intended to be a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP and may be different from non-GAAP financial measures used by other companies, and therefore, may not be comparable among companies.

OVERVIEW

We are a developer, manufacturer and distributor of high-performance scientific instruments and analytical and diagnostic solutions that enable our customers to explore life and materials at microscopic, molecular and cellular levels. Our corporate headquarters are located in Billerica, Massachusetts. We maintain major technical and manufacturing centers in Europe, Asia and North America and we have sales offices located throughout the world. Bruker is organized into three reportable segments: the BSI Life Science Segment (comprised of the Bruker BioSpin Group and the Bruker CALID Group), the BSI Nano Segment and the Bruker Energy & Supercon Technologies (BEST) Segment.

Revenue for the year ended December 31, 2021 increased by $430.4 million, or 21.7%, to $2,417.9 million, compared to $1,987.5 million for the comparable period in 2020. Included in revenue was an increase of approximately $43.3 million from foreign currency translation and an increase of $8.1 million from acquisitions. Excluding the effects of foreign currency translation and our recent acquisitions, our organic revenue, a non-GAAP measure, increased $379.0 million. Revenue increases were driven by strong demand for our products and solutions, as well as a robust recovery compared to the same period in 2020.

Our gross profit margin increased to 50.0% for the year ended December 31, 2021 as compared to 47.3% in the same period in 2020, the result of volume leverage.

The income tax provision for the years ended December 31, 2021 and December 31, 2020 was $113.0 million and $64.4 million, respectively, representing effective tax rates of 28.7% and 28.5%, respectively. The increase in our effective tax rate was primarily due to additional tax reserves for uncertain tax positions in 2021 and the impact of U.S. tax on foreign earnings, partially offset by the impact of discrete items in the period.

Diluted earnings per share for the year ended December 31, 2021 was $1.81, an increase of $0.79, compared to $1.02 per share in the same period in 2020. The increase in earnings per diluted share was primarily driven by higher revenue, favorable volume and operating leverage compared to the same period in 2020.

The following table presents a reconciliation from net cash provided by operating activities, which is the most directly comparable GAAP operating financial measure, to free cash flow as used by management (in millions):

	Year Ended December 31,	
	2021	2020
Net cash provided by operating activities	$282.4	$332.2
Less: purchases of property, plant and equipment	(92.0)	(97.2)
Free cash flow	$190.4	$235.0

For the year ended December 31, 2021, our free cash flow was 19% lower than the same period in 2020, primarily from an increase in working capital due to increased accounts receivable from higher revenues and timing of receivables and strategic inventory build for 2021 orders and supply chain management.

The following table presents a reconciliation from gross profit and gross profit margin, which are the most directly comparable GAAP operating performance measures, to non-GAAP gross profit and non-GAAP gross profit margin as used by management (dollars in millions):

	Year Ended December 31,			
	2021		2020	
Gross profit	$1,209.6	50.0%	$939.8	47.3%
Non-GAAP adjustments:				
Restructuring costs	3.4	0.1%	3.8	0.2%
Acquisition-related costs	0.7	—	0.8	—
Purchased intangible amortization	20.2	0.9%	19.9	1.0%
Other costs	1.1	0.1%	3.7	0.2%
Non-GAAP gross profit	$1,235.0	51.1%	$968.0	48.7%

Our non-GAAP gross profit margin was 51.1% and 48.7% in the years ended December 31, 2021 and 2020, respectively. The increases in our non-GAAP gross profit margins were driven by higher revenue and volume leverage, compared to 2020 which was negatively impacted by the COVID-19 pandemic. Contributions from higher margin products also favorably impacted our gross profit margin in the year ended December 31, 2021.

The following table presents a reconciliation from operating income and operating margin, which are the most directly comparable GAAP operating performance measures, to non-GAAP operating income and non-GAAP operating margin as used by management (in millions):

	Year Ended December 31,			
	2021		2020	
Operating income	$413.3	17.1%	$248.3	12.5%
Non-GAAP adjustments:				
Restructuring costs	8.2	0.3%	15.8	0.8%
Acquisition-related costs	6.9	0.3%	3.2	0.2%
Purchased intangible amortization	37.4	1.5%	35.7	1.8%
Other costs	4.4	0.2%	14.2	0.7%
Non-GAAP operating income	$470.2	19.4%	$317.2	16.0%

Our non-GAAP operating margin was 19.4% and 16.0% for the years ended December 31, 2021 and 2020, respectively. The increase in our non-GAAP operating margins was driven by higher revenue and volume and operating leverage, compared to 2020 which was negatively impacted by the COVID-19 pandemic. Contributions from higher margin products also favorably impacted our operating margin in the year ended December 31, 2021.

We can experience quarter-to-quarter fluctuations in our operating results as a result of various factors, some of which are outside our control, such as:

- the impact of the COVID-19 global pandemic on our customers, supply chain or manufacturing capabilities;
- the impact of certain weather-related disruptions, such as the recent flooding in Germany and other parts of Europe;

- the timing of governmental stimulus programs and academic research budgets;
- the time it takes between the date customer orders and deposits are received, systems are shipped and accepted by our customers and full payment is received;
- foreign currency exchange rates;
- the time it takes for us to receive critical materials to manufacture our products;
- general economic conditions, including the impact of COVID-19 or other factors on the global economy;
- the time it takes to satisfy local customs requirements and other export/import requirements;
- the time it takes for customers to construct or prepare their facilities for our products; and
- the time required to obtain governmental licenses.

Several of these factors have in the past affected the amount and timing of revenue recognized on sales of our products and receipt of related payments and will likely continue to do so in the future. Accordingly, our operating results in any particular quarter may not necessarily be an indication of any future quarter's operating performance. The COVID-19 pandemic continues to present a challenging operating environment. During the COVID-19 pandemic, we have been focused on and continue to focus on four key priorities: the health and safety of our employees, customers and partners; maintaining business continuity and service levels for our customers; executing prudent temporary cost reductions based on demand; and delivering enabling research and diagnostic products to help fight the pandemic, and to support other essential priorities of our society.

Health and safety of our valued employees, customers and partners

We have implemented strict social distancing, enhanced cleaning protocols and other preventative measures, such as company-issued face coverings and mandatory mask protocols for unvaccinated employees, in our major facilities. While many of our office colleagues are working remotely, we are placing enhanced focus on our service organization and factory employees for whom work from home is not feasible. Where customer sites are accessible and open, our field service organizations operate under social distancing protocols with proper face coverings to ensure the safety of customer sites, when our employees need to be on site. Many of our facilities have begun to plan for employees who have been working remotely during the pandemic to gradually return to the office. Employee and visitor health and safety will remain our paramount concern.

Maintaining business continuity and service levels for our customers

Ensuring our ability to supply our enabling technologies and solutions and maintaining high service levels for our customers is another top priority for Bruker. In late March and during parts of April 2020, several of our manufacturing sites underwent temporary controlled shutdowns or were operating at reduced capacity to implement new safety protocols, comply with local rules, and manage cost and inventory levels. These sites thereafter ramped back up with expanding capacity and productivity levels. However, with any resurgence of the virus or the emergence of additional strains of the virus, particularly any new strains of the virus that are more resistant to existing vaccines, we may again need to consider temporary controlled shutdowns or reduced capacity measures. In addition, we are continuing capital investments in production facilities for efficiencies and expansion. We continue to manage supply chain risks, more recently associated with the economic recovery from the pandemic, like the worldwide shortage of semiconductor chips, components and raw materials, such as copper.

Executing prudent temporary cost reductions

During a period of reduced demand due to COVID-19 in 2020, we implemented temporary cost reduction measures in an effort to mitigate the negative impacts on our business of COVID-19 and the related slowdown in

the global economy. These temporary measures included short-time work for many of our European operations, temporary tiered salary reductions for our Board of Directors, global leadership team and workforce, one-to two-week closures of select manufacturing locations, selective product manufacturing reductions, a hiring freeze, and curtailment of non-strategic discretionary spending. At the same time, we looked to minimize the disruption for our employees and preserve our ability to ramp up again with our highly trained and loyal work force. While pursuing cost savings throughout the business, we have maintained our important investments in key strategic initiatives. These cost reduction measures have since been relaxed, as our revenue has recovered. We could in fact experience increased compensation expenses associated with employee recruiting and employee retention to the extent employment opportunities continue multiplying post-pandemic, causing the search for and retention of talent to remain and become more competitive.

Delivering enabling research and diagnostic products to help fight the pandemic and to support other essential priorities of our society

Bruker is providing critical technologies and solutions to help combat the COVID-19 crisis, most notably our Microbiology and infectious disease diagnostics portfolio and our nuclear magnetic resonance and mass spectrometry systems which are used in critical disease, therapeutic and vaccine research.

The COVID-19 global pandemic has driven volatility and uncertainty in global markets and has in the past affected our operations significantly. We continue to work to manage the impact of COVID-19 on our operations; however, the full extent to which any resurgence of the virus, the emergence of any new strains of the virus, or the availability and effectiveness of COVID-19 vaccines will impact our business, directly or indirectly, cannot accurately be predicted at this time. We continue to monitor the impact of COVID-19 on our business and our supply chain and respond accordingly. For additional information on the various risks posed by the COVID-19 pandemic, refer to Item 1A. Risk Factors included in this report.

RESULTS OF OPERATIONS

A discussion regarding our results of operations for the fiscal year ended December 31, 2020 compared to 2019 can be found under Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, filed with the SEC on March 1, 2021, which is available on the SEC's website at www.sec.gov and our Investor Relations website at https://.ir.bruker.com under the "Financial Info" section.

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

Consolidated Results

The following table presents our results for the years ended December 31, 2021 and 2020 (dollars in millions):

	Year Ended December 31,			
	2021	2020	Dollar Change	Percentage Change
Product revenue	$2,017.3	$1,638.1	$379.2	23.1%
Service revenue	393.2	343.4	49.8	14.5%
Other revenue	7.4	6.0	1.4	23.3%
Total revenue	2,417.9	1,987.5	430.4	21.7%
Cost of product revenue	979.3	840.2	139.1	16.6%
Cost of service revenue	228.2	206.5	21.7	10.5%
Cost of other revenue	0.8	1.0	(0.2)	(20.0)%
Total cost of revenue	1,208.3	1,047.7	160.6	15.3%
Gross profit	1,209.6	939.8	269.8	28.7%

	Year Ended December 31,			
	2021	2020	Dollar Change	Percentage Change
Operating expenses:				
Selling, general and administrative	561.2	468.6	92.6	19.8%
Research and development	220.8	198.0	22.8	11.5%
Other charges, net	14.3	24.9	(10.6)	(42.6)%
Total operating expenses	796.3	691.5	104.8	15.2%
Operating income	413.3	248.3	165.0	66.5%
Interest and other income (expense), net	(19.7)	(22.5)	2.8	(12.4)%
Income before income taxes and noncontrolling interest in consolidated subsidiaries	393.6	225.8	167.8	74.3%
Income tax provision	113.0	64.4	48.6	75.5%
Consolidated net income	280.6	161.4	119.2	73.9%
Net income attributable to noncontrolling interests in consolidated subsidiaries	3.5	3.6	(0.1)	(2.8)%
Net income attributable to Bruker Corporation	$277.1	$157.8	$119.3	75.6%

Revenue

Revenue increases were driven by strong broad demand for our products and solutions, and the business and end market recovery as compared to the same period in 2020.

Gross Profit

The increase in gross profit was a result of higher revenue, volume leverage and favorable product mix.

Selling, General and Administrative

Our selling, general and administrative expenses for the year ended December 31, 2021 decreased to 23.2% of total revenue from 23.6% of total revenue for the comparable period in 2020. The increase in dollars was a result of the cost control and cost reduction measures implemented during the COVID-19 pandemic in 2020 that did not occur in 2021. The decrease as a percentage of revenue was a result of the increase in revenue period over period and the delayed timing of certain investments.

Research and Development

Our research and development expenses for the year ended December 31, 2021 decreased to 9.1% of total revenue from 10.0% of total revenue for the comparable period in 2020. The increase in dollars was a result of the cost control and cost reduction measures implemented during the COVID-19 pandemic in 2020 that did not occur in 2021.The decrease as a percentage of revenue was a result of the increase in revenue period over period and the delayed timing of certain investments.

Other Charges, Net

Other charges, net for the year ended December 31, 2021 consisted primarily of $6.1 million of acquisition-related charges related to acquisitions completed in 2021 and 2020, $4.8 million of restructuring costs related to closing facilities and implementing outsourcing and other restructuring initiatives, $2.8 million of costs associated with our global IT transformation activities, $1.1 million related to professional fees and ($0.5) million related to long-lived asset impairments.

Other charges, net for the year ended December 31, 2020 consisted primarily of $12.0 million of restructuring costs related to closing facilities and implementing outsourcing and other restructuring initiatives, $5.9 million related to professional fees, $2.5 million of costs associated with our global IT transformation activities, $2.4 million of acquisition-related charges related to acquisitions completed in 2020 and 2019 and $2.1 million related to long-lived asset impairments.

Operating Income

The increase in operating income was due to higher revenue, gross profit and favorable operating leverage in the year ended December 31, 2021 as our business and end markets rebounded, as compared to the same period in 2020 which was negatively impacted by the COVID-19 pandemic and related economic slowdown.

Interest and Other Income (Expense), Net

The decline in net interest and other expense in the year ended December 31, 2021, as compared to the same period in 2020 was primarily due to the impact of foreign currency exchange rates.

Income Tax Provision

The effective tax rates for years ended 2021 and 2020 were 28.7% and 28.5%, respectively. The increase in our effective tax rate for the year ended December 31, 2021, compared to 2020, was primarily due to additional tax reserves for uncertain tax positions in 2021 and the impact of U.S. tax on foreign earnings, partially offset by the impact of discrete items in the period.

Net Income Attributable to Noncontrolling Interests and Redeemable Noncontrolling Interest

The net income attributable to noncontrolling interests represented the minority shareholders' proportionate share of the net income recorded by our majority-owned subsidiaries. In January 2020, we acquired the remaining 20% non-controlling interests from Hain LifeScience GmbH shareholders.

Net Income Attributable to Bruker Corporation

The increase in net income and earnings per diluted share was primarily driven by the increase in revenue, gross profit and operating profit as a result of strengthened demand and recovery in our business and end markets.

Segment Results

Revenue

The following table presents revenue, change in revenue, and revenue growth by reportable segment for the years ended December 31, 2021 and 2020 (dollars in millions):

	2021	2020	Dollar Change	Percentage Change
BSI Life Science	$1,510.6	$1,253.9	$256.7	20.5%
BSI Nano	697.5	556.1	141.4	25.4%
BEST	223.8	189.5	34.3	18.1%
Eliminations (a)	(14.0)	(12.0)	(2.0)	
	$2,417.9	$1,987.5	$430.4	21.7%

(a) Represents product and service revenue between reportable segments.

The increase in revenue for the BSI Life Science segment for the year ended December 31, 2021 was due to strong demand and end market recovery across the segment's major product lines, including mass spectrometry, infrared, Raman, microbiology, Nuclear Magnetic Resonance (NMR) and Preclinical Imaging (PCI) solutions. In addition, system installation activities recovered compared to the same period in 2020. The increase in revenue for the BSI Nano Segment was driven by a rebound in industrial research and academic market demand and continued strong demand from semiconductor and microelectronics customers and our X-ray products. The increase in revenue for the BEST Segment resulted from higher "big science" project revenue and a recovery in superconductors for healthcare MRI for the year ended December 31, 2021.

Operating Income

The following table presents operating income and operating margins on revenue by reportable segment for the years ended December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Operating Income (Loss)	Percentage of Segment Revenue	Operating Income (Loss)	Percentage of Segment Revenue
BSI Life Science	$385.4	25.5%	$273.8	21.8%
BSI Nano	73.4	10.5%	23.6	4.2%
BEST	22.2	9.9%	6.2	3.3%
Corporate, eliminations and other (a)	(67.7)		(55.3)	
Total operating income	$413.3	17.1%	$248.3	12.5%

(a) Represents corporate costs and eliminations not allocated to the reportable segments.

The operating margin increases in the BSI Life Science and BSI Nano Segments resulted from higher revenue, volume and operating leverage. The operating margin increase in the BEST Segment resulted from higher revenue and favorable mix.

LIQUIDITY AND CAPITAL RESOURCES

We anticipate that our existing cash, cash equivalents, short-term investments and credit facilities will be sufficient to support our operating and investing needs for at least the next twelve months. Our future cash requirements could be affected by acquisitions that we may complete, purchases of our common stock or the payment of dividends in the future. Historically, we have financed our growth and liquidity needs through cash flow from operations and a combination of debt financings and issuances of common stock. In the future, there are no assurances that we will continue to generate cash flow from operations or that additional financing alternatives will be available to us, if required, or if available, will be obtained on terms favorable to us.

Cash, cash equivalents and short-term investments at December 31, 2021 and 2020 totaled $1,168.2 million and $731.8 million, respectively, of which $646.9 million and $514.9 million, respectively, related to cash, cash equivalents and short-term investments is held outside of the U.S. in our foreign subsidiaries, most significantly in the Netherlands, Switzerland and Hong Kong.

The following table presents our cash flows from operating activities, investing activities and financing activities for the periods presented (in millions):

	Year Ended December 31,	
	2021	2020
Net cash provided by operating activities	$ 282.4	$ 332.2
Net cash used in investing activities	(192.4)	(192.7)
Net cash provided by (used in) financing activities	318.7	(161.6)
Effect of exchange rates on cash and cash equivalents and restricted cash	(22.5)	25.7
Total increase in cash and cash equivalents and restricted cash	$ 386.2	$ 3.6

Cash provided by operating activities during the year ended December 31, 2021 resulted from consolidated net income adjusted for non-cash items of $408.0 million, partially offset by a change in operating assets and liabilities, net of acquisitions and divestitures of $125.6 million. The primary increase is a result of increased net income driven by the increase in revenue, gross profit and operating profit as a result of the rebounding in our business and end markets. The decrease in cash flows due to change in operating assets and liabilities, net of acquisitions for the year ended December 31, 2021 was primarily due to increases in inventory in response to supply chain challenges, timing of tax payments and increased accounts receivable at the end of 2021 due to higher revenues. These decreases were partially offset by a decrease in timing of payments as compared to the same period in the prior year. During the year ended December 31, 2020, net cash provided by operating activities resulted from consolidated net income adjusted for non-cash items of $262.6 million, offset by a change in operating assets and liabilities, net of acquisitions and divestitures of $69.6 million. The increase in cash flows due to changes in operating assets and liabilities, net of acquisitions for the year ended December 31, 2020 was primarily caused by a decrease in accounts receivable due to increased cash collections, increased customer advances related to COVID-19 order increases late in 2020 offset by a strategic inventory build for 2021 orders and supply chain management.

Cash used in investing activities during the year ended December 31, 2021 resulted primarily from purchases of property, plant and equipment of $92.0 million, acquisitions of $65.0 million and purchases of short-term investments, net of maturities of $49.8 million, offset by $10.0 million of net proceeds from our cross-currency swap agreements and proceeds from sales of property, plant and equipment of $4.9 million. Cash used in investing activities during the year ended December 31, 2020 was primarily attributed to net capital expenditures of $97.2 million, net cash paid for acquisitions of $59.2 million and purchases of short-term investments, net of maturities of $43.9 million.

We currently expect capital expenditures in 2022 to be approximately $115.0 million.

Net cash provided by financing activities during the year ended December 31, 2021 was primarily from proceeds from the 2021 Note Purchase Agreement of $492.8 million, offset by cash paid for purchases of common stock under our repurchase program of $153.3 million and $24.2 million for the payment of dividends. Net cash used in financing activities during the year ended December 31, 2020 was primarily attributable to $123.2 million used for the purchase of common stock under our repurchase program, $24.6 million used for the payment of dividends, $7.6 million in net payments of borrowings under the 2019 Revolving Credit Agreement and a $7.5 million payment of contingent consideration.

Share Repurchase Program

In May 2019, our Board of Directors approved a share repurchase program (the "2019 Repurchase Program") authorizing the purchase of our common stock of up to $300.0 million from time to time, in amounts,

at prices, and at such times as management deems appropriate, subject to market conditions, legal requirements and other considerations. We purchased a total of 555,602 shares at an aggregate cost of $34.5 million under the 2019 Repurchase Program during the year ended December 31, 2021. We completed the 2019 Repurchase Program in April 2021, after reaching the maximum cumulative spend.

In May 2021, our Board of Directors approved a share repurchase program (the "2021 Repurchase Program") authorizing the purchase of our common stock up to $500.0 million from time to time over a two-year period, in amounts, at prices, and at such times we deem appropriate, subject to market conditions, legal requirements and other conditions. We purchased a total of 1,537,217 shares at an aggregate cost of $118.9 million under the 2021 Repurchase Program during the year ended December 31, 2021. As of February 23, 2022, $374.9 million remains for future purchases under the 2021 Repurchase Program. We intend to fund any additional purchases from cash on hand, future cash flows from operations and available borrowings under the revolving credit facility.

Income Taxes

At December 31, 2021 and in accordance with the tax reform legislation signed by the president of the United States on December 22, 2017, or the 2017 Tax Act, we recorded state and foreign withholding taxes, as well as subsequent foreign currency translations on these withholding taxes as they are an obligation of the parent company, on the cash and liquid assets portion of the unremitted earnings and profits (E&P) of foreign subsidiaries expected to be repatriated from our foreign subsidiaries to the United States. We continue to be indefinitely reinvested in the amount of $546 million of non-cash E&P that is subject to the 2017 Tax Act deemed repatriation. If this E&P is ultimately distributed to the United States in the form of dividends or otherwise we would likely be subject to additional withholding tax. We will continue to evaluate our assertions on the cumulative historical outside basis differences in our foreign subsidiaries as of December 31, 2021. The amount of unrecognized deferred withholding taxes on the undistributed E&P was $69 million at December 31, 2021.

As of December 31, 2021, we had approximately $89.4 million of net operating loss carryforwards available to reduce state taxable income that are expected to expire at various times beginning in 2022; approximately $86.1 million of net operating losses available to reduce German federal income and trade taxes that are carried forward indefinitely and $6.4 million of other foreign net operating losses that are expected to expire at various times in the future. We had U.S. federal foreign tax credit carried forwards in the amount of $6.3 million. We also had U.S. federal and state research and development tax credits of $4.6 million and $7.8 million, respectively. Utilization of these credits and state net operating losses may be subject to annual limitations due to the ownership percentage change limitations provided by Internal Revenue Code Section 382 and similar state provisions. In the event of a deemed change in control under Internal Revenue Code Section 382, an annual limitation on the utilization of net operating losses and credits may result in the expiration of all or a portion of the net operating loss and credit carryforwards. Additionally, the Company has $40.2 million of gross interest expense carryforward as provided by Code Section 163(j) that can be carried forward indefinitely.

Uncertain tax contingencies are positions taken or expected to be taken on an income tax return that may result in additional payments to tax authorities. If a tax authority agrees with the tax position taken or expected to be taken or the applicable statute of limitations expires, then additional payments will not be necessary.

Credit Facilities

On December 7, 2021, the Company entered into a note purchase agreement to issue and sell CHF 300 million aggregate principal amount of 0.88% series A senior notes and EUR 150 million aggregate principal amount of 1.03% series B senior notes due December 8, 2031. We designated our CHF 300 million series A senior notes as a hedge in our net investment in our Swiss Franc denominated net assets. We designated our EUR 150 million series B senior notes as a hedge in our net investment in our Euro denominated net assets. Proceeds of the notes will be used for general corporate purposes.

On December 11, 2019, we entered into (1) a new revolving credit agreement to establish a new revolving credit facility in the aggregate principal amount of $600 million; (2) a term loan agreement to establish a new term loan facility in the aggregate principal amount of $300 million; and (3) a note purchase agreement to issue and sell CHF 297 million aggregate principal amount of 1.01% senior notes due December 11, 2029. Floating interest rates under the term loan were simultaneously fixed through cross-currency and interest rate swap agreements into Euro ($150 million) and Swiss Franc ($150 million) rates carrying average effective interest rates of 0.94% and hedge our net investment in our Euro and Swiss Franc denominated net assets. The new revolving credit agreement replaced our $500 million five-year revolving credit agreement established on October 27, 2015, that was terminated on December 11, 2019.

In addition, we designated our CHF 297 million senior notes as a hedge in our net investment in our Swiss Franc denominated net assets. Proceeds from this financing were used to repay the outstanding borrowings under our prior 2015 revolving credit facility and we intend to use the remaining proceeds for general corporate purposes and to support corporate strategic objectives. During December 2019, we entered into U.S. Dollar to Euro cross-currency swaps on our existing 2012 private placement notes of $105 million 4.31% Series 2012A Senior Notes, Tranche C, due January 18, 2022 and subsequently paid in January 2022, and the existing $100 million 4.46% Series 2012A Senior Notes, Tranche D, due January 18, 2024, resulting in an average effective interest rate of 2.25% on these instruments. The cross-currency swaps hedge our net investment in our Euro denominated net assets.

As of December 31, 2021, we have several cross-currency and interest rate swap agreements with a notional value of $149.6 million of U.S. Dollar to Swiss Franc and a notional value of $354.7 million of U.S. Dollar to Euro to hedge the variability in the movement of foreign currency exchange rates on portions of our Euro and Swiss Franc denominated net asset investments. As a result of these agreements, we lowered our net interest expense by $5.5 million and $7.2 million during the year ended December 31, 2021 and 2020, respectively. We anticipate these swap agreements will lower net interest expense by approximately $4.6 million in 2022 and $7.4 million in 2023.

We had the following debt outstanding (in millions):

	2021	2020
EUR notes (in dollars) under the 2021 Note Purchase Agreement	$ 170.7	$ —
CHF notes (in dollars) under the 2021 Note Purchase Agreement	329.2	—
CHF notes (in dollars) under the 2019 Note Purchase Agreement	325.9	335.5
U.S. Dollar notes under the 2019 Term Loan	299.2	300.0
U.S. Dollar notes under the 2012 Note Purchase Agreement	205.0	205.0
Unamortized debt issuance costs	(2.0)	(2.4)
Other loans	1.9	3.0
Total notes and loans outstanding	1,329.9	841.1
Finance lease obligations	4.3	3.4
Total debt	1,334.2	844.5
Current portion of long-term debt	(112.4)	(2.2)
Total long-term debt, less current portion	$1,221.8	$842.3

There was no amount outstanding under the 2019 Credit Agreement as of December 31, 2021 or 2020.

Annual maturities of notes and loans outstanding are as follows (in millions):

2022	$ 111.1
2023	15.8
2024	115.2
2025	15.5
2026	15.2
Thereafter	1,059.1
Total	$1,331.9

As of December 31, 2021, we had no off-balance sheet arrangements and we were in compliance with the financial covenants of these debt arrangements.

The following is a summary of the maximum commitments and the net amounts available to us under the 2019 Credit Agreement and other banking working capital lines and guarantees of credit with various financial institutions located primarily in Germany and Switzerland that are unsecured and typically due upon demand at December 31, 2021 (dollars in millions):

	Weighted Average Interest Rate	Total Amount Committed by Lenders	Outstanding Borrowings	Outstanding Letters of Credit	Total Committed Amounts Available
2019 Credit Agreement	1.3%	$600.0	$—	$ 0.2	$599.8
Bank guarantees and working capital line	varies	116.2	—	116.2	—
Total revolving lines of credit		$716.2	$—	$116.4	$599.8

As of December 31, 2021, we were in compliance with the covenants of all debt agreements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America, or U.S. GAAP, which requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period.

We consider our accounting estimates to be critical to the consolidated financial statements if (i) the estimate requires significant judgment or is complex in nature and (ii) if different estimates and assumptions were used, the results could have a material impact on our consolidated financial statements. We evaluate our estimates and the application of our policies on an ongoing basis.

We base our estimates and judgments on our historical experience, current market and economic conditions, industry trends, and other assumptions that we believe are reasonable. Actual results could differ from these estimates. Changes in estimates are recorded in the period in which they become known.

We believe the following critical accounting policies and estimates to be both those most important to the portrayal of our financial position and results of operations and those that require the most estimation and subjective judgment.

Revenue recognition

We recognize revenue in accordance with Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers* (ASC 606). The key elements of ASC 606 are: 1) identifying a contract with the

customer; 2) identifying the performance obligations in the contract; 3) determining the transaction price; 4) allocating the transaction price to the performance obligations in the contract; and 5) recognizing revenue when (or as) each performance obligation is satisfied.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. Some of our contracts have multiple performance obligations, most commonly due to providing additional goods or services along with a system, such as installation, accessories, parts and services. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using the best estimate of the standalone selling price of each distinct good or service being provided to the customer. Our best evidence of standalone selling price is our normal selling pricing and discounting practices for the specific product or service when sold on a standalone basis. Alternatively, when not sold separately, we may determine standalone selling price using an expected cost plus a margin approach.

Our performance obligations are typically satisfied at a point in time, most commonly either on shipment or customer acceptance. Certain performance obligations, such as maintenance contracts and extended warranty, are recognized over time based on the contractual obligation period. In addition, certain arrangements to provide more customized deliverables may be satisfied over time based on the extent of progress towards completion. For performance obligations recognized over time, revenue is measured by progress toward completion of the performance obligation that reflects the transfer of control. Typically, progress is measured using a cost-to-cost method based on cost incurred to date relative to total estimated costs upon completion as this best depicts the transfer of control to the customer. Application of the cost-to-cost method requires us to make reasonable estimates of the extent of progress toward completion and the total costs we expect to incur. Losses are recorded immediately when we estimate that contracts will ultimately result in a loss. Changes in the estimates could affect the timing of revenue recognition.

We include costs incurred in connection with shipping and handling of products within selling, general and administrative costs. Amounts billed to customers in connection with these costs are included in total revenues. When control of the goods transfers prior to the completion of our obligation to ship the products to our customers, we have elected the practical expedient to account for the shipping services as a fulfillment cost. We expense incremental costs of obtaining a contract as and when incurred if the expected amortization period is one year or less or the amount is immaterial. We exclude from the transaction price all taxes assessed by a governmental authority on revenue-producing transactions that are collected by us from a customer.

We recognize revenue from systems sales upon transfer of control in an amount that reflects the consideration we expect to receive. Transfer of control generally occurs upon shipment, or for certain systems, based upon customer acceptance for a system once delivered and installed at a customer facility. For systems that include customer-specific acceptance criteria, we are required to assess when we can demonstrate the acceptance criteria has been met, which generally is upon successful factory acceptance testing or customer acceptance and evidence of installation. For systems that require installation and where system revenue is recognized upon shipment, the standalone selling price of installation is deferred until customer acceptance. Revenue from accessories and parts is generally recognized based on shipment. Service revenue is recognized as the services are performed or ratably over the contractual obligation and includes maintenance contracts, extended warranties, training, application support and on-demand services.

When products are sold through an independent distributor or a strategic distribution partner, we recognize the system sale upon transfer of control which is typically on shipment. When we are responsible for installation, the standalone selling price of installation is deferred until customer acceptance. Our distributors do not have price protection rights or rights of return; however, our products are typically warranted to be free from defect for a period of one year.

We require an advance deposit based on the terms and conditions of contracts with customers for many of our contracts. Typically, revenue is recognized within one year of receiving an advance deposit. We do not have any material payment terms that extend beyond one year. There is minimal variable consideration included in the transaction price of our contracts.

Other revenues are primarily comprised of development arrangements recognized on a cost-plus-fixed-fee basis and licensing arrangements recognized either when the licenses are provided or ratably over the contract term depending on the nature of the arrangement.

Income taxes

Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the income tax basis of assets and liabilities. A valuation allowance is applied against any net deferred tax asset if, based on the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We record liabilities related to uncertain tax positions in accordance with the guidance that clarifies the accounting for uncertainty in income taxes recognized in our financial statements. This guidance prescribes a minimum recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. We include accrued interest and penalties related to unrecognized tax benefits and income tax liabilities, when applicable, in income tax expense.

Inventories

All inventories are stated at the lower of cost and net realizable value. Cost is determined principally by the first-in, first-out method for a majority of subsidiaries and by average-cost for certain other subsidiaries. We reduce the carrying value of our inventories for differences between cost and estimated net realizable value, taking into consideration usage in the preceding twelve months, expected demand, technological obsolescence and other information including the physical condition of demonstration inventories. We record a charge to cost of product revenue for the amount required to reduce the carrying value of inventory to net realizable value. Costs associated with the procurement of inventories, such as inbound freight charges and purchasing and receiving costs, are capitalized as part of inventory and are also included in the cost of product revenue line item within the consolidated statements of income and comprehensive income.

Goodwill, other intangible assets and other long-lived assets

Goodwill and indefinite-lived intangible assets are not amortized, but are evaluated for impairment on an annual basis, or on an interim basis when events or changes in circumstances indicate that the carrying value may not be recoverable. In assessing the recoverability of goodwill and indefinite-lived intangible assets, we must make assumptions regarding the estimated future cash flows, including forecasted revenue growth and the discount rate to determine the fair value of these assets. If these estimates or their related assumptions change in the future, we may be required to record impairment charges against these assets in the reporting period in which the impairment is determined.

We test goodwill for impairment at the reporting unit level, which is the operating segment or one level below an operating segment. We have the option of performing a qualitative assessment to determine whether further impairment testing is necessary before performing the quantitative assessment. If as a result of the qualitative assessment, it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, a quantitative impairment test will be required. Otherwise, no further testing will be required. If a quantitative impairment test is performed, we compare the fair values of the applicable reporting units with their aggregate carrying values, including goodwill. We determine the fair value of reporting units using a weighting of both the market and the income methodologies. Estimating the fair value of the reporting units requires

significant judgment by management. If the carrying amount of a reporting unit exceeds the fair value of the reporting unit, an impairment charge is recognized for the amount by which the carrying value amount exceeds the reporting unit's fair value up to the total amount of goodwill allocated to the reporting unit.

In process research and development, or IPR&D, acquired as part of business combinations under the acquisition method represents ongoing development work associated with enhancements to existing products, as well as the development of next generation products. IPR&D is initially capitalized at fair value as an intangible asset with an indefinite life and assessed for impairment on an annual basis, or when indicators of impairment are identified. When the IPR&D project is complete, it is reclassified as a finite-lived intangible asset and is amortized over its estimated useful life. If an IPR&D project is abandoned before completion or is otherwise determined to be impaired, the value of the asset or the amount of the impairment is charged to the consolidated statements of income and comprehensive income in the period the project is abandoned or impaired.

Business Combinations

We account for business combinations under the acquisition method of accounting. Accordingly, at the date of each acquisition, we measure the fair value of all identifiable assets acquired (including intangible assets), liabilities assumed and any remaining noncontrolling interests and allocate the amounts paid to all items measured. The fair value of identifiable intangible assets acquired is based on valuations that use information and assumptions determined by management and which consider management's best estimates of inputs and assumptions that a market participant would use.

RECENT ACCOUNTING PRONOUNCEMENTS

Information regarding recently issued accounting pronouncements may be found in Note 3 to our consolidated financial statements included in this Annual Report on Form 10-K.

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

We are potentially exposed to market risks associated with changes in foreign currency translation rates, interest rates and commodity prices. We selectively use financial instruments to reduce these risks. All transactions related to risk management techniques are authorized and executed pursuant to our policies and procedures. Analytical techniques used to manage and monitor foreign currency translation and interest rate risk include market valuations and sensitivity analysis.

We have estimated our market risk exposure using sensitivity analysis. To test the sensitivity of our market risk exposure, we have estimated the changes in fair value of market risk sensitive instruments assuming a hypothetical 10 percent adverse change in market prices or rates. The results of the sensitivity analyses are summarized below.

Foreign Currency Risk

We generate a substantial portion of our revenues in international markets, principally Germany and other countries in the European Union, Switzerland and Japan, which exposes our operations to the risk of exchange rate fluctuations. The impact of currency exchange rate movement can be positive or negative in any period. Our costs related to sales in foreign currencies are largely denominated in the same respective currencies, reducing our transaction risk exposure. However, for foreign currency denominated sales in certain regions, such as Japan, where we do not incur significant costs denominated in Japanese Yen, we are more exposed to the impact of foreign currency fluctuations. For sales not denominated in U.S. dollars, if there is an increase in the rate at which a foreign currency is exchanged for U.S. dollars, it will require more of the foreign currency to equal a specified amount of U.S. dollars than before the rate increase. In such cases, if we price our products in the foreign currency, we will receive less in U.S. dollars than we would have received before the rate increase went

into effect. If we price our products in U.S. dollars and competitors price their products in local currency, an increase in the relative strength of the U.S. dollar could result in our prices not being competitive in a market where business is transacted in the local currency. For example, if the U.S. dollar strengthened against the Japanese Yen, our Japanese-based competitors would have a greater pricing advantage over us.

Our revenue by geography was as follows (dollars in millions):

	2021		2020	
	Revenue	Percentage of Revenue	Revenue	Percentage of Revenue
United States	$ 601.0	24.9%	$ 455.9	22.9%
Europe	920.7	38.1	764.7	38.5
Asia Pacific	729.1	30.1	629.1	31.7
Rest of world	167.1	6.9	137.8	6.9
Total revenue	$2,417.9	100.0%	$1,987.5	100.0%

Changes in foreign currency exchange rates increased our revenue by approximately 2.2% and 1.4% in the years ended December 31, 2021 and December 31, 2020, respectively.

Assets and liabilities of our foreign subsidiaries, where the functional currency is the local currency, are translated into U.S. dollars using period end exchange rates, or historical rates, as appropriate. Revenues and expenses of foreign subsidiaries are translated at the average exchange rates in effect during the year. Adjustments resulting from financial statement translations are included as a separate component of shareholders' equity. In the years ended December 31, 2021 and 2020, we recorded net losses of $26.4 million and net gains of $22.0 million, respectively, from currency translation adjustments. A 10% depreciation in functional currencies, relative to the U.S. dollar, at December 31, 2021, would have resulted in a reduction of shareholders' equity of approximately $255.8 million. Gains and losses resulting from foreign currency transactions are reported in interest and other income (expense), net in the consolidated statements of income and comprehensive income. Our foreign currency transaction gain (loss), net were net losses of $4.1 million and $7.9 million for years ended December 31, 2021 and 2020, respectively.

The impact of currency exchange rate movement can be positive or negative in any period. We periodically enter into foreign currency contracts in order to minimize the volatility that fluctuations in currency translation have on our monetary transactions. Under these arrangements, we typically agree to purchase a fixed amount of a foreign currency in exchange for a fixed amount of U.S. Dollars or other currencies on specified dates with maturities of less than twelve months, with some agreements extending to longer periods. These transactions do not qualify for hedge accounting and, accordingly, the instrument is recorded at fair value with the corresponding gains and losses recorded in the consolidated statements of income and comprehensive income.

As of December 31, 2021, we have several cross-currency and interest rate swap agreements with a notional value of $149.6 million of U.S. dollar to Swiss Franc and a notional value of $354.7 million of U.S. dollar to Euro to hedge the variability in the movement of foreign currency exchange rates on portions of our Euro and Swiss Franc denominated net asset investments. Under the U.S. GAAP hedge accounting guidance, changes in fair value of the derivative that relates to changes in the foreign currency spot rate are recorded in the currency translation adjustment in comprehensive income (loss) and remain in accumulated comprehensive income (loss) in stockholders' equity until the sale or substantial liquidation of the foreign operation. The difference between the interest rate received and paid under the interest rate cross-currency swap derivative agreement is recorded in interest income in the statement of income.

From time to time, we have entered into forward currency contracts designed to minimize the volatility that fluctuations in foreign currency have on our cash flows related to purchases and sales denominated in foreign currencies. Under these arrangements, we agree to purchase a fixed amount of a foreign currency in exchange for

a fixed amount of U.S. Dollars or other currencies on specified dates typically with maturities of less than twelve months with some agreements extending to longer periods. These transactions are recorded at fair value with the corresponding gains and losses recorded in interest and other income (expense), net in the consolidated statements of income and comprehensive income. At December 31, 2021 and 2020, we had forward currency contracts with notional amounts aggregating $180.7 million and $278.3 million, respectively. We will continue to evaluate our currency risks, and in the future, may utilize foreign currency contracts more frequently.

Interest Rate Risk

We regularly invest excess cash in short-term investments that are subject to changes in interest rates. We believe that the market risk arising from holding these financial instruments is minimal because of our policy of investing in short-term financial instruments issued by highly rated financial institutions.

Our exposure related to adverse movements in interest rates is derived primarily from outstanding floating rate debt instruments that are indexed to short-term market rates. We currently have a higher level of fixed rate debt than variable rate debt, which limits the exposure to adverse movements in interest rates.

Commodity Price Risk

We are exposed to certain commodity risks associated with prices for various raw materials. The prices of copper and certain other raw materials, particularly niobium-tin, used to manufacture superconductors have increased significantly over the last decade. Copper and niobium-tin are the main components of low temperature superconductors and continued commodity price increases for copper and niobium, as well as other raw materials, may negatively affect our profitability. We have arrangements with certain customers under which we have a firm commitment to deliver copper based on superconductor wire at a fixed price. In order to minimize the volatility that fluctuations in the price of copper have on our sales of these commodities, we enter into commodity hedge contracts. At December 31, 2021 and 2020, we had fixed price commodity contracts with notional amounts aggregating $5.5 million and $8.8 million, respectively. The fair value of the fixed price commodity contracts at December 31, 2021 and 2020 was $0.4 million and $3.1 million, respectively. As commodity contracts settle, gains (losses) as a result of changes in fair values are adjusted to the contracts with the customers through revenues. We will continue to evaluate our commodity risks and may utilize commodity forward purchase contracts more frequently in the future.

Inflation Risk

Global inflation increased during 2021 as a result of COVID-19 and associated disruptions in global demand, logistics, and labor markets. These inflationary conditions could impact our future operating results.

Inflation may affect the costs of materials and services that we use, including raw materials and labor to manufacture our products, as well as, transportation and logistical costs. We may not be able to recover these higher costs through increased selling prices due to competition and timing.

Inflation rates may also vary between countries in which we operate. To date, these inflationary conditions have not had a material effect on our operating results; however, they could have a greater impact on our future operating results.

ITEM 8 *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Index of Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Bruker Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Bruker Corporation and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of income and comprehensive income, of redeemable noncontrolling interest and shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2021, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

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

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

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

As described in Management's Report on Internal Control over Financial Reporting, management has excluded SCI Instruments, SVXR, Inc. and Molecubes NV from its assessment of internal control over financial reporting as of December 31, 2021 because they were acquired by the Company in purchase business combinations during 2021. We have also excluded SCI Instruments, SVXR, Inc. and Molecubes NV from our

audit of internal control over financial reporting. SCI Instruments, SVXR, Inc. and Molecubes NV are wholly-owned subsidiaries whose total assets and total revenues excluded from management's assessment and our audit of internal control over financial reporting collectively represent 1.9% and 0.4%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2021.

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Goodwill Impairment Assessment—Reporting Unit in Bruker Scientific Instruments (BSI) Nano Segment

As described in Notes 2 and 9 to the consolidated financial statements, the Company's consolidated goodwill balance was $339.5 million as of December 31, 2021, $238.9 million of which relates to the BSI Nano segment. Management evaluates goodwill for impairment on an annual basis, or on an interim basis when events or changes in circumstances indicate that the carrying value may not be recoverable. Management tests goodwill for impairment at the reporting unit level, which is the operating segment or one level below an operating segment. Management determines the fair value of reporting units using a weighting of both the market and the income methodologies. In assessing the recoverability of goodwill, management must make assumptions regarding the estimated future cash flows, including the forecasted revenue growth to determine the fair value. If the carrying amount of a reporting unit exceeds the fair value of the reporting unit, management recognizes an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value up to the total amount of goodwill allocated to the reporting unit.

The principal consideration for our determination that performing procedures relating to the goodwill impairment assessment is a critical audit matter is the significant judgment by management when developing the fair value measurement of the reporting unit. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's significant assumption related to the forecasted revenue growth. The audit effort also involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting unit. These procedures also included, among others, testing management's process for developing the fair value estimates of the reporting unit; evaluating the appropriateness of using a weighting of both the market and income methodologies; testing the completeness, accuracy, and relevance of underlying data used in the methodologies; and evaluating the significant assumption used by management related to the forecasted revenue growth. Evaluating management's assumption related to the forecasted revenue growth involved evaluating whether the assumption used by management was reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether the assumption was consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's methodologies.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 28, 2022

We have served as the Company's auditor since 2016.

BRUKER CORPORATION
CONSOLIDATED BALANCE SHEETS
(in millions, except share and per share data)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$1,068.2	$ 681.8
Short-term investments	100.0	50.0
Accounts receivable, net	416.9	335.3
Inventories	710.1	692.3
Assets held for sale	4.4	—
Other current assets	172.2	165.6
Total current assets	2,471.8	1,925.0
Property, plant and equipment, net	406.1	395.5
Goodwill	339.5	320.4
Intangible assets, net	211.8	229.1
Operating lease assets	59.9	67.4
Deferred tax assets	90.1	72.0
Other long-term assets	70.8	39.6
Total assets	$3,650.0	$3,049.0
LIABILITIES, REDEEMABLE NONCONTROLLING INTEREST AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 112.4	$ 2.2
Accounts payable	147.4	134.6
Customer advances	197.5	189.2
Other current liabilities	481.2	465.9
Total current liabilities	938.5	791.9
Long-term debt	1,221.8	842.3
Long-term deferred revenue	50.2	50.9
Deferred tax liabilities	46.0	43.1
Operating lease liabilities	41.8	47.0
Accrued pension	104.7	123.4
Other long-term liabilities	162.2	176.1
Commitments and contingencies (Note 17)		
Redeemable noncontrolling interest	0.2	—
Shareholders' equity:		
Preferred stock, $0.01 par value 5,000,000 shares authorized, none issued or outstanding at December 31, 2021 and 2020	—	—
Common stock, $0.01 par value 260,000,000 shares authorized, 174,905,035 and 174,045,610 shares issued and 150,753,687 and 151,987,081 outstanding at December 31, 2021 and 2020, respectively	1.7	1.7
Treasury stock at cost, 24,151,348 and 22,058,529 shares at December 31, 2021 and 2020, respectively	(820.3)	(667.0)
Additional paid-in capital	237.8	216.3
Retained earnings	1,659.5	1,406.5
Accumulated other comprehensive (loss) income	(8.2)	3.7
Total shareholders' equity attributable to Bruker Corporation	1,070.5	961.2
Noncontrolling interests in consolidated subsidiaries	14.1	13.1
Total shareholders' equity	1,084.6	974.3
Total liabilities, redeemable noncontrolling interest and shareholders' equity	$3,650.0	$3,049.0

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

BRUKER CORPORATION
CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME
(in millions, except per share data)

	Year Ended December 31,		
	2021	2020	2019
Product revenue	$2,017.3	$1,638.1	$1,744.7
Service revenue	393.2	343.4	322.4
Other revenue	7.4	6.0	5.5
Total revenue	2,417.9	1,987.5	2,072.6
Cost of product revenue	979.3	840.2	878.5
Cost of service revenue	228.2	206.5	198.3
Cost of other revenue	0.8	1.0	0.5
Total cost of revenue	1,208.3	1,047.7	1,077.3
Gross profit	1,209.6	939.8	995.3
Operating expenses:			
Selling, general and administrative	561.2	468.6	500.2
Research and development	220.8	198.0	187.7
Other charges, net	14.3	24.9	6.5
Total operating expenses	796.3	691.5	694.4
Operating income	413.3	248.3	300.9
Interest and other income (expense), net	(19.7)	(22.5)	(20.5)
Income before income taxes and noncontrolling interests in consolidated subsidiaries	393.6	225.8	280.4
Income tax provision	113.0	64.4	82.4
Consolidated net income	280.6	161.4	198.0
Net income attributable to noncontrolling interests in consolidated subsidiaries	3.5	3.6	0.8
Net income attributable to Bruker Corporation	$ 277.1	$ 157.8	$ 197.2
Net income per common share attributable to Bruker Corporation shareholders:			
Basic	$ 1.83	$ 1.03	$ 1.27
Diluted	$ 1.81	$ 1.02	$ 1.26
Weighted average common shares outstanding:			
Basic	151.4	153.4	155.2
Diluted	152.9	154.6	156.6
Consolidated net income	$ 280.6	$ 161.4	$ 198.0
Foreign currency translation (net of tax of $2.1 million, $1.2 million and $5.1 million, respectively) adjustments	(77.8)	97.4	(4.3)
Derivatives designated as hedging instruments (net of tax of $12.5 million in 2021)	51.4	(75.8)	(15.7)
Pension liability adjustments (net of tax of ($3.9) million, ($1.7) million and $6.3 million, respectively)	14.5	7.5	(23.0)
Net comprehensive income	268.7	190.5	155.0
Less: Comprehensive income attributable to noncontrolling interests	1.0	4.0	1.8
Less: Comprehensive loss attributable to redeemable noncontrolling interest	(0.1)	(0.5)	(1.5)
Comprehensive income attributable to Bruker Corporation	$ 267.8	$ 187.0	$ 154.7

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

BRUKER CORPORATION
CONSOLIDATED STATEMENTS OF REDEEMABLE NONCONTROLLING INTEREST AND SHAREHOLDERS' EQUITY
(in millions, except share data)

	Redeemable Noncontrolling Interest	Common Shares	Common Amount	Treasury Shares	Treasury Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity Attributable to Bruker Corporation	Noncontrolling Interests in Consolidated Subsidiaries	Total Shareholders' Equity
Balance at December 31, 2018	$ 22.6	156,609,340	$ 1.7	16,024,880	$(401.5)	$176.9	$1,102.5	$ 17.0	$ 896.6	$ 8.5	$ 905.1
Stock options exercised	—	626,796	—	—	—	12.0	—	—	12.0	—	12.0
Restricted stock units vested	—	241,359	—	—	—	(1.1)	—	—	(1.1)	—	(1.1)
Stock-based compensation	—	—	—	—	—	11.9	—	—	11.9	—	11.9
Shares issued from 2017 acquisition	—	3,087	—	(3,087)	0.1	—	—	—	0.1	—	0.1
Shares repurchased	—	(3,323,104)	—	3,323,104	(142.3)	—	—	—	(142.3)	—	(142.3)
Treasury stock acquired	—	(1,680)	—	1,680	(0.1)	—	—	—	(0.1)	—	(0.1)
Cash dividends paid to common stockholders ($0.16 per share)	—	—	—	—	—	—	(25.0)	—	(25.0)	—	(25.0)
Consolidated net income	(1.1)	—	—	—	—	—	197.2	—	197.2	1.9	199.1
Other comprehensive income (loss)	(0.4)	—	—	—	—	—	—	(42.5)	(42.5)	(0.1)	(42.6)
Balance at December 31, 2019	$ 21.1	154,155,798	$ 1.7	19,346,577	$(543.8)	$199.7	$1,274.7	$(25.5)	$ 906.8	$10.3	$ 917.1
Stock options exercised	—	241,915	—	—	—	4.9	—	—	4.9	—	4.9
Restricted stock units vested	—	301,320	—	—	—	(1.6)	—	—	(1.6)	—	(1.6)
Stock-based compensation	—	—	—	—	—	13.3	—	—	13.3	—	13.3
Shares repurchased	—	(2,711,952)	—	2,711,952	(123.2)	—	—	—	(123.2)	—	(123.2)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	—	(1.2)	(1.2)
Acquired remaining 20% interest in Hain LifeScience GmbH	(20.6)	—	—	—	—	—	(1.3)	—	(1.3)	—	(1.3)
Cash dividends paid to common stockholders ($0.16 per share)	—	—	—	—	—	—	(24.7)	—	(24.7)	—	(24.7)
Consolidated net income	—	—	—	—	—	—	157.8	—	157.8	3.6	161.4
Other comprehensive income (loss)	(0.5)	—	—	—	—	—	—	29.2	29.2	0.4	29.6
Balance at December 31, 2020	$ —	151,987,081	$ 1.7	22,058,529	$(667.0)	$216.3	$1,406.5	$ 3.7	$ 961.2	$13.1	$ 974.3
Stock options exercised	—	580,656	—	—	—	11.7	—	—	11.7	—	11.7
Restricted stock units vested	—	278,769	—	—	—	(4.7)	—	—	(4.7)	—	(4.7)
Stock-based compensation	—	—	—	—	—	14.5	—	—	14.5	—	14.5
Shares repurchased	—	(2,092,819)	—	2,092,819	(153.3)	—	—	—	(153.3)	—	(153.3)
Cash dividends paid to common stockholders ($0.16 per share)	—	—	—	—	—	—	(24.1)	—	(24.1)	—	(24.1)
Formation of Acuity Spatial Genomics, Inc.	0.3	—	—	—	—	—	—	—	—	—	—
Consolidated net income	(0.1)	—	—	—	—	—	277.1	—	277.1	3.6	280.7
Other comprehensive income (loss)	—	—	—	—	—	—	—	(11.9)	(11.9)	(2.6)	(14.5)
Balance at December 31, 2021	$ 0.2	150,753,687	$ 1.7	24,151,348	$(820.3)	$237.8	$1,659.5	$ (8.2)	$1,070.5	$14.1	$1,084.6

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

BRUKER CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31,		
	2021	**2020**	**2019**
Cash flows from operating activities:			
Consolidated net income	$ 280.6	$ 161.4	$ 198.0
Adjustments to reconcile consolidated net income to cash flows from operating activities:			
Depreciation and amortization	89.1	80.4	75.6
Stock-based compensation expense	17.2	16.0	9.6
Deferred income taxes	(5.8)	(22.5)	(5.4)
Other non-cash expenses, net	26.9	27.3	10.1
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable	(95.3)	40.8	(5.0)
Inventories	(67.0)	(91.6)	(60.2)
Accounts payable and accrued expenses	61.4	(2.4)	15.9
Income taxes payable	(44.3)	42.9	13.1
Deferred revenue	20.3	16.9	7.3
Customer advances	18.5	51.7	4.2
Other changes in operating assets and liabilities	(19.2)	11.3	(49.8)
Net cash provided by operating activities	282.4	332.2	213.4
Cash flows from investing activities:			
Purchase of short-term investments	(148.0)	(150.0)	(6.4)
Maturity of short-term investments	98.2	106.1	—
Purchase of investments held to maturity	(0.5)	(1.2)	—
Cash paid for acquisitions, net of cash acquired	(65.0)	(59.2)	(90.0)
Purchases of property, plant and equipment	(92.0)	(97.2)	(73.0)
Proceeds from sales of property, plant and equipment	4.9	0.2	11.0
Net proceeds from cross-currency swap agreements	10.0	8.6	—
Net cash used in investing activities	(192.4)	(192.7)	(158.4)
Cash flows from financing activities:			
Proceeds from issuance of long-term debt	492.8	—	597.9
Repayment of long-term debt	(0.8)	—	(15.0)
Repayments of revolving lines of credit	—	(305.1)	(361.9)
Proceeds from revolving lines of credit	—	297.5	250.6
Repayment of other debt, net	(2.3)	(0.7)	(4.6)
Payment of deferred financing costs	(0.1)	(0.1)	(4.4)
Proceeds from issuance of common stock, net	7.0	3.3	10.9
Payment of contingent consideration	(0.4)	(7.5)	(6.2)
Payment of dividends to common stockholders	(24.2)	(24.6)	(25.0)
Repurchase of common stock	(153.3)	(123.2)	(142.3)
Cash payments to noncontrolling interests	—	(1.2)	—
Net cash provided by (used in) financing activities	318.7	(161.6)	300.0
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(22.5)	25.7	0.6
Net change in cash, cash equivalents and restricted cash	386.2	3.6	355.6
Cash, cash equivalents and restricted cash at beginning of year	685.5	681.9	326.3
Cash, cash equivalents and restricted cash at end of year	$1,071.7	$ 685.5	$ 681.9
Supplemental cash flow information:			
Cash paid for interest	$ 19.6	$ 28.7	$ 16.0
Cash paid for taxes	$ 145.5	$ 43.0	$ 61.3
Restricted cash period beginning balance	$ 3.7	$ 3.6	$ 3.9
Restricted cash period ending balance	$ 3.5	$ 3.7	$ 3.6

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business

Bruker Corporation, together with its consolidated subsidiaries (Bruker or the Company), develops, manufactures and distributes high-performance scientific instruments and analytical and diagnostic solutions that enable its customers to explore life and materials at microscopic, molecular and cellular levels. Many of the Company's products are used to detect, measure and visualize structural characteristics of chemical, biological and industrial material samples. The Company's products address the rapidly evolving needs of a diverse array of customers in life science research, pharmaceuticals, biotechnology, applied markets, cell biology, clinical research, microbiology, in-vitro diagnostics, nanotechnology and materials science research.

The Company has four operating segments, *Bruker BioSpin Group, Bruker CALID Group, Bruker Scientific Instruments (BSI) Nano Segment* and *Bruker Energy & Supercon Technologies (BEST)*. The Company has three reportable segments, *BSI Life Science Segment, BSI Nano* Segment and *BEST*.

For financial reporting purposes, the Bruker BioSpin Group and Bruker CALID Group operating segments are aggregated into the reportable BSI Life Science Segment because each has similar economic characteristics, production processes, service offerings, types and classes of customers, methods of distribution and regulatory environments.

Bruker BioSpin - The Bruker BioSpin Group designs, manufactures and distributes enabling life science tools based on magnetic resonance technology. Bruker BioSpin Group's revenues are generated by academic and government research customers, pharmaceutical and biotechnology companies and nonprofit laboratories, as well as chemical, food and beverage, clinical and other industrial companies.

Bruker CALID (Chemicals, Applied Markets, Life Science, In-Vitro Diagnostics, Detection) - The Bruker CALID Group designs, manufactures and distributes life science mass spectrometry and ion mobility spectrometry solutions, analytical and process analysis instruments and solutions based on infrared and Raman molecular spectroscopy technologies and radiological/nuclear detectors for Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) detection. Customers of the Bruker CALID Group include academic institutions and medical schools; pharmaceutical, biotechnology and diagnostics companies; contract research organizations; nonprofit and for-profit forensics laboratories; agriculture, food and beverage safety laboratories; environmental and clinical microbiology laboratories; hospitals and government departments and agencies.

The BSI Nano Segment designs, manufactures and distributes advanced X-ray instruments; atomic force microscopy instrumentation; advanced fluorescence optical microscopy instruments; analytical tools for electron microscopes and X-ray metrology; defect-detection equipment for semiconductor process control; handheld, portable and mobile X-ray fluorescence spectrometry instruments; spark optical emission spectroscopy systems; chip cytometry products and services for targeted spatial proteomics, multi-omic services, and products and services for spatial genomics research. Customers of the BSI Nano Segment include academic institutions, governmental customers, nanotechnology companies, semiconductor companies, raw material manufacturers, industrial companies, biotechnology and pharmaceutical companies and other businesses involved in materials research and life science research analysis.

The BEST reportable segment develops and manufactures superconducting and non-superconducting materials and devices for use in renewable energy, energy infrastructure, healthcare and "big science" research. The segment focuses on metallic low temperature superconductors for use in magnetic resonance imaging, nuclear magnetic resonance, fusion energy research and other applications.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and all majority and wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Noncontrolling Interests

Noncontrolling interests represents the minority shareholders' proportionate share of the Company's majority-owned subsidiaries. The portion of net income or net loss attributable to non-controlling interests is presented as net income attributable to noncontrolling interests in consolidated subsidiaries in the consolidated statements of income and comprehensive income, and the portion of other comprehensive income of these subsidiaries is presented in the consolidated statements of shareholders' equity.

Redeemable Noncontrolling Interests

The Company has agreements with noncontrolling interest holders that provide the Company with the right to purchase, and the noncontrolling interest holders with the right to sell, their remaining minority interest at a contractually defined redemption value. These rights can be accelerated in certain events. As the redemptions are contingently redeemable at the option of the noncontrolling interest shareholders, the Company classifies the carrying amount of the redeemable noncontrolling interest in the mezzanine section on the consolidated balance sheet, which is presented above the equity section and below liabilities. The redeemable noncontrolling interests are measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value and its carrying amount adjusted for net income (loss) attributable to the noncontrolling interest. Adjustments to the carrying value of the redeemable noncontrolling interest are recorded through retained earnings. During the years ended December 31, 2021 and 2020, carrying value adjustments were immaterial.

Business Combinations

The Company accounts for business combinations under the acquisition method of accounting. Accordingly, at the date of each acquisition, the Company measures the fair value of all identifiable assets acquired (including intangible assets), liabilities assumed and any remaining noncontrolling interests and allocates the amounts paid to all items measured. The fair value of identifiable intangible assets acquired is based on valuations that use information and assumptions determined by management and which consider management's best estimates of inputs and assumptions that a market participant would use.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period.

Significant estimates and judgments made by management in preparing these financial statements include revenue recognition, allowances for doubtful accounts, write-downs for excess and obsolete inventory, estimated fair values used to record impairment charges related to intangible assets, goodwill, and other long-lived assets, amortization periods, expected future cash flows used to evaluate the recoverability of long-lived assets and to record intangible assets in business combinations, stock-based compensation expense, warranty allowances, restructuring and other related charges, contingent liabilities and the recoverability of the Company's net deferred tax assets.

Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results may differ from management's estimates if these results differ from historical experience or other assumptions prove not to be substantially accurate, even if such assumptions were reasonable when made.

Subsequent Events Considerations

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the financial statements to provide additional evidence for certain estimates or to identify matters that require additional disclosure. Subsequent events have been evaluated as required. The Company has evaluated all subsequent events and determined that, other than as reported herein, there are no material recognized or unrecognized subsequent events.

Cash and Cash Equivalents

Cash and cash equivalents primarily include cash on hand, money market funds and time deposits with original maturities of three months or less at the date of acquisition. Time deposits represent amounts on deposit in banks and temporarily invested in instruments with maturities of three months or less at the time of purchase. Certain of these investments represent deposits which are not insured by the Federal Deposit Insurance Corporation or any other government agency. Cash equivalents are carried at cost, which approximates fair value.

Short-term Investments

Short-term investments represent time and call deposits maturing within twelve months and with original maturities of greater than three months at the date of acquisition. Short-term investments are classified as available-for-sale and are reported at fair value. There were no unrealized gains (losses) recorded as of December 31, 2021, 2020 and 2019, as cost approximates current fair value.

Restricted Cash

Restricted cash is included as a component of cash, cash equivalents, and restricted cash on the Company's consolidated statement of cash flows. The Company has certain subsidiaries that are required by local laws and regulations to maintain restricted cash balances to cover future employee benefit payments. Restricted cash balances are classified as non-current unless, under the terms of the applicable agreements, the funds will be released from restrictions within one year from the balance sheet date. The current and non-current portion of restricted cash is recorded within other current assets and other long-term assets, respectively, in the accompanying consolidated balance sheets.

Accounts Receivable, net

Accounts receivable have been reduced by an allowance for doubtful accounts. The allowance for doubtful accounts represents the Company's best estimate of the amount of probable credit losses in our accounts receivable. The Company's allowance is based on a number of factors, including an evaluation of customer credit worthiness, the age of the outstanding receivable, economic trends and historical experience. Provisions for doubtful accounts are recorded in selling, general and administrative expenses in the accompanying consolidated statements of income and comprehensive income.

Derivative Financial Instruments and Hedging Activities

All derivatives, whether designated in a hedging relationship or not, are recorded on the consolidated balance sheets at fair value. The accounting for changes in fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and further, on the type of hedging relationship. For those derivative instruments that are designated and qualify as hedging instruments, the Company must designate the hedging instrument, based on the exposure being hedged, as a fair value hedge, cash flow hedge, foreign currency hedge or a hedge of a net investment in a foreign operation. If a derivative is designated as a hedge, depending on the nature of the hedge, changes in the fair value of the derivative are either

offset against the change in fair value of the hedged item through earnings or recognized in other comprehensive income until the hedged item is recognized in earnings. Derivatives that are not designated as hedges are recorded at fair value through earnings. The Company presents the cross-currency swap periodic settlements in investing activities and the interest rate swap periodic settlements in operating activities in the consolidated statements of cash flows. The Company records derivative assets and liabilities on a gross basis in the consolidated balance sheets.

Fair Value of Financial Instruments

The Company applies the following hierarchy to determine the fair value of financial instruments, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement. The levels in the hierarchy are defined as follows:

- *Level 1:* Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- *Level 2:* Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- *Level 3:* Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The valuation techniques that may be used by the Company to determine the fair value of Level 2 and Level 3 financial instruments are the market approach, the income approach and the cost approach. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value based on current market expectations about those future amounts, including present value techniques, option-pricing models and the excess earnings method. The cost approach is based on the amount that would be required to replace the service capacity of an asset (replacement cost).

The Company's financial instruments consist primarily of cash equivalents, short-term investments, restricted cash, derivative instruments consisting of forward foreign exchange contracts, cross-currency interest rate swap agreements, commodity contracts, derivatives embedded in certain purchase and sale contracts, derivatives embedded within noncontrolling interests, accounts receivable, accounts payable, contingent consideration and long-term debt. The carrying amounts of the Company's cash equivalents, short-term investments and restricted cash, accounts receivable, borrowings under a revolving credit agreement and accounts payable approximate fair value because of their short-term nature. Derivative assets and liabilities are measured at fair value on a recurring basis.

The Company has evaluated the estimated fair value of financial instruments using available market information and management's estimates. The use of different market assumptions and/or estimation methodologies could have a significant effect on the estimated fair value amounts.

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk consist of cash, cash equivalents, short-term investments, derivative instruments, accounts receivables and restricted cash. The risk with respect to cash, cash equivalents and short-term investments is minimized by the Company's policy of investing in short-term financial instruments issued by highly rated financial institutions. The risk with respect to derivative instruments is minimized by the Company's policy of entering into arrangements with highly rated financial institutions. The risk with respect to accounts receivables is minimized by the creditworthiness and diversity of the Company's customers. The Company performs periodic credit evaluations of its customers' financial condition and generally

requires an advanced deposit for a portion of the purchase price. Credit losses have been within management's expectations and the allowance for doubtful accounts totaled $4.2 million and $3.0 million at December 31, 2021 and 2020, respectively. At December 31, 2021 and 2020, no single customer represented 10% or more of the Company's accounts receivable. For the years ended December 31, 2021, 2020 and 2019, no single customer represented 10% or more of the Company's total revenue.

Inventories

Components of inventory include raw materials, work-in-process, demonstration units and finished goods. Demonstration units include systems which are located in the Company's demonstration laboratories or installed at the sites of potential customers and are considered available for sale. Finished goods include in-transit systems that have been shipped to the Company's customers, but not yet installed and accepted by the customer. All inventories are stated at the lower of cost and net realizable value. Cost is determined principally by the first-in, first-out method for a majority of subsidiaries and by average-cost for certain other subsidiaries. The Company reduces the carrying value of its inventories for differences between cost and estimated net realizable value, taking into consideration usage in the preceding twelve months, expected demand, technological obsolescence and other information including the physical condition of demonstration inventories. The Company records a charge to cost of product revenue for the amount required to reduce the carrying value of inventory to net realizable value. Costs associated with the procurement of inventories, such as inbound freight charges and purchasing and receiving costs, are capitalized as part of inventory and are also included in the cost of product revenue line item within the consolidated statements of income and comprehensive income.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation and amortization. Major improvements that extend the useful lives are capitalized while expenditures for maintenance, repairs and minor improvements are charged to expense as incurred. When assets are retired or otherwise disposed of, the assets and related accumulated depreciation and amortization are eliminated from the accounts and any resulting gain or loss is reflected in the consolidated statements of income and comprehensive income. Depreciation and amortization are calculated on a straight-line basis over the estimated useful lives of the assets as follows:

	Estimated Useful Life
Buildings	25 to 40 years
Machinery and equipment	3 to 10 years
Computer equipment and software	3 to 5 years
Furniture and fixtures	3 to 10 years
Leasehold improvements	Lesser of 15 years or the remaining lease term

Goodwill and Intangible Assets

Goodwill and indefinite-lived intangible assets are not amortized, but are evaluated for impairment on an annual basis, or on an interim basis when events or changes in circumstances indicate that the carrying value may not be recoverable. In assessing the recoverability of goodwill and indefinite-lived intangible assets, the Company must make assumptions regarding the estimated future cash flows, including forecasted revenue growth, to determine the fair value of these assets. If these estimates or their related assumptions change in the future, the Company may be required to record impairment charges against these assets in the reporting period in which the impairment is determined.

In January 2017, the Financial Accounting Standards Board ("FASB") issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The new standard simplifies the subsequent measurement of goodwill by eliminating the second step of the goodwill impairment

test. The adoption of this ASU on January 1, 2020 did not have a material impact on the Company's consolidated financial statements.

The Company tests goodwill for impairment at the reporting unit level, which is the operating segment or one level below an operating segment. The Company has the option of performing a qualitative assessment to determine whether further impairment testing is necessary before performing the quantitative assessment. If as a result of the qualitative assessment, it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, a quantitative impairment test will be required. Otherwise, no further testing will be required. If a quantitative impairment test is performed, the Company compares the fair values of the applicable reporting units with their aggregate carrying values, including goodwill. The Company determines the fair value of reporting units using a weighting of both the market and the income methodologies. Estimating the fair value of the reporting units requires significant judgment by management. If the carrying amount of a reporting unit exceeds the fair value of the reporting unit, an impairment charge is recognized for the amount by which the carrying value amount exceeds the reporting unit's fair value up to the total amount of goodwill allocated to the reporting unit.

In process research and development, or IPR&D, acquired as part of business combinations under the acquisition method represents ongoing development work associated with enhancements to existing products, as well as the development of next generation products. IPR&D is initially capitalized at fair value as an intangible asset with an indefinite life and assessed for impairment on an annual basis, or when indicators of impairment are identified. When the IPR&D project is complete, it is reclassified as a finite-lived intangible asset and is amortized over its estimated useful life. If an IPR&D project is abandoned before completion or is otherwise determined to be impaired, the value of the asset or the amount of the impairment is charged to the consolidated statements of income and comprehensive income in the period the project is abandoned or impaired. At December 31, 2021 and 2020, the Company did not have any IPR&D.

Intangible assets with a finite useful life are amortized on a straight-line basis over their estimated useful lives as follows:

	Estimated Useful Life
Existing technology and related patents	3 to 15 years
Customer relationships	5 to 15 years
Trade names	5 to 15 years

Impairment of Long-Lived Assets

Impairment losses are recorded on long-lived assets used in operations when indicators of impairment are present and the quoted market price, if available or the estimated fair value of those assets are less than the assets' carrying value and are not recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their fair values. Impairment losses are charged to the consolidated statements of income and comprehensive income for the difference between the fair value and carrying value of the asset.

Warranty Costs and Deferred Revenue

The Company typically provides a one-year parts and labor warranty with the purchase of equipment. The anticipated cost for this warranty is accrued upon recognition of the sale and is included as a current liability on the accompanying consolidated balance sheets. The Company's warranty reserve reflects estimated material and labor costs for potential product issues for which the Company expects to incur an obligation. The Company's estimates of anticipated rates of warranty claims and costs are primarily based on historical information. The Company assesses the adequacy of the warranty reserve on a quarterly basis and adjusts the amount as necessary.

If the historical data used to calculate the adequacy of the warranty reserve is not indicative of future requirements, additional or reduced warranty reserves may be required.

The Company also offers to its customers extended warranty and service agreements extending beyond the initial warranty for a fee. These fees are recorded as deferred revenue and recognized ratably into income over the life of the extended warranty contract or service agreement.

Income Taxes

Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the income tax basis of assets and liabilities. A valuation allowance is applied against any net deferred tax asset if, based on the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company records liabilities related to uncertain tax positions in accordance with the guidance that clarifies the accounting for uncertainty in income taxes recognized in a Company's financial statements. This guidance prescribes a minimum recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company includes accrued interest and penalties related to unrecognized tax benefits and income tax liabilities, when applicable, in income tax provision.

Customer Advances

The Company typically requires an advance deposit under the terms and conditions of contracts with customers. These deposits are recorded as a current or long-term liability until revenue is recognized on the specific contract in accordance with the Company's revenue recognition policy.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers*. The key elements of ASC 606 are: 1) identifying a contract with the customer; 2) identifying the performance obligations in the contract; 3) determining the transaction price; 4) allocating the transaction price to the performance obligations in the contract; and 5) recognizing revenue when (or as) each performance obligation is satisfied.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. Some of the Company's contracts have multiple performance obligations, most commonly due to providing additional goods or services along with a system, such as installation, accessories, parts and services. For contracts with multiple performance obligations, the Company allocates the contract's transaction price to each performance obligation using the best estimate of the standalone selling price of each distinct good or service being provided to the customer. The Company's best evidence of standalone selling price is its normal selling pricing and discounting practices for the specific product or service when sold on a standalone basis. Alternatively, when not sold separately, the Company may determine standalone selling price using an expected cost plus a margin approach.

The Company's performance obligations are typically satisfied at a point in time, most commonly either on shipment or customer acceptance. Certain performance obligations, such as maintenance contracts and extended warranty, are recognized over time based on the contractual obligation period. In addition, certain arrangements to provide more customized deliverables may be satisfied over time based on the extent of progress towards completion. For performance obligations recognized over time, revenue is measured by progress toward completion of the performance obligation that reflects the transfer of control. Typically, progress is measured

using a cost-to-cost method based on cost incurred to date relative to total estimated costs upon completion as this best depicts the transfer of control to the customer. Application of the cost-to-cost method requires the Company to make reasonable estimates of the extent of progress toward completion and the total costs the Company expects to incur. Losses are recorded immediately when the Company estimates that contracts will ultimately result in a loss. Changes in the estimates could affect the timing of revenue recognition.

The Company includes costs incurred in connection with shipping and handling of products within selling, general and administrative costs. Amounts billed to customers in connection with these costs are included in total revenues. When control of the goods transfers prior to the completion of the Company's obligation to ship the products to its customers, the Company has elected the practical expedient to account for the shipping services as a fulfillment cost. The Company expenses incremental costs of obtaining a contract as and when incurred if the expected amortization period is one year or less or the amount is immaterial. The Company excludes from the transaction price all taxes assessed by a governmental authority on revenue-producing transactions that are collected by the Company from a customer.

The Company recognizes revenue from systems sales upon transfer of control in an amount that reflects the consideration it expects to receive. Transfer of control generally occurs upon shipment, or for certain systems, based upon customer acceptance for a system once delivered and installed at a customer facility. For systems that include customer-specific acceptance criteria, the Company is required to assess when it can demonstrate the acceptance criteria has been met, which generally is upon successful factory acceptance testing or customer acceptance and evidence of installation. For systems that require installation and where system revenue is recognized upon shipment, the standalone selling price of installation is deferred until customer acceptance. Revenue from accessories and parts is generally recognized based on shipment. Service revenue is recognized as the services are performed or ratably over the contractual obligation and includes maintenance contracts, extended warranties, training, application support and on-demand services.

When products are sold through an independent distributor or a strategic distribution partner, the Company recognizes the system sale upon transfer of control which is typically on shipment. When the Company is responsible for installation, the standalone selling price of installation is deferred until customer acceptance. The Company's distributors do not have price protection rights or rights of return; however, the Company's products are typically warranted to be free from defect for a period of one year.

The Company requires an advance deposit based on the terms and conditions of contracts with customers for many of its contracts. Typically, revenue is recognized within one year of receiving an advance deposit. The Company does not have any material payment terms that extend beyond one year. There is minimal variable consideration included in the transaction price of the Company's contracts.

Other revenues are primarily comprised of development arrangements recognized on a cost-plus-fixed-fee basis and licensing arrangements recognized either when the licenses are provided or ratably over the contract term depending on the nature of the arrangement.

Contract Assets and Liabilities

Contract assets represent unbilled receivables when revenue recognized exceeds the amount billed to the customer, and the right to payment is not just subject to the passage of time. Contract assets typically result from system revenue recorded where a portion of the transaction price is not billable until a future event, such as customer acceptance, or from contracts recognized on a cost-to-cost or cost-plus-fixed-fee basis as revenue exceeds the amount billed to the customer. Amounts may not exceed their net realizable value. Contract assets are generally classified as current.

Contract liabilities consist of customer advances, deferred revenue and billings in excess of revenue from contracts recognized on a cost-to-cost or cost-plus-fixed-fee basis. Contract liabilities are classified as current or

long-term based on the timing of when the Company expects to recognize revenue. Contract assets and liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period.

Leases

The Company accounts for leases in accordance with ASC 842, *Leases*. At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. Leases with a term greater than 12 months are recognized on the balance sheet as Right-of-use ("ROU") assets with a corresponding lease liability. The Company has elected not to recognize on the consolidated balance sheets leases with an initial term of 12 months or less. Leases with an initial term of 12 months or less are directly expensed as incurred. Leases are classified as either operating or finance depending on the specific terms of the arrangement.

The Company's leases mainly consist of facilities, office equipment, and vehicles. The majority of leases are classified as operating. The remaining lease term ranges from 2022 to 2039, with some leases including an option to extend the lease for varying periods of time or to terminate prior to the end of the lease term. Certain lease agreements contain provisions for future rent increases. Lease payments included in the measurement of the lease liability comprise fixed payments, future rent increases tied to an index or rate, and the exercise price of a Company option to purchase the underlying asset if the Company is reasonably certain to exercise the option. Future rent increases dependent on an index or rate are initially measured at the index or rate at the commencement date. The Company's leases typically do not contain residual value guarantees.

At the commencement date, operating and finance lease liabilities, and their corresponding ROU assets, are recorded based on the present value of lease payments over the expected lease term. The lease term includes the non-cancellable period of the lease, plus any additional periods covered by either a Company option to extend (or not to terminate) the lease that the Company is reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor. The interest rate implicit in lease contracts is typically not readily determinable, therefore an incremental borrowing rate is used to calculate the lease liability. The incremental borrowing rate is the rate incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. Certain adjustments to the ROU asset may be required for items such as prepayments, lease incentives received or initial direct costs paid.

Shipping and Handling Costs

The Company includes costs incurred in connection with shipping and handling of products within selling, general and administrative expenses in the accompanying consolidated statements of income and comprehensive income. Shipping and handling costs were $36.3 million, $28.3 million and $27.0 million in the years ended December 31, 2021, 2020 and 2019, respectively. Amounts billed to customers in connection with these costs are included in total revenues.

Research and Development

The Company commits substantial capital and resources to internal and collaborative research and development projects in order to provide innovative products and solutions to its customers. The Company conducts research primarily to enhance system performance and improve the reliability of existing products, and to develop revolutionary new products and solutions. Research and development costs are expensed as incurred and include salaries, wages and other personnel related costs, material costs and depreciation, consulting costs and facility costs.

Capitalized Software

Purchased software is capitalized at cost and is amortized over the estimated useful life, which is generally three years. Software developed for use in the Company's products is expensed as incurred to research and

development expense until technological feasibility is achieved. Subsequent to the achievement of technological feasibility, amounts are capitalizable; however, to date such amounts have not been material.

Advertising

The Company expenses advertising costs as incurred. Advertising expenses were $13.8 million, $9.7 million and $15.4 million during the years ended December 31, 2021, 2020 and 2019, respectively.

Stock-Based Compensation

The Company recognizes stock-based compensation expense in the consolidated statements of income and comprehensive income based on the fair value of the share-based award at the grant date. The Company's primary types of share-based compensation are stock options, restricted stock awards and restricted stock units.

Compensation expense is amortized on a straight-line basis over the underlying vesting terms of the share-based award. Stock options to purchase the Company's common stock are periodically awarded to executive officers and other employees of the Company subject to a vesting period of three to four years. The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model.

The determination of the fair value of stock-based payment awards using the Black-Scholes model is affected by our stock price and a number of assumptions, including expected volatility, expected life, risk-free interest rates and expected dividends. Risk-free interest rates are based on the yield on zero-coupon U.S. Treasury securities for a period that is commensurate with the expected life assumption. Expected life is determined through a calculation based on historical experience. Expected volatility is based the Company's historical volatility results. Expected dividend yield is based on the estimated annualized dividend yield on our stock based on our history of paying dividends. The Company utilizes an estimated forfeiture rate derived from an analysis of historical data.

Assumptions regarding volatility, expected term, dividend yield and risk-free interest rates are required for the Black-Scholes model and are presented in the table below:

	2021	2020	2019
Risk-free interest rates	0.62%	0.23%	1.55%
Expected life	4.4 years	5.1 years	5.3 years
Volatility	34.0%	34.1%	29.6%
Expected dividend yield	0.20%	0.37%	0.38%
Weighted-average fair value per share	$ 21.69	$ 12.08	$ 11.16

Stock-based compensation for restricted stock awards and restricted stock units is expensed ratably over the vesting period based on the grant date fair value.

Earnings Per Share

Net income per common share attributable to Bruker Corporation shareholders is calculated by dividing net income attributable to Bruker Corporation, adjusted to reflect changes in the redemption value of the redeemable noncontrolling interest, by the weighted-average shares outstanding during the period. The diluted net income per share computation includes the effect of shares which would be issuable upon the exercise of outstanding stock options and the vesting of restricted stock, reduced by the number of shares which are assumed to be purchased by the Company under the treasury stock method. There was no redemption value adjustment of the redeemable noncontrolling interest for the years ended December 31, 2021 and 2020.

Post Retirement Benefit Plans

The Company recognizes the over-funded or under-funded status of defined benefit pension and other postretirement defined benefit plans as an asset or liability, respectively, in its consolidated balance sheets and recognizes changes in the funded status in the year in which the changes occur through other comprehensive income.

Other Comprehensive Income (Loss)

Other comprehensive income (loss) refers to revenues, expenses, gains and losses that are excluded from net income as these amounts are recorded directly as an adjustment to shareholders' equity, net of tax. The Company's other comprehensive income (loss) was composed of foreign currency translation adjustments, derivatives designated as hedging instruments and pension liability adjustments.

Foreign Currency Translation

Assets and liabilities of the Company's foreign subsidiaries, where the functional currency is the local currency, are translated into U.S. dollars using the current exchange rate as of the consolidated balance sheet date and shareholders' equity is translated using historical rates. Revenues and expenses of foreign subsidiaries are translated at the average exchange rates in effect during the year. Adjustments resulting from financial statement translations are included as a separate component of shareholders' equity. Gains and losses resulting from translation of foreign currency monetary transactions are reported in interest and other income (expense), net in the consolidated statements of income and comprehensive income for all periods presented. The Company has certain intercompany foreign currency transactions that are deemed to be of a long-term investment nature. Exchange adjustments related to those transactions are made directly to a separate component of shareholders' equity.

Risks and Uncertainties

The Company is subject to risks common to its industry including, but not limited to, global economic conditions, rapid technological change, government and academic funding levels, the impact of the COVID-19 coronavirus, changes in commodity prices, spending patterns of its customers, protection of its intellectual property, availability of key raw materials and components, compliance with existing and future regulation by government agencies and fluctuations in foreign currency exchange rates and interest rates.

The impact of the COVID-19 worldwide pandemic has been and will likely continue to be extensive in certain geographies and aspects of society. The pandemic has resulted in and will likely continue to result in significant disruptions to the global economy, global supply chains, as well as businesses and capital markets around the world.

Impacts to the Company's business included temporary closures in 2020 of many of the Company's government and university customers and suppliers, disruptions or restrictions on employees' and customers' ability to travel, and delays in product installations or shipments to and from affected countries. In an effort to halt the outbreak of COVID-19, a number of countries, including the United States, implemented and some continue to implement significant restrictions on travel, shelter in place or stay at home orders, and business closures. While some of these restrictions are loosening in certain jurisdictions, some markets have returned to restrictions in the face of increases in new COVID-19 cases, particularly as more contagious strains of the virus emerge. Many of the Company's employees in jurisdictions in which it has significant operations continue to work remotely. In addition, certain Asia Pacific geographies where the Company operates are continuing to experience significant COVID-19 disruptions. Much of the commercial activity in sales and marketing, and customer demonstrations and applications training, is still either being conducted remotely or postponed. Even where customers have re-opened their sites, some still operate at productivity levels that are below pre-pandemic

levels in an effort to accommodate safety protocols and as a result of pandemic-related supply chain disruptions. Any resurgence of the virus or the emergence of new strains of the virus, particularly any new strains which are more easily transmitted or which are resistant to existing vaccines, may require the Company or its customers to close or partially close operations once again. These travel restrictions, business closures and operating reductions at Bruker, customers, distributors, and/or suppliers have in the past adversely impacted and may continue to adversely impact the Company's operations worldwide, including the ability to manufacture, sell or distribute products, as well as cause temporary closures of foreign distributors, or the facilities of suppliers or customers. Global supply chains, including for semiconductor chips, components and raw materials such as copper, have been disrupted, causing shortages, which has impacted the Company's ability to manufacture or supply its products. The Company could also experience increased compensation expenses associated with employee recruiting and employee retention to the extent employment opportunities continue to multiply post-pandemic, causing the search for and retention of talent to become more competitive. This disruption of the Company's employees, distributors, suppliers and customers has historically impacted and may continue to impact the Company's global sales and operating results.

In September 2021, President Biden issued an Executive Order requiring certain COVID-19 precautions for government contractors and their subcontractors, including mandatory employee vaccination (subject to medical and religious exemptions). In November 2021, the Department of Labor's Occupational Safety and Health Administration, or OSHA, issued an Emergency Temporary Standard, or ETS, requiring that all employers with at least 100 employees ensure that their employees are fully vaccinated for COVID-19 or obtain a negative COVID-19 test at least once a week. The Executive Order was preliminarily enjoined by several U.S. federal district courts, the U.S. Supreme Court preliminarily stayed the OSHA ETS in January 2022, and OSHA subsequently withdrew the ETS. While the Company is not currently subject to any vaccine mandate, any requirement to mandate COVID-19 vaccination of its workforce or require its unvaccinated employees to be tested weekly could result in employee attrition and difficulty securing future labor needs and may have an adverse effect on future operations. In addition, any requirement to impose such obligations on the Company's suppliers who are deemed government contractors and their subcontractors could impact the price and continuity of supply of raw materials and its results of operations and financial condition could be adversely affected. It continues to be the Company's policy to encourage each of its employees to be fully vaccinated against COVID-19.

The Company has experienced supply chain interruptions as a result of the COVID-19 pandemic, general global economic conditions, a tight labor market and other factors, including natural events and disasters. Various factors, including increased demand for certain components and production delays, are contributing to shortages of certain components used in the Company's products and increased difficulties in its ability to obtain a consistent supply of materials at stable pricing levels. Supply shortages and longer lead times for components used in the Company's products, including limited source components, can result in significant additional costs and inefficiencies in manufacturing. A shortage of key components may cause a significant disruption to the Company's production activities, which could have a substantial adverse effect on the Company's financial condition or results of operations. If the Company is unsuccessful in resolving any such component shortages in a timely manner, the Company could experience a significant adverse impact on the timing of its revenue, a possible loss of revenue, or an increase in manufacturing costs, any of which could have a material adverse impact on the Company's operating results.

The Company is continuing to monitor and assess the effects of the COVID-19 pandemic on its commercial operations in 2022. However, the Company cannot at this time accurately predict what effects these conditions will ultimately have on future operations due to uncertainties relating to the severity of the disease, the duration of the outbreak, including the impact of any resurgence of the virus or the continued emergence of new strains of the virus, the effectiveness and availability of vaccines, (including to protect against any new strains of the virus), the willingness of individuals to receive vaccines, and the length or severity of the travel restrictions, business closures, and other safety and precautionary measures imposed by the governments of impacted countries. The pandemic has also adversely affected the economies and financial markets of many countries, which has affected and likely will continue to affect demand for the Company's products and its operating results.

The preparation of the consolidated financial statements requires the Company to make estimates, judgments and assumptions that may affect the reported amounts of assets, liabilities, equity, revenues and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis the Company evaluates estimates, judgments and methodologies. Changes in estimates are recorded in the period in which they become known. The Company bases estimates on historical experience and on various other assumptions that they believe are reasonable, the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity and the amount of revenues and expenses. The full extent to which the COVID-19 pandemic will directly or indirectly impact future business, results of operations and financial condition, including sales, expenses, reserves and allowances, manufacturing, research and development costs and employee-related amounts, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19, new strains of the virus, the effectiveness and availability of COVID-19 vaccines or individuals' willingness to receive vaccines, and the actions taken to contain or treat the virus, as well as the economic impact on local, regional, national and international customers and markets. The Company has made estimates of the impact of COVID-19 within the financial statements and there may be changes to those estimates in future periods. Actual results may differ from management's estimates if these results differ from historical experience.

Loss Contingencies

Loss contingency provisions are recorded if the potential loss from any claim, asserted or unasserted, or legal proceeding related to patents, products and other matters, is considered probable and the amount can be reasonably estimated or a range of loss can be determined. These accruals represent management's best estimate of probable loss. Disclosure is provided when a loss is considered probable but the loss is not reasonably estimable and when a material loss is reasonably possible but not probable.

3. Recent Accounting Pronouncements

In October 2021, the FASB issued Accounting Standards Update ("ASU") No. 2021-08, *Business Combinations (Topic 805)—Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* to improve the accounting for acquired revenue contracts with customers in a business combination. The amendments require an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with ASC 606. Previous guidance required an entity to recognize contract assets and contract liabilities at fair value as of the acquisition date. The amendments are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted, including adoption in an interim period. The Company elected to early adopt ASU No. 2021-08 in the fourth quarter of 2021, and in accordance with the early adoption requirements in an interim period, has applied the provisions retrospectively to all acquisitions completed on or after January 1, 2021. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* ("ASU 2020-04"), which provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The guidance provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include: contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity. In January 2021, the FASB issued ASU 2021-01, Reference Rate Reform (Topic 848): Scope, to clarify that certain optional expedients and exceptions under the reference rate reform guidance for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition. Specifically, certain provisions in the reference rate reform guidance, if elected by an entity, apply to derivative instruments that use an interest rate for margining, discounting, or contract price alignment that is modified as a result of reference rate reform. This temporary guidance is effective for all entities as of March 12, 2020 through December 31, 2022. The Company may elect to apply this guidance for all contract modifications or eligible hedging relationships during that time period

subject to certain criteria. The Company is still evaluating the impact of reference rate reform and whether this guidance will be adopted.

In January 2020, the FASB issued ASU 2020-01—*Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)-Clarifying the Interactions between Topic 321, Topic 323, and Topic 815 (a consensus of the Emerging Issues Task Force)*, which clarifies the interaction of the accounting for certain equity securities, equity method investments, and certain forward contracts and purchased options. The guidance clarifies that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting for the purposes of applying measurement principles for certain equity securities immediately before applying or discontinuing the equity method. The Company adopted this guidance using a prospective method. The adoption of this ASU in 2020 did not have a material impact on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12—*Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. The guidance simplifies the accounting for income taxes by removing certain exceptions within the current guidance; including the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities for outside basis differences. The amendment also improves consistent application by clarifying and amending existing guidance related to aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step up in the tax basis of goodwill. This guidance is effective for annual and interim periods beginning after December 15, 2020 and early adoption is permitted. The adoption of this ASU in 2021 did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820), Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements of fair value measurements, including the consideration of costs and benefits. This ASU is effective for the Company in fiscal years beginning after December 15, 2019. The Company adopted this guidance on January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The new standard simplifies the subsequent measurement of goodwill by eliminating the second step of the goodwill impairment test. This ASU will be applied prospectively and is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019. The Company adopted this ASU on January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13—*Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The guidance modifies the recognition of credit losses related to financial assets, such as debt securities, trade receivables, net investments in leases, off-balance sheet credit exposures, and other financial assets that have the contractual right to receive cash. Current guidance requires the recognition of a credit loss when it is considered probable that a loss event has occurred. The new guidance requires the measurement of expected credit losses to be based upon relevant information, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the asset. As such, expected credit losses may be recognized sooner under the new guidance due to the broader range of information that will be required to determine credit loss estimates. The new guidance also amends the current other-than-temporary impairment model used for debt securities classified as available-for-sale. When the fair value of an available-for-sale debt security is below its amortized cost, the new guidance requires the total unrealized loss to be bifurcated into its credit and non-credit components. Any expected credit losses or subsequent recoveries will be recognized in earnings and any changes not considered credit related will continue to be recognized within other comprehensive income (loss). This guidance is effective for annual and interim periods beginning after December 15, 2019. The Company adopted this new standard on January 1, 2020 using a

modified retrospective method for all financial assets measured at amortized cost. The new standard impacts the Company's accounts receivables and off-balance sheet credit exposures. The new standard did not have an impact on the Company's results of operations and cash flows.

4. Revenue

The following table presents the Company's revenues by Group for the years ended December 31:

(in millions)	2021	2020	2019
Revenue by Group:			
Bruker BioSpin	$ 691.0	$ 600.0	$ 621.4
Bruker CALID	819.6	653.9	623.5
BSI Nano	697.5	556.1	632.7
BEST	223.8	189.5	209.9
Eliminations	(14.0)	(12.0)	(14.9)
Total revenue	$2,417.9	$1,987.5	$2,072.6

Revenue for the Company recognized at a point in time versus over time is as follows for the years ended December 31:

(in millions)	2021	2020	2019
Revenue recognized at a point in time	$2,104.7	$1,726.7	$1,847.4
Revenue recognized over time	313.2	260.8	225.2
Total revenue	$2,417.9	$1,987.5	$2,072.6

Remaining Performance Obligations

Remaining performance obligations represent the aggregate transaction price allocated to a promise to transfer a good or service that is fully or partially unsatisfied at the end of the period. As of December 31, 2021, remaining performance obligations were approximately $2,077.2 million. The Company expects to recognize revenue on approximately 70% of the remaining performance obligations over the next twelve months and the remaining performance obligations primarily within one to three years.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets) and deferred revenue, customer deposits and billings in excess of revenue recognized (contract liabilities) on the Company's consolidated balance sheets.

Contract assets—Most of the Company's long-term contracts are billed as work progresses in accordance with the contract terms and conditions, either at periodic intervals or upon achievement of certain milestones. Billing often occurs subsequent to revenue recognition, resulting in contract assets. Contract assets are generally classified as other current assets in the consolidated balance sheets. The balance of contract assets as of December 31, 2021 and December 31, 2020 was $46.1 million and $41.8 million, respectively.

Contract liabilities—The Company often receives cash payments from customers in advance of the Company's performance, resulting in contract liabilities. These contract liabilities are classified as either current or long-term in the consolidated balance sheet based on the timing of when revenue recognition is expected. As of December 31, 2021 and December 31, 2020, the contract liabilities were $430.8 million and $399.4 million, respectively. The increase in the contract liability balance during the year ended

December 31, 2021 is primarily a result of new performance obligations entered into during the period in addition to delays in instrument installations due to customer facility closures or reduced operations as a result of COVID-19. Approximately $270.0 million of the contract liability balance on December 31, 2020 was recognized as revenue during the year ended December 31, 2021.

5. Acquisitions

Pro forma financial information reflecting all acquisitions has not been presented because the impact, individually and collectively, on revenues and net income is not material. Amounts allocated to goodwill that are attributable to expected synergies are not expected to be deductible for tax purposes.

2021

In the year ended December 31, 2021, the Company completed various acquisitions that collectively complemented its existing product offerings of to the Company's existing businesses. The following table reflects the consideration transferred and the respective reportable segment for each of the 2021 acquisitions (in millions):

	SCI Instruments	Molecubes NV
Segment	**BSI Nano**	**BSI Life Science**
Consideration Transferred:		
Cash paid	$28.0	$21.1
Fair value of contingent consideration	1.0	0.4
Working capital adjustment	(0.6)	—
Total consideration transferred	$28.4	$21.5
Allocation of Consideration Transferred:		
Cash	$ —	$ 1.1
Accounts receivable	—	1.2
Inventories	1.0	1.5
Other current assets	—	0.3
Property, plant and equipment	—	0.1
Intangible assets:		
Technology	7.1	3.4
Customer relationships	6.4	2.4
Trade name	0.4	0.5
Backlog	1.2	0.1
Goodwill	12.6	14.1
Deferred taxes	—	(1.6)
Liabilities assumed	(0.3)	(1.6)
Total consideration allocated	$28.4	$21.5

SCI Instruments

On August 24, 2021, the Company acquired SCI Instruments ("SCI"), a privately held company, for a purchase price of $28.0 million with the potential for additional consideration of up to $4.0 million based on revenue and gross margin achievements in the calendar years 2022 and 2023. SCI is a manufacturer of advanced metrology systems and analysis software and serves major companies in the semiconductor, optoelectronics, data storage, display, MEMS, and optical coating industries. SCI will be integrated into the BSI Nano Segment. The acquisition is being accounted for under the acquisition method.

The preliminary fair value allocation included contingent consideration in the amount of $1.0 million, which represented the estimated fair value of future payments to the former shareholders of SCI based on achieving revenue and gross margin targets for the calendar years 2022 and 2023. The Company expects to complete the fair value allocation during the measurement period. The amortization period for the intangible assets acquired is ten years for the trade name and technology, and nine years for the customer relationships. The backlog intangible asset will be amortized through March 31, 2022.

Molecubes NV

On November 17, 2021, the Company acquired Molecubes NV ("Molecubes"), a privately held company, for a purchase price of EUR 18.7 million (approximately $21.1 million) with the potential for additional consideration of up to EUR 3.0 million (approximately $3.4 million) based on revenue and gross margin achievements. Molecubes manufactures and sells preclinical imaging CUBES that enable researchers to perform high-performance SPECT/CT and PET/CT studies without the need for complex system handling. The acquisition is being accounted for under the acquisition method.

The preliminary fair value allocation included contingent consideration in the amount of EUR 0.4 million (approximately $0.4 million), which represented the estimated fair value of future payments to the former shareholders of Molecubes based on achieving revenue and gross margin targets in 2021 and 2022. The Company expects to complete the fair value allocation during the measurement period. The amortization period for the intangible assets acquired is ten years for the trade name, technology, and customer relationships. The backlog intangible asset was fully amortized as of December 31, 2021.

In addition to the SCI and Molecubes acquisitions, in 2021 the Company completed various other acquisitions accounted for under the acquisition method that complemented the Company's existing product offerings. The following table reflects the consideration transferred and the respective reportable segment for these acquisitions (in millions):

Name of Acquisition	Date Acquired	Segment	Total Consideration	Cash Consideration
Creative Instruments	July 1, 2021	BSI Life Science	$ 1.0	$ 1.0
SVXR, Inc	September 9, 2021	BSI Nano	13.4	11.9
			$14.4	$12.9

In addition to the acquisitions noted above, in 2021 the Company completed minority investments that complemented the Company's existing product offerings. The following table reflects the consideration transferred and the respective reportable segment for the acquisitions (in millions):

Name	Acquisition / Investment	Financial Statement Classification	Date Acquired	Segment	Total Consideration	Cash Consideration
Glycopath Inc.	Investment	Other long-term assets	February 18, 2021	BSI Life Science	$2.0	$2.0
IonPath Inc.	Investment	Other long-term assets	March 18, 2021	BSI Life Science	2.0	2.0
Olaris, Inc.	Investment	Other long-term assets	September 23, 2021	BSI Life Science	0.5	0.5
					$4.5	$4.5

2022—Subsequent Event Acquisitions

On January 17, 2022, the Company completed a share purchase agreement to acquire 100% of the outstanding stock of Prolab Instruments GmbH ("Prolab") for a purchase price of CHF 5.0 million (approximately $5.5 million) with the potential for additional consideration of up to CHF 3.0 million (approximately $3.3 million). Prolab is located in Basel, Switzerland and will be integrated into the Bruker CALID Group.

On January 18, 2022, the Company completed a share purchase agreement to acquire 74.15% of the outstanding stock of PreOmics GmbH ("PreOmics") for EUR 44.7 million (approximately $50.6 million). PreOmics is located in Munich, Germany and will be integrated into the Bruker CALID Group.

On February 1, 2022, the Company completed a share purchase agreement to acquire 100% of the outstanding stock of PepSep Holding ApS ("PepSep") for EUR 2.5M (approximately $2.8 million) with the potential for additional consideration of up to EUR $1.5 million (approximately $1.7 million). PepSep is located in Odense, Denmark and will be integrated into the Bruker CALID Group.

On February 15, 2022, the Company completed an additional $12.0 million minority interest investment in PrognomIQ, Inc. ("PrognomIQ"). PrognomIQ is located in Redwood City, California and is reported within the Bruker CALID Group.

2020

Canopy Biosciences

On September 10, 2020, Bruker acquired Canopy Biosciences, LLC ("Canopy") for a purchase price of $24.2 million with the potential for additional consideration of up to $5.0 million based on achieving revenue targets in calendar years 2021 and 2022. Canopy is a leader in high multiplex biomarker imaging for immunology, immune-oncology and cell therapy. Canopy was integrated into the BSI Nano Segment. The acquisition was accounted for under the acquisition method. The components and fair value allocation of the consideration transferred in connection with the acquisition are as follows (in millions):

Consideration Transferred:	
Cash paid	$24.4
Contingent consideration	0.5
Cash acquired	(0.5)
Working capital adjustment	0.3
Total consideration transferred	$24.7
Allocation of Consideration Transferred:	
Inventories	$ 1.1
Accounts receivable	1.2
Other current and non-current assets	1.0
Property, plant and equipment	0.9
Operating lease assets	0.3
Intangible assets:	
Technology	5.7
Customer relationships	6.1
Trade name	0.7
Backlog	0.3
Goodwill	12.0
Deferred taxes, net	(2.0)
Liabilities assumed	(2.6)
Total consideration allocated	$24.7

The fair value allocation included contingent consideration in the amount of $0.5 million, which represented the estimated fair value of future payments to the former shareholders of Canopy based on achieving revenue targets for calendar years 2021 and 2022. The Company completed the fair value allocation during 2021. The amortization period for the intangible assets acquired is ten years for the customer relationships and technology, eight years for the trade name and one year for the backlog intangible asset. During the year ended December 31,

2021, the revenue targets were not achieved and the $0.5 million contingent consideration liability was reduced to zero resulting in a reduction to selling, general and administrative expenses.

Hain

On October 15, 2018, Bruker acquired an 80% interest in Hain LifeScience GmbH ("Hain") for a purchase price of Euro 66 million (approximately $76.4 million) with options to acquire the remaining 20%. Hain is an infectious disease specialist with a broad range of molecular diagnostics solutions for the detection of microbial and viral pathogens, as well as for molecular antibiotic resistance testing. Hain is located in Nehren, Germany and was integrated into the BSI Life Science Segment. On January 31, 2020, the Company acquired the remaining 20% interest in Hain for a purchase price of EUR 20 million (approximately $22.2 million). The carrying value of the noncontrolling interest was accreted to the redemption value of EUR 20 million through retained earnings and then reclassified to additional paid in capital.

In addition to the acquisitions noted above, in 2020 the Company completed various other acquisitions that complemented the Company's existing product offerings. The following table reflects the consideration transferred and the respective reportable segment for these acquisitions (in millions):

Name of Acquisition	Date Acquired	Segment	Total Consideration	Cash Consideration
SmartTip B.V.	April 1, 2020	BSI Nano	$3.1	$2.4
Integrated Proteomics Applications, Inc.	August 7, 2020	BSI Life Science	3.0	3.0
			$6.1	$5.4

6. Allowance for Doubtful Accounts

The following is a summary of the components for allowance for doubtful accounts (in millions):

Balance at December 31, 2018	$ 3.8
Additions	1.5
Deductions	(1.9)
Balance at December 31, 2019	3.4
Additions	0.9
Deductions	(1.3)
Balance at December 31, 2020	3.0
Additions	2.2
Deductions	(1.0)
Balance at December 31, 2021	$ 4.2

7. Inventories

Inventories consisted of the following (in millions):

	2021	2020
Raw materials	$218.7	$198.8
Work-in-process	254.9	245.7
Finished goods	144.9	152.1
Demonstration units	91.6	95.7
Inventories	$710.1	$692.3

Finished goods include in-transit systems that have been shipped to the Company's customers but not yet installed and accepted by the customer. At December 31, 2021 and 2020, inventory-in-transit was $49.5 million and $67.8 million, respectively.

8. Property, Plant and Equipment, Net

The following is a summary of property, plant and equipment, net by major asset class (in millions):

	2021	2020
Land	$ 34.1	$ 36.5
Building and leasehold improvements	371.5	374.7
Machinery, equipment, software and furniture and fixtures	435.6	416.8
	841.2	828.0
Less accumulated depreciation and amortization	(435.1)	(432.5)
Property, plant and equipment, net	$ 406.1	$ 395.5

Depreciation expense, which includes the amortization of leasehold improvements, for the years ended December 31, 2021, 2020 and 2019 was $51.8 million, $44.7 million and $37.3 million, respectively.

9. Goodwill and Intangible Assets

Goodwill

The following table sets forth the changes in the carrying amount of goodwill by segment (in millions):

	BSI Life Science	BSI Nano	BEST	Total
Balance at December 31, 2018	$ 72.0	$203.7	$—	$275.7
Current period additions/adjustments	13.1	6.3	0.3	19.7
Foreign currency impact	(0.9)	(1.5)	—	(2.4)
Balance at December 31, 2019	84.2	208.5	0.3	293.0
Current period additions/adjustments	—	13.7	—	13.7
Foreign currency impact	7.9	5.8	—	13.7
Balance at December 31, 2020	92.1	228.0	0.3	320.4
Current period additions/adjustments	13.4	16.6	—	30.0
Foreign currency impact	(5.2)	(5.7)	—	(10.9)
Balance at December 31, 2021	$100.3	$238.9	$ 0.3	$339.5

The Company performed its annual impairment evaluation using both a quantitative and qualitative approach at December 31, 2021, 2020 and 2019, and concluded it was more likely than not that goodwill has not been impaired. Based on the most recent quantitative analysis the fair values of each of the Company's reporting units was greater than their carrying amounts and, therefore, no impairment was required.

As a result of the impact of the COVID-19 pandemic, the Company performed an interim impairment assessment of the goodwill balance as of March 31, 2020 using a combination of both quantitative and qualitative approaches. Based on this interim assessment, the Company concluded the fair values of each of the reporting units were significantly greater than their carrying amounts, and therefore, no impairment is required. The goodwill assessment was based on management's estimates and assumptions, certain of which are dependent on external factors. No further triggering events were identified subsequent to March 31, 2020.

The Company has recorded $3.1 million of accumulated impairment losses of goodwill as of December 31, 2021.

Intangible Assets

The following is a summary of intangible assets (in millions):

	2021			2020		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Existing technology and related patents	$310.4	$(206.8)	$103.6	$309.8	$(194.6)	$115.2
Customer relationships	156.1	(58.2)	97.9	148.3	(45.4)	102.9
Trade names	15.5	(5.8)	9.7	15.2	(4.4)	10.8
Other	1.8	(1.2)	0.6	0.3	(0.1)	0.2
Intangible assets	$483.8	$(272.0)	$211.8	$473.6	$(244.5)	$229.1

For the years ended December 31, 2021, 2020 and 2019, the Company recorded amortization expense of approximately $37.4 million, $35.8 million and $38.3 million, respectively, in the consolidated statements of income and comprehensive income.

The estimated future amortization expense related to amortizable intangible assets is as follows (in millions):

2022	$ 32.8
2023	29.7
2024	27.5
2025	26.6
2026	28.4
Thereafter	66.8
Total	$211.8

10. Other Current Liabilities

The following is a summary of other current liabilities (in millions):

	2021	2020
Deferred revenue	$138.4	$118.0
Accrued compensation	132.0	110.6
Accrued warranty	23.8	20.3
Contingent consideration	5.2	2.7
Income taxes payable	75.1	98.0
Other taxes payable	15.4	18.5
Derivative liabilities	6.4	8.0
Operating leases	17.9	21.3
Legal and professional fees	12.8	14.3
Other accrued expenses	54.2	54.2
Other current liabilities	$481.2	$465.9

The following table sets forth the changes in accrued warranty (in millions):

Balance at December 31, 2018	$ 19.7
Accruals for warranties issued during the year	24.5
Settlements of warranty claims	(22.9)
Foreign currency impact	(0.2)
Balance at December 31, 2019	21.1
Accruals for warranties issued during the year	19.2
Settlements of warranty claims	(21.1)
Foreign currency impact	1.1
Balance at December 31, 2020	20.3
Accruals for warranties issued during the year	23.4
Settlements of warranty claims	(19.0)
Foreign currency impact	(0.9)
Balance at December 31, 2021	$ 23.8

11. Debt

The Company's debt obligations consist of the following (in millions):

	2021	2020
EUR notes (in dollars) under the 2021 Note Purchase Agreement	$ 170.7	$ —
CHF notes (in dollars) under the 2021 Note Purchase Agreement	329.2	—
CHF notes (in dollars) under the 2019 Note Purchase Agreement	325.9	335.5
U.S. Dollar notes under the 2019 Term Loan	299.2	300.0
U.S. Dollar notes under the 2012 Note Purchase Agreement	205.0	205.0
Unamortized debt issuance costs	(2.0)	(2.4)
Other loans	1.9	3.0
Total notes and loans outstanding	1,329.9	841.1
Finance lease obligations	4.3	3.4
Total debt	1,334.2	844.5
Current portion of long-term debt	(112.4)	(2.2)
Total long-term debt, less current portion	$1,221.8	$842.3

2021 Note Purchase Agreement

On December 7, 2021, the Company entered into a note purchase agreement, referred to as the 2021 Note Purchase Agreement, with a group of institutional accredited investors. Pursuant to the 2021 Note Purchase Agreement, the Company issued and sold CHF 300 million aggregate principal amount of 0.88% series A senior notes and EUR 150 million aggregate principal amount of 1.03% series B senior notes due December 8, 2031, referred to as the 2021 Senior Notes. The obligations under the Note Purchase Agreement are unsecured and are fully and unconditionally guaranteed by certain of the Company's subsidiaries.

Interest on the 2021 Senior Notes is payable semi-annually on June 7 and December 7 of each year, commencing June 7, 2022. The Company may prepay some or all of the 2021 Senior Notes at any time in an amount not less than 10% of the aggregate principal amount of the 2021 Senior Notes then outstanding at a price equal to the sum of (a) the principal amount to be prepaid, plus accrued and unpaid interest, (b) any applicable "make-whole" amount, and (c) certain other fees and expenses. In the event of a change in control (as defined in the 2021 Note Purchase Agreement) of the Company, the Company may be required to prepay the 2021 Senior

Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest and certain other fees and expenses.

The 2021 Note Purchase Agreement contains customary affirmative and negative covenants, including, among others, restrictions on the Company's ability to incur liens, transfer or sell equity or assets, engage in certain mergers and consolidations, enter into transactions with affiliates, and engage or permit any subsidiary to engage in certain lines of business. The 2021 Note Purchase Agreement also includes customary representations and warranties and events of default.

Additionally, so long as any 2021 Senior Notes are outstanding, the Company may not permit (i) its leverage ratio (as determined pursuant to the 2021 Note Purchase Agreement) as of the end of any fiscal quarter to exceed 3.50 to 1.00 unless a material acquisition causes an adjusted leverage ratio to apply pursuant to the 2021 Note Purchase Agreement, (ii) its interest coverage ratio (as determined pursuant to the 2021 Note Purchase Agreement) as of the end of any fiscal quarter for any period of four consecutive fiscal quarters to be less than 2.50 to 1.00, or (iii) priority Debt at any time to exceed 15% of consolidated total assets (as determined pursuant to the 2021 Note Purchase Agreement).

2019 Transactions

On December 11, 2019, the Company entered into (1) a new revolving credit agreement to establish a new revolving credit facility in the aggregate principal amount of $600 million; (2) a term loan agreement to establish a new term loan facility in the aggregate principal amount of $300 million; and (3) a note purchase agreement to issue and sell CHF 297 million aggregate principal amount of 1.01% senior notes due December 11, 2029.

The existing $105 million 4.31% Series 2012A Senior Notes, Tranche C, due January 18, 2022, and the existing $100 million 4.46% Series 2012A Senior Notes, Tranche D, due January 18, 2024, which the Company issued pursuant to a note purchase agreement dated January 18, 2012, remain in full force and effect.

Each of the revolving credit agreements, term loan agreement and note purchase agreements are described below.

2019 Revolving Credit Agreement

On December 11, 2019, the Company entered into a new credit agreement, referred to as the 2019 Revolving Credit Agreement. The 2019 Revolving Credit Agreement provides for a five-year revolving credit facility in the U.S. Dollar equivalent amount of $600 million, comprised of sub-facilities for revolving loans, swing-line loans, letters of credit and foreign borrowings. The 2019 Revolving Credit Agreement also provides for an uncommitted incremental facility whereby, under certain circumstances, the Company may, at its option, increase the amount of the revolving facility or incur term loans in an aggregate amount not to exceed $250 million. Loans under the 2019 Revolving Credit Agreement will be repayable in full at maturity and may also be prepaid at the Company's option in whole or in part without premium or penalty. Amounts borrowed under the 2019 Revolving Credit Agreement may be repaid and reborrowed from time to time prior to the maturity date. The obligations under the 2019 Revolving Credit Agreement are unsecured and are fully and unconditionally guaranteed by the Company and certain of its subsidiaries.

Borrowings under the 2019 Revolving Credit Agreement bear interest at a rate equal to, at the Company's option, (a) the London Interbank Offered Rate (LIBOR) applicable to the relevant currency, plus a margin ranging from 1.000% to 1.500%, based on the Company's leverage ratio, or (b) the highest of (i) the federal funds effective rate plus ½ of 1%, (ii) the prime rate announced by Bank of America, N.A., and (iii) LIBOR, as adjusted, plus 1%, plus, in each case, a margin rate ranging from 0.100% to 0.500%, based on the Company's leverage ratio. The Company has also agreed to pay a quarterly facility fee based on the aggregate unused amount available under the 2019 Revolving Credit Agreement ranging from 0.100% to 0.200%, based on the Company's leverage ratio.

The 2019 Revolving Credit Agreement includes affirmative, negative and financial covenants and events of default customary for financings of this type. The negative covenants include, among others, restrictions on liens, indebtedness of the Company and its subsidiaries, asset and equity sales, dividends, and transactions with affiliates. The financial covenants include maximum leverage ratio and minimum interest coverage ratios of the Company, specifically, the Company's leverage ratio cannot exceed 3.5 and the interest coverage ratio cannot be less than 2.5. The events of default include, among others, payment defaults, defaults in the performance of affirmative and negative covenants, the inaccuracy of representations and warranties, bankruptcy and insolvency related events, certain ERISA events, material judgments, and the occurrence of a change of control.

The following is a summary of the maximum commitments and the net amounts available to the Company under the 2019 Revolving Credit Agreement and other lines of credit with various financial institutions located primarily in Germany and Switzerland that are unsecured and typically due upon demand with interest payable monthly (dollars in millions):

	Weighted Average Interest Rate	Total Amount Committed by Lenders	Outstanding Borrowings	Outstanding Letters of Credit	Total Committed Amounts Available
2019 Credit Agreement	1.3%	$600.0	$—	$ 0.2	$599.8
Bank guarantees and working capital line	varies	116.2	—	116.2	—
Total revolving lines of credit		$716.2	$—	$116.4	$599.8

2019 Term Loan Agreement

On December 11, 2019, the Company, together with certain of its subsidiaries, as borrowers, entered into a term loan agreement, referred to as Term Loan Agreement with a bank consortium. The Term Loan Agreement provides for a $300 million seven-year term loan facility subject to terms and conditions substantially consistent with those provisions contained in the 2019 Revolving Credit Agreement. Loans under the Term Loan Agreement will be repayable in full at maturity, subject to scheduled amortization beginning in 2022, and may also be prepaid at the Company's option in whole or in part without premium or penalty. The obligations under the Term Loan Agreement are unsecured and are fully and unconditionally guaranteed by certain of the Company's subsidiaries.

Amounts outstanding under the Term Loan Agreement bear interest at a rate equal to, at the Company's option, (a) the U.S. Dollar London Interbank Offered Rate (USD LIBOR), plus a margin ranging from 1.000% to 1.500%, based on the Company's leverage ratio, or (b) the highest of (i) the federal funds effective rate plus ½ of 1%, (ii) the prime rate announced by Bank of America, N.A., and (iii) USD LIBOR, as adjusted, plus 1%, plus a margin ranging from 0.100% to 0.500%, based on the Company's leverage ratio.

The other terms of the Term Loan Agreement are substantially similar to the terms of the 2019 Revolving Credit Agreement, including representations and warranties, affirmative, negative and financial covenants, and events of default.

2019 Note Purchase Agreement

On December 11, 2019, the Company entered into a note purchase agreement, referred to as the 2019 Note Purchase Agreement, with a group of institutional accredited investors. Pursuant to the 2019 Note Purchase Agreement, the Company issued and sold CHF 297 million aggregate principal amount of 1.01% senior notes due December 11, 2029, referred to as the 2019 Senior Notes. The obligations under the Note Purchase Agreement are unsecured and are fully and unconditionally guaranteed by certain of the Company's subsidiaries.

Interest on the 2019 Senior Notes is payable semi-annually on June 11 and December 11 of each year, commencing June 11, 2020. The 2019 Senior Notes are unsecured obligations of the Company and are fully and unconditionally guaranteed by certain of the Company's subsidiaries. The Company may prepay some or all of the 2019 Senior Notes at any time in an amount not less than 10% of the aggregate principal amount of the 2019 Senior Notes then outstanding at a price equal to the sum of (a) the principal amount to be prepaid, plus accrued and unpaid interest, (b) any applicable "make-whole" amount, and (c) certain other fees and expenses. In the event of a change in control (as defined in the 2019 Note Purchase Agreement) of the Company, the Company may be required to prepay the 2019 Senior Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest and certain other fees and expenses.

The 2019 Note Purchase Agreement contains customary affirmative and negative covenants, including, among others, restrictions on the Company's ability to incur liens, transfer or sell equity or assets, engage in certain mergers and consolidations, enter into transactions with affiliates, and engage or permit any subsidiary to engage in certain lines of business. The 2019 Note Purchase Agreement also includes customary representations and warranties and events of default.

Additionally, so long as any 2019 Senior Notes are outstanding, the Company may not permit (i) its leverage ratio (as determined pursuant to the 2019 Note Purchase Agreement) as of the end of any fiscal quarter to exceed 3.50 to 1.00 unless a material acquisition causes an adjusted leverage ratio to apply pursuant to the 2019 Note Purchase Agreement, (ii) its interest coverage ratio (as determined pursuant to the 2019 Note Purchase Agreement) as of the end of any fiscal quarter for any period of four consecutive fiscal quarters to be less than 2.50 to 1.00, or (iii) priority Debt at any time to exceed 15% of consolidated total assets (as determined pursuant to the 2019 Note Purchase Agreement).

2012 Note Purchase Agreement

In January 2012, the Company entered into a note purchase agreement, referred to as the 2012 Note Purchase Agreement, with a group of accredited institutional investors. Pursuant to the 2012 Note Purchase Agreement, the Company issued and sold $240.0 million of senior notes, referred to as the 2012 Senior Notes, which consist of the following:

- $20 million 3.16% Series 2012A Senior Notes, Tranche A, due January 18, 2017;
- $15 million 3.74% Series 2012A Senior Notes, Tranche B, due January 18, 2019;
- $105 million 4.31% Series 2012A Senior Notes, Tranche C, due January 18, 2022; and
- $100 million 4.46% Series 2012A Senior Notes, Tranche D, due January 18, 2024.

Principal amounts of Tranches A, B and C together with any accrued interest theron were paid on their respective due dates in accordance with the 2012 Note Purchase Agreement.

Under the terms of the 2012 Note Purchase Agreement, interest is payable semi-annually on January 18 and July 18 of each year. The 2012 Senior Notes are unsecured obligations of the Company and are fully and unconditionally guaranteed by certain of the Company's direct and indirect subsidiaries. The 2012 Senior Notes rank pari passu in right of repayment with the Company's other senior unsecured indebtedness. The Company may prepay some or all of the 2012 Senior Notes at any time in an amount not less than 10% of the original aggregate principal amount of the 2012 Senior Notes to be prepaid, at a price equal to the sum of (a) 100% of the principal amount thereof, plus accrued and unpaid interest, and (b) the applicable make-whole amount, upon not less than 30 and no more than 60 days' written notice to the holders of the 2012 Senior Notes. In the event of a change in control of the Company, as defined in the Note Purchase Agreement, the Company may be required to prepay the Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest.

The 2012 Note Purchase Agreement contains affirmative covenants, including, without limitation, maintenance of corporate existence, compliance with laws, maintenance of insurance and properties, payment of taxes, addition of subsidiary guarantors and furnishing notices and other information. The 2012 Note Purchase Agreement also contains certain restrictive covenants that restrict the Company's ability to, among other things, incur liens, transfer or sell assets, engage in certain mergers and consolidations and enter into transactions with affiliates. The 2012 Note Purchase Agreement also includes customary representations and warranties and events of default. In the case of an event of default arising from specified events of bankruptcy or insolvency, all outstanding 2012 Senior Notes will become due and payable immediately without further action or notice. In the case of payment events of defaults, any holder of 2012 Senior Notes affected thereby may declare all 2012 Senior Notes held by it due and payable immediately. In the case of any other event of default, a majority of the holders of the 2012 Senior Notes may declare all the 2012 Senior Notes to be due and payable immediately. Pursuant to the 2012 Note Purchase Agreement, so long as any 2012 Senior Notes are outstanding, the Company will not permit (i) its leverage ratio, as determined pursuant to the 2012 Note Purchase Agreement, as of the end of any fiscal quarter to exceed 3.50 to 1.00, (ii) its interest coverage ratio as determined pursuant to the 2012 Note Purchase Agreement as of the end of any fiscal quarter for any period of four consecutive fiscal quarters to be less than 2.50 to 1 or (iii) priority debt at any time to exceed 25% of consolidated net worth, as determined pursuant to the 2012 Note Purchase Agreement.

As of December 31, 2021, the Company was in compliance with the covenants of all debt agreements.

Annual maturities of notes and loans outstanding are as follows (in millions):

2022	$ 111.1
2023	15.8
2024	115.2
2025	15.5
2026	15.2
Thereafter	1,059.1
Total	$1,331.9

As of December 31, 2021, the Company has several cross-currency and interest rate swap agreements with a notional value of $149.6 million of U.S. to Swiss Franc and a notional value of $354.7 million of U.S. to Euro to hedge the variability in the movement of foreign currency exchange rates on portions of our Euro and Swiss Franc denominated net asset investments. These agreements qualify for hedge accounting and accordingly the change in fair value of the derivative is recorded in other comprehensive income as part of foreign currency translation adjustments and remains in accumulated comprehensive income (loss) attributable to Bruker Corporation in shareholders' equity until the sale or substantial liquidation of the foreign operation. The difference between the interest rate received and paid under the interest rate and cross-currency swap agreements is recorded in interest and other income (expenses) in the consolidated statements of income and comprehensive income. As a result of entering into these agreements, the Company has lowered net interest expense by $5.5 million and $7.2 million during 2021 and 2020, respectively. The gains related to hedges of net asset investments in international operations that were recorded within the cumulative translation adjustment section of other comprehensive income were $36.4 million for the year ended December 31, 2021. The losses related to hedges of net asset investments in international operations that were recorded within the cumulative translation adjustment section of other comprehensive income were $47.1 million and $6.8 million for the years ended December 31, 2020 and 2019, respectively.

Interest expense for the years ended December 31, 2021, 2020 and 2019 was $14.3 million, $14.4 million and $16.0 million, respectively.

12. Fair Value of Financial Instruments

The Company measures the following financial assets and liabilities at fair value on a recurring basis. The following tables set forth the Company's financial instruments and presents them within the fair value hierarchy using the lowest level of input that is significant to the fair value measurement (in millions):

December 31, 2021	Total	Quoted Prices in Active Markets Available (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Time deposits and money market funds	$ 367.7	$—	$ 367.7	$ —
Short-term investments	100.0	—	100.0	—
Interest rate and cross currency swap agreements	6.4	—	6.4	—
Forward currency contracts	0.7	—	0.7	—
Embedded derivatives in purchase and delivery contracts	0.2	—	0.2	—
Fixed price commodity contracts	0.4	—	0.4	—
Debt securities available for sale	1.2	—	—	1.2
Total assets recorded at fair value	$ 476.6	$—	$ 475.4	$ 1.2
Liabilities:				
Contingent consideration	$ 6.6	$—	$ —	$ 6.6
Hybrid instrument liability	15.6	—	—	15.6
Forward currency contracts	0.3	—	0.3	—
Interest rate and cross currency swap agreements	23.9	—	23.9	—
Long-term fixed interest rate debt	1,043.3	—	1,043.3	—
Total liabilities recorded at fair value	$1,089.7	$—	$1,067.5	$22.2

December 31, 2020	Total	Quoted Prices in Active Markets Available (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Time deposits and money market funds	$183.2	$—	$183.2	$ —
Short-term investments	50.0	—	50.0	—
Interest rate and cross currency swap agreements	7.6	—	7.6	—
Foreign currency contracts	2.1	—	2.1	—
Embedded derivatives in purchase and delivery contracts	0.1	—	0.1	—
Fixed price commodity contracts	3.1	—	3.1	—
Debt securities available for sale	1.2	—	—	1.2
Total assets recorded at fair value	$247.3	$—	$246.1	$ 1.2
Liabilities:				
Contingent consideration	$ 4.3	$—	$ —	$ 4.3
Hybrid instrument liability	13.9	—	—	13.9
Interest rate and cross currency swap agreements	61.5	—	61.5	—
Forward currency contracts	0.4	—	0.4	—
Long-term fixed interest rate debt	549.8	—	549.8	—
Total liabilities recorded at fair value	$629.9	$—	$611.7	$18.2

Derivative financial instruments are classified within level 2 because there is not an active market for each derivative contract. However, the inputs used to calculate the value of the instruments are obtained from active markets.

The Company measures certain assets and liabilities at fair value with changes in fair value recognized in earnings. Fair value treatment may be elected either upon initial recognition of an eligible asset or liability or, for an existing asset or liability, if an event triggers a new basis of accounting. The Company did not elect to remeasure any of its existing financial assets or liabilities and did not elect the fair value option for any financial assets or liabilities which originated during the year ended December 31, 2021 or 2020.

The fair value of the long-term fixed interest rate debt, which has been classified as Level 2, was based on market and observable sources with similar maturity dates. The remaining long-term debt has variable interest rates and the carrying value approximates fair value accordingly.

On a quarterly basis, the Company reviews its short-term investments to determine if there have been any events that could create an impairment. None were noted for the years ended December 31, 2021, 2020 and 2019.

Debt securities consist of investments in redeemable preferred stock. Debt securities are classified as either current or long-term investments based on their contractual maturities unless the Company intends to sell an investment within the next twelve months, in which case it is classified as current on the consolidated balance sheets. Debt securities are classified as available for sale and are carried at fair value.

Contingent consideration recorded within other liabilities represents the estimated fair value of future payments to the former shareholders as part of certain acquisitions. These contingent consideration amounts are primarily based on the applicable acquired company achieving annual revenue and gross margin targets in certain years as specified in the relevant purchase and sale agreement. The Company initially values the contingent consideration on acquisition date by using a Monte Carlo simulation or an income approach method. The Monte Carlo method models future revenue and costs of goods sold projections and discounts the average results to present value. The income approach method involves calculating the earnout payment based on the forecasted cash flows, adjusting the future earnout payment for the risk of reaching the projected financials, and then discounting the future payments to present value by the counterparty risk. The counterparty risk considers the risk of the buyer having the cash to make the earnout payments and is commensurate with a cost of debt over an appropriate term.

The following table sets forth the changes in contingent consideration liabilities (in millions):

Balance at December 31, 2019	$15.8
Current period additions	1.2
Current period adjustments	(4.4)
Current period settlements	(8.7)
Foreign currency effect	0.4
Balance at December 31, 2020	4.3
Current period additions	2.6
Current period adjustments	0.2
Current period settlements	(0.4)
Foreign currency effect	(0.1)
Balance at December 31, 2021	$ 6.6

As part of the Mestrelab acquisition, the Company entered into an agreement with the noncontrolling interest holders that provides the Company with the right to purchase, and the noncontrolling interest holders with the right to sell, the remaining 49% of Mestrelab for cash at a contractually defined redemption value. These

rights (an embedded derivative) are exercisable beginning in 2022 and can be accelerated, at a discounted redemption value, upon certain events related to post combination services. As the option is tied to continued employment, the Company classified the hybrid instrument (noncontrolling interest with an embedded derivative) within short-term and long-term liabilities on the consolidated balance sheet. Subsequent to the acquisition, the carrying value of the hybrid instrument is remeasured to fair value with changes recorded to stock-based compensation expense in proportion to the requisite service period vested. The hybrid instrument is classified as Level 3 in the fair value hierarchy.

The following table sets forth the changes in hybrid instrument liability (in millions):

Balance at December 31, 2019	$10.6
Current period additions	2.6
Foreign currency effect	0.7
Balance at December 31, 2020	13.9
Current period additions	2.7
Foreign currency effect	(1.0)
Balance at December 31, 2021	$15.6

13. Derivative Instruments and Hedging Activities

Interest Rate Risk

The Company's exposure to interest rate risk relates primarily to outstanding variable rate debt and adverse movements in the related market rates. Typically, the most significant component of the Company's interest rate risk relates to amounts outstanding under the 2019 Credit Agreement and the 2019 Term Loan.

Commodity Price Risk Management

The Company has arrangements with certain customers under which it has a firm commitment to deliver copper based superconductors at a fixed price. In order to minimize the volatility that fluctuations in the price of copper have on the Company's sales of these commodities, the Company enters into commodity hedge contracts. As commodity contracts settle, gains (losses) as a result of changes in fair values are adjusted to the contracts with the customers through revenues.

Foreign Exchange Rate Risk Management

The Company generates a substantial portion of its revenues and expenses in international markets, principally Germany and other countries in the European Union and Switzerland, which subjects its operations to the exposure of exchange rate fluctuations. The impact of currency exchange rate movement can be positive or negative in any period. The Company periodically enters into foreign currency contracts in order to minimize the volatility that fluctuations in currency translation have on its monetary transactions. Under these arrangements, the Company typically agrees to purchase a fixed amount of a foreign currency in exchange for a fixed amount of U.S. Dollars or other currencies on specified dates with maturities of less than twelve months, with some agreements extending to longer periods. These transactions do not qualify for hedge accounting and, accordingly, the instrument is recorded at fair value with the corresponding gains and losses recorded in the consolidated statements of income and comprehensive income.

In addition, the Company periodically enters into purchase and sales contracts denominated in currencies other than the functional currency of the parties to the transaction. The Company accounts for these transactions separately valuing the "embedded derivative" component of these contracts. The contracts, denominated in currencies other than the functional currency of the transacting parties, amounted to $8.5 million and $4.8 million

for the purchase of products at December 31, 2021 and 2020, respectively. The contracts, denominated in currencies other than the functional currency of the transacting parties, amounted to $0.0 million and $7.5 million for the delivery of products at December 31, 2021 and 2020, respectively. The changes in the fair value of these embedded derivatives are recorded in interest and other income (expense), net in the consolidated statements of income and comprehensive income.

The Company had the following notional amounts outstanding under foreign exchange contracts, cross-currency interest rate swap agreements and long-term debt designated as net investment hedges (in millions) and the respective fair value of the instruments recorded in the consolidated balance sheets as follows (in millions):

	Notional (in USD)	December 31, 2021	Notional (in USD)	December 31, 2020
Derivatives designated as hedging instruments				
Interest rate cross-currency swap agreements				
Other current assets		$ 6.4		$ 7.6
Other current liabilities		(5.8)		(4.3)
Other long-term liabilities		(18.1)		(57.2)
	$ 504.3	$(17.5)	$ 505.0	$(53.9)
Long-term debt				
Long-term Debt	825.8	(35.1)	335.5	(37.6)
Total derivatives designated as hedging instruments	$1,330.1	$ (52.6)	$ 840.5	$ (91.5)
Derivatives not designated as hedging instruments				
Forward currency contracts				
Other current assets	$ 157.7	$ 0.7	$ 175.8	$ 2.1
Other current liabilities	23.0	(0.3)	102.5	(0.4)
Embedded derivatives in purchase and delivery contracts				
Other current assets	8.5	0.2	12.3	0.1
Fixed price commodity contracts				
Other current assets	5.5	0.4	8.8	3.1
Total derivatives not designated as hedging instruments	$ 194.7	$ 1.0	$ 299.4	$ 4.9
Total derivatives	$1,524.8	$ (51.6)	$1,139.9	$ (86.6)

The following is a summary of the gain (loss) included in the consolidated statements of income and comprehensive income related to the derivative instruments described above (in millions):

	Financial Statement Classification	Years Ended December 31, 2021	2020	2019
Derivatives not designated as hedging instruments				
Forward currency contracts	Interest and other income (expense), net	$ (5.5)	$ 2.1	$ 3.0
Embedded derivatives in purchase and delivery contracts	Interest and other income (expense), net	0.1	0.5	—
		(5.4)	2.6	3.0
Derivatives designated as cash flow hedging instruments				
Interest rate cross-currency swap agreements	Interest and other income (expense), net	(4.7)	(3.0)	—
Derivatives designated as net investment hedging instruments				
Interest rate cross-currency swap agreements	Interest and other income (expense), net	10.2	10.1	0.6
Total		$ 0.1	$ 9.7	$ 3.6

	Financial Statement Classification	Years Ended December 31, 2021	2020	2019
Derivatives designated as cash flow hedging instruments				
Interest rate cross-currency swap agreements	Accumulated other comprehensive income, net of tax	$15.0	$(20.4)	$ 2.0
Derivatives designated as net investment hedging instruments				
Interest rate cross-currency swap agreements	Accumulated other comprehensive income, net of tax	25.6	(26.7)	(8.8)
Long-term debt	Accumulated other comprehensive income, net of tax	10.8	(28.7)	(8.9)
		36.4	(55.4)	(17.7)
Total		$51.4	$(75.8)	$(15.7)

14. Income Taxes

The domestic and foreign components of income before income taxes are as follows (in millions):

	2021	2020	2019
Domestic	$ (15.4)	$ (31.1)	$ 3.8
Foreign	409.0	256.9	276.6
Total income before provision for income taxes	$393.6	$225.8	$280.4

The components of the income tax provision are as follows (in millions):

	2021	2020	2019
Current income tax expense (benefit):			
Federal	$ 1.0	$ (0.5)	$ 0.6
State	1.2	(0.5)	2.2
Foreign	118.0	85.4	82.1
Total current income tax expense	120.2	84.4	84.9
Deferred income tax expense (benefit):			
Federal	(7.8)	(4.9)	(2.2)
State	(2.5)	(1.0)	0.3
Foreign	3.1	(14.1)	(0.6)
Total deferred income tax benefit	(7.2)	(20.0)	(2.5)
Income tax provision	$113.0	$ 64.4	$82.4

The income tax provision differs from the tax provision computed at the U.S. federal statutory rate due to the following significant components:

	2021	2020	2019
Statutory tax rate	21.0%	21.0%	21.0%
Foreign tax rate differential	5.2	4.9	5.9
Permanent differences	1.2	2.0	0.7
U.S. tax on foreign earnings	1.6	0.3	1.4
Stock compensation	(2.5)	(0.7)	(1.0)
Mandatory repatriation	—	0.5	(0.6)
Tax contingencies	2.6	1.4	1.4
Change in tax rates	(0.1)	0.1	0.3
Withholding taxes	—	(0.1)	(0.1)
Repatriation of foreign earnings	(0.4)	0.6	0.3
State income taxes, net of federal benefits	(0.4)	(0.6)	0.7
Research and development credits	(0.9)	(1.2)	(0.6)
Other	1.2	(0.7)	—
Change in valuation allowance for unbenefited losses	0.2	1.0	—
Effective tax rate	28.7%	28.5%	29.4%

The tax effect of temporary items that give rise to significant portions of the deferred tax assets and liabilities are as follows (in millions):

	2021	2020
Deferred tax assets:		
Accrued expenses	$ 0.3	$ 4.7
Compensation	28.8	32.3
Deferred revenue	—	13.9
Disallowed interest carryforward	9.3	5.0
Net operating loss carryforwards	23.5	31.1
Foreign tax and other tax credit carryforwards	21.4	16.4
Unrealized currency gain/loss	6.8	9.6
Hedge unrealized FX gain/loss	12.5	—
Lease obligations	14.1	15.2
Other	2.4	—
Gross deferred tax assets	119.1	128.2
Less valuation allowance	(7.1)	(6.6)
Total deferred tax assets	112.0	121.6
Deferred tax liabilities:		
Accounts receivable	—	2.7
Inventory	3.6	10.8
Fixed assets	6.1	10.4
Foreign patent reserves	4.4	2.4
Intangibles	32.6	40.2
Accrued expenses	0.5	2.8
Accrued withholding tax	6.7	6.7
Right-of-use asset	14.0	14.9
Other	0.2	2.2
Total deferred tax liabilities	68.1	93.1
Net deferred tax assets	$ 43.9	$ 28.5

The Company uses the liability method to account for income taxes. Under this method, deferred income taxes are recognized for the future tax consequences of differences between the tax and financial accounting bases of assets and liabilities at each reporting period. Deferred income taxes are based on enacted tax laws and statutory tax rates applicable to the period in which these differences are expected to affect taxable income. A valuation allowance is established when necessary to reduce deferred tax assets to the expected realizable amounts.

The Company can only recognize a deferred tax asset to the extent this it is “more likely than not” that these assets will be realized. Judgments around realizability depend on the availability and weight of both positive and negative evidence. Changes in the valuation allowance for deferred tax assets were as follows (in millions):

Balance at December 31, 2018	$ 4.3
Decreases recorded as a benefit to income tax provision	(0.1)
Balance at December 31, 2019	$ 4.2
Increases recorded as part of acquisition purchase accounting	2.4
Balance at December 31, 2020	$ 6.6
Increases recorded as an expense to income tax provision	0.5
Balance at December 31, 2021	$ 7.1

As of December 31, 2021, the Company had approximately $89.4 million net operating loss carryforwards available to reduce state taxable income that are expected to expire at various times beginning in 2022. The Company also has approximately $86.1 million of German Trade Tax and Corporate Income Tax net operating losses that are carried forward indefinitely. Additionally, the Company has $6.4 million of other foreign net operating losses that are expected to expire at various times in the future. We had U.S. federal foreign tax credit carried forwards in the amount of $6.3 million. We also had U.S. federal and state research and development tax credit of $4.6 million and $7.8 million respectively. Utilization of these credits and state net operating losses may be subject to annual limitations due to the ownership percentage change limitations provided by the Code Section 382 and similar state provisions. In the event of a deemed change in control under Code Section 382, an annual limitation on the utilization of net operating losses and credits may result in the expiration of all or a portion of the net operating loss and credit carryforwards. Additionally, the Company has $40.2 million of gross interest expense carryforward as provided by Code Section 163(j) that can be carried forward indefinitely.

At December 31, 2021 the Company recorded state income and foreign withholding taxes on the cash and liquid assets portion of the unremitted earnings and profits (E&P) of foreign subsidiaries expected to be repatriated from its foreign subsidiaries to the United States, except for amounts from certain subsidiaries, which the Company has asserted to be indefinitely reinvested. Specifically, the Company asserts that a total of $1.9 billion of unremitted foreign earnings is indefinitely reinvested. This figure is comprised of $1.4 billion in unremitted earnings as well as $546 million of non-cash E&P in all jurisdictions not indefinitely reinvested. If this E&P is ultimately distributed to the United States in the form of dividends the Company would likely be subject to additional withholding tax. The Company estimates the amount of unrecognized deferred withholding taxes on the undistributed E&P to be approximately $69 million at December 31, 2021.

The Company had gross unrecognized tax benefits, excluding interest, of approximately $51.4 million as of December 31, 2021, that if recognized, would reduce the Company's effective tax rate. In the next twelve months it is reasonably possible that the Company will reduce its unrecognized tax benefits by an immaterial amount due to the expiration of statutes of limitations. A tabular reconciliation of the Company's gross unrecognized tax benefits is as follows (in millions):

Gross unrecognized tax benefits at December 31, 2018	$ 6.6
Gross increases—tax positions in prior periods	4.7
Gross increases—current period tax positions	4.7
Lapse of statutes	(0.1)
Gross unrecognized tax benefits at December 31, 2019	$15.9
Gross increases—tax positions in prior periods	1.2
Gross increases—current period tax positions	5.6
Gross unrecognized tax benefits at December 31, 2020	$22.7
Gross increases—tax positions in prior periods	17.8
Gross increases—current period tax positions	10.9
Gross unrecognized tax benefits at December 31, 2021	$51.4

The Company's policy is to include accrued interest and penalties related to unrecognized tax benefits and income tax liabilities, when applicable, in income tax expense. At December 31, 2021 and 2020, the Company had approximately $3.1 million and $1.8 million, respectively, of accrued interest and penalties related to uncertain tax positions included in other long-term liabilities in the consolidated balance sheets. The Company recorded expense of $1.5 million for penalties and interest related to unrecognized tax benefits in the provision for income taxes during the year ended December 31, 2021. There was no benefit recognized during the year ended December 31, 2020.

The Company has been subject to a tax examination in Germany for the years 2009 through 2012 whereby the German tax authorities had imposed additional tax assessments for those years. Due to the nature of the

additional tax assessments, the Company filed for competent authority relief from those assessments under the Mutual Agreement Procedures ("MAP") of the United States-Germany income tax treaty. The Company expects the competent authorities to present a resolution for the 2009 through 2012 tax years during 2022. The Company does not expect a material impact to the results of operations for the year ending December 31, 2022 as a result of the resolution of this matter.

The Company files tax returns in the United States, which includes federal, state and local jurisdictions, and many foreign jurisdictions with varying statutes of limitations. The Company considers Germany, the United States and Switzerland to be its significant tax jurisdictions. The majority of the Company's earnings are derived in Germany and Switzerland. Accounting for the various federal and local taxing authorities, the statutory rates for 2021 were approximately 30.0% and 20.0% for Germany and Switzerland, respectively. The mix of earnings in those two jurisdictions resulted in an increase of 5.7% from the U.S. statutory rate of 21% in 2021.

In 2020, the Company was granted an income tax holiday for our manufacturing facility in Malaysia. The tax holiday allows for tax-free operations through February 28, 2023, with the option to apply for a 5 year extension if certain conditions are met. This tax holiday had an immaterial impact to earnings per share for the year ended December 31, 2021.

In connection with the Tax Cuts and Jobs Act ("TCJA") of 2017, the Company recorded a toll charge liability of $35.4 million. Of that amount, approximately $11.3 million has already been paid as of December 31, 2021.

In 2020, the U.S. Treasury Department issued final regulations regarding Foreign Derived Intangible Income ("FDII") and Global Intangible Low-Taxed Income ("GILTI"). We have determined we will elect the GILTI high tax exception as allowed by the final regulations for the period ended December 31, 2021.

15. Leases

Operating lease cost is recognized over the lease term on a straight-line basis, while finance lease cost is amortized over the expected term on a straight-line basis. Variable lease cost not dependent on an index or rate is recognized when incurred and typically consists of amounts owed by the Company to a lessor that are not fixed, such as reimbursement for common area maintenance and utilities cost.

The components of lease expense were as follows (in millions):

	2021	2020	2019
Amortization of right-of-use assets	$ 1.5	$ 0.7	$ 0.3
Interest on lease liabilities	0.1	0.1	—
Total finance lease cost	1.6	0.8	0.3
Operating lease cost	24.0	23.3	24.9
Short term lease cost	4.2	3.9	2.2
Variable lease cost	3.0	3.4	3.5
Sublease income	(2.0)	(1.9)	(1.2)
Total lease cost	$30.8	$29.5	$29.7

Supplemental balance sheet information related to leases was as follows (dollars in millions):

	December 31, 2021	December 31, 2020
Operating leases		
Operating lease assets, net	$59.9	$67.4
Other current liabilities	17.9	21.3
Operating lease liability—long term	41.8	47.0

	December 31, 2021	December 31, 2020	December 31, 2019
Weighted average remaining lease term	5.1 years	5.2 years	5.0 years
Weighted average discount rate	1.6%	1.9%	2.3%

	December 31, 2021	December 31, 2020
Finance leases		
Property, plant and equipment, net	$4.6	$3.7
Current portion of long-term debt	1.7	0.8
Long-term debt	2.6	2.6

	December 31, 2021	December 31, 2020	December 31, 2019
Weighted average remaining lease term	2.9 years	3.3 years	3.7 years
Weighted average discount rate	1.6%	2.2%	3.0%

Supplemental cash flow information related to leases was as follows (in millions):

	2021	2020	2019
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash flows from finance leases	$ 0.1	$ 0.1	$ —
Operating cash flows from operating leases	21.2	24.0	27.1
Financing cash flows from finance leases	1.6	0.9	0.4
Right-of-use assets obtained in exchange for lease liabilities			
Operating leases	$21.2	$24.3	
Finance leases	2.7	2.6	

Future lease payments under operating leases and finance leases as follows (in millions):

	Operating Leases	Finance Leases
Twelve months ending December 31:		
2022	$18.7	$ 1.7
2023	13.9	1.4
2024	9.1	0.9
2025	6.9	0.3
2026	5.3	0.1
Thereafter	8.1	—
Total undiscounted lease payments	62.0	4.4
Less: imputed interest	(2.3)	(0.1)
Total lease liabilities	$59.7	$ 4.3

16. Post Retirement Benefit Plans

Defined Contribution Plans

The Company sponsors various defined contribution plans that cover certain domestic and international employees. The Company may make contributions to these plans at its discretion. The Company contributed $9.4 million, $8.1 million and $8.7 million to such plans in the years ended December 31, 2021, 2020 and 2019, respectively.

Defined Benefit Plans

Substantially all of the Company's employees in Switzerland, France and Japan, as well as certain employees in Germany, are covered by Company-sponsored defined benefit pension plans. Retirement benefits are generally earned based on years of service and compensation during active employment. Eligibility is generally determined in accordance with local statutory requirements; however, the level of benefits and terms of vesting varies among plans.

The Company records pension service cost within cost of sales, selling, general and administrative, and research and development expenses while non-service related pension costs are recorded within interest and other income (expense), net in the consolidated statements of income and comprehensive income. The components of net periodic benefit costs included in the accompanying consolidated statements of income were as follows (in millions):

	2021	2020	2019
Components of net periodic benefit costs:			
Service cost	$ 8.1	$ 8.2	$ 6.4
Interest cost	0.5	1.1	2.6
Expected return on plan assets	(1.8)	(2.5)	(2.0)
Settlement loss recognized	0.1	—	—
Amortization of prior service (credit) cost	0.9	1.2	1.1
Amortization of actuarial (gains) losses	2.6	3.5	0.9
Net periodic benefit costs	$10.4	$11.5	$ 9.0

The Company measures its benefit obligation and the fair value of plan assets as of December 31st each year. The changes in benefit obligations and plan assets under the defined benefit pension plans, projected benefit obligation and funded status of the plans were as follows (in millions):

	2021	2020
Change in benefit obligation:		
Benefit obligation at beginning of year	$275.2	$255.0
Service cost	8.1	8.2
Interest cost	0.5	1.1
Plan participant contributions	5.2	4.4
Plan amendments	(10.9)	(2.8)
Plan settlements	(0.5)	—
Benefits paid	(6.4)	(5.7)
Actuarial loss (gain)	(5.4)	(6.7)
Premiums paid	(1.8)	(1.4)
Impact of foreign currency exchange rates	(10.1)	23.1
Benefit obligation at end of year	253.9	275.2

	2021	2020
Change in plan assets:		
Fair value of plan assets at beginning of year	150.5	131.4
Return on plan assets	(2.1)	3.1
Plan participant and employer contributions	12.4	10.7
Benefits paid	(6.4)	(5.7)
Plan settlements	(0.5)	—
Premiums paid	(1.8)	(1.5)
Impact of foreign currency exchange rates	(4.3)	12.5
Fair value of plan assets at end of year	147.8	150.5
Net under-funded status	$(106.1)	$(124.7)

Plan amendments relate to further reductions in the mandatory and the supplementary conversion rates for the pension plan in Switzerland that will be effective in 2022 and in 2023, respectively. The accumulated benefit obligation for the defined benefit pension plans is $225.8 million and $260.4 million at December 31, 2021 and 2020, respectively. All defined benefit pension plans have an accumulated benefit obligation and projected benefit obligation in excess of plan assets at December 31, 2021 and 2020.

The following amounts were recognized in the accompanying consolidated balance sheets for the Company's defined benefit plans (in millions):

	2021	2020
Current liabilities	$ (1.8)	$ (1.9)
Non-current liabilities	(104.3)	(122.8)
Net benefit obligation	$ (106.1)	$ (124.7)

The following pre-tax amounts were recognized in accumulated other comprehensive income for the Company's defined benefit plans (in millions):

	2021	2020	2019
Reconciliation of amounts recognized in the consolidated balance sheets:			
Prior service cost (credit)	$ 9.4	$ (2.4)	$ (6.0)
Net actuarial loss	(50.1)	(56.6)	(62.3)
Accumulated other comprehensive loss	(40.7)	(59.0)	(68.3)
Accumulated contributions in excess of net periodic benefit cost	(65.4)	(65.7)	(55.3)
Net amount recognized	$(106.1)	$(124.7)	$(123.6)

The amount in accumulated other comprehensive income at December 31, 2021 expected to be recognized as amortization of net loss within net periodic benefit cost in 2022 is $2.1 million.

For the defined benefit pension plans, the Company uses a corridor approach to amortize actuarial gains and losses. Under this approach, net actuarial gains or losses in excess of ten percent of the larger of the projected benefit obligation or the fair value of plan assets are amortized over the average remaining service of active participants who are expected to receive benefits under the plans.

The following assumptions were used for defined benefit pension plans reflects the different economic environments within the various countries. The assumptions used to determine the net periodic benefit costs and the projected benefit obligations are as follows:

2021	Japan	France	Switzerland	Germany
Annual discount rate—defined benefit obligation	0.4%	1.0%	0.4%	0.8%
Annual discount rate—defined benefit cost	0.4%	0.6%	0.1%	0.5%
Expected return on plan assets	0.0%	3.0%	1.2%	0.0%
Expected rate of compensation increase	3.0%	2.0%	1.0%	2.6%

2020	Japan	France	Switzerland	Germany
Annual discount rate—defined benefit obligation	0.4%	0.6%	0.1%	0.5%
Annual discount rate—defined benefit cost	0.3%	0.8%	0.3%	1.1%
Expected return on plan assets	0.0%	3.0%	1.8%	0.0%
Expected rate of compensation increase	3.0%	2.0%	1.0%	2.6%

2019	Japan	France	Switzerland	Germany
Annual discount rate—defined benefit obligation	0.3%	0.8%	0.3%	1.1%
Annual discount rate—defined benefit cost	0.5%	1.5%	1.1%	1.4%
Expected return on plan assets	0.0%	0.0%	1.6%	0.0%
Expected rate of compensation increase	2.9%	2.0%	1.0%	2.6%

To determine the expected long-term rate of return on pension plan assets, the Company considers current asset allocations, as well as historical and expected returns on various asset categories of plan assets. For the defined benefit pension plans, the Company applies the expected rate of return to a market-related value of assets, which stabilizes variability in assets to which the expected return is applied.

Asset Allocations by Asset Category

The fair value of the Company's pension plan assets by asset category and by level in the fair value hierarchy, is as follows (in millions):

December 31, 2021	Total	Quoted Prices in Active Markets Available (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Plan Assets:				
Group BPCE Life (a)	$ 0.1	$—	$ 0.1	$—
Swiss Life Collective BVG Foundation (b)	147.7	—	147.7	—
Total plan assets	$147.8	$—	$147.8	$—

December 31, 2020	Total	Quoted Prices in Active Markets Available (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Plan Assets:				
Group BPCE Life (a)	$ 0.5	$—	$ 0.5	$—
Swiss Life Collective BVG Foundation (b)	150.0	—	150.0	—
Total plan assets	$150.5	$—	$150.5	$—

(a) The Company's pension plan in France is invested in a larger fund that invests in a variety of instruments. The assets are not directly dedicated to the French pension plan. The Group BPCE Life fund invests in debt securities of foreign corporations and governments, equity securities of foreign government funds and private real estate funds.

(b) The Company's pension plan in Switzerland is outsourced to Swiss Life AG, an outside insurance provider. Under the insurance contract, the plan assets are invested in Swiss Life Collective BVG Foundation (the Foundation), which is an umbrella fund for which the retirement savings and interest rates are guaranteed a minimum of 1.0% on the mandatory withdrawal portion, as defined by Swiss law, and 0.25% on the non-mandatory portion starting 2022. The Foundation utilizes plan administrators and investment managers to oversee the investment allocation process, set long-term strategic targets and monitor asset allocations. The target allocations are 65% bonds, 2.5% cash, 7.5% equity investments and 25% real estate and mortgages. Should the Foundation yield a return greater than the guaranteed amounts, the Company, according to Swiss law, shall receive 90% of the additional return with Swiss Life AG retaining 10%. The withdrawal benefits and interest allocations are secured at all times by Swiss Life AG.

Contributions and Estimated Future Benefit Payments

For all of our plans except Switzerland, we do not have plan assets to payout benefit payments. Contributions are expected to be consistent with estimated benefit payments for the next fiscal year. The estimated future benefit payments are based on the same assumptions used to measure the Company's benefit obligation at December 31, 2021. The following benefit payments reflect future employee service as appropriate (in millions):

2022	$ 8.1
2023	8.0
2024	8.5
2025	8.4
2026	8.5
2027-2031	47.5

17. Commitments and Contingencies

Litigation and Related Contingencies

Lawsuits, claims and proceedings of a nature considered normal to its businesses may be pending from time to time against the Company. Third parties might allege that the Company or its collaborators are infringing their patent rights or that the Company is otherwise violating their intellectual property rights. The Company believes the outcome of pending proceedings, individually and in the aggregate, will not have a material impact on the Company's financial statements.

On September 25, 2019, in a complaint filed in the Düsseldorf, Germany, District Court, Carl Zeiss Microscopy GmbH, a subsidiary of Carl Zeiss AG (Zeiss), sued Luxendo GmbH (Luxendo), a subsidiary of Bruker Corporation, for infringement of a recently registered German utility model patent licensed to Zeiss pertaining to one specific Luxendo product category. The Company is vigorously defending against these claims.

At December 31, 2021 and 2020, no material accruals have been recorded for potential contingencies.

Governmental Investigations

The Company is subject to regulation by national, state and local government agencies in the United States and other countries in which it operates. From time to time, the Company is the subject of governmental investigations often involving regulatory, marketing and other business practices. These governmental investigations may result in the commencement of civil and criminal proceedings, fines, penalties and administrative remedies which could have a material adverse effect on the Company's financial position, results of operations and/or liquidity.

In August 2018, the Korea Fair Trade Commission (KFTC) informed the Company that it was conducting an investigation into the public tender bidding activities of a number of life science instrument companies operating in Korea, including Bruker Korea Co., Ltd (Bruker Korea). The Company cooperated fully with the KFTC and on June 16, 2019, the KFTC announced its decision to impose a civil fine of approximately $20,000 on Bruker Korea and declined to impose any criminal liability against Bruker Korea in connection with this matter. As a result of the KFTC's decision, the Korea Public Procurement Service (PPS) imposed a three-month suspension on Bruker Korea's ability to bid for or conduct sales to Korean government entities which ended on March 27, 2020. Sales to Korean entities were less than 4% of the Company's revenue for the year ended December 31, 2021.

In late August 2019, the KFTC informed the Company that it was conducting a separate investigation into the public tender bidding activities of a number of life science instrument companies operating in Korea, including five public tenders involving Bruker Korea during 2015. The Company cooperated fully with the KFTC and on July 8, 2020, the KFTC announced its decision to impose a civil fine of approximately $11,000 on Bruker Korea and declined to impose any criminal liability against Bruker Korea in connection with this matter. There was no suspension imposed in connection with this matter.

At December 31, 2021 and 2020, no material accruals have been recorded for potential contingencies related to these matters. The Company does not expect additional losses to be incurred in excess of the amounts accrued.

Unconditional Purchase Commitments

The Company has entered into unconditional purchase commitments, in the ordinary course of business, that include agreements to purchase goods, services or fixed assets and to pay royalties that are enforceable and legally binding and that specify all significant terms including: fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. Purchase commitments exclude agreements that are cancelable at any time without penalty. The majority of these commitments are expected to be settled during 2022.

Unconditional purchase commitments that are fixed and determinable are as follows (in millions):

2022	$254.3
2023	40.9
2024	1.9
2025	5.5
2026	—
Total	$302.6

License Agreements

The Company has entered into license agreements allowing it to utilize certain patents. If these patents are used in connection with a commercial product sale, the Company pays royalties on the related product revenues. Licensing fees for the years ended December 31, 2021, 2020 and 2019, were $5.8 million, $8.4 million and $2.6 million, respectively, and are recorded in cost of product revenue in the consolidated statements of income and comprehensive income.

Letters of Credit and Guarantees

At December 31, 2021 and 2020, the Company had bank guarantees of $116.4 million and $133.0 million, respectively, related primarily to customer advances. These arrangements guarantee the refund of advance payments received from customers in the event that the merchandise is not delivered or warranty obligations are not fulfilled in compliance with the terms of the contract. These guarantees affect the availability of the Company's lines of credit.

Indemnifications

The Company enters into standard indemnification arrangements in the Company's ordinary course of business. Pursuant to these arrangements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified parties for losses suffered or incurred by the indemnified party. These parties are generally the Company's directors, officers, business partners or customers, in connection with any patent, or any copyright or other intellectual property infringement claim by any third party with respect to its products. The term of these indemnification agreements is generally perpetual any time after the execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these agreements is unlimited. The Company believes the estimated fair value of these agreements is minimal based on historical experiences.

18. Earnings Per Share

The following table sets forth the computation of basic and diluted weighted average shares outstanding and net income per common share attributable to Bruker shareholders (in millions, except per share amounts):

	2021	2020	2019
Net income attributable to Bruker Corporation, as reported	$ 277.1	$ 157.8	$ 197.2
Weighted average shares outstanding:			
Weighted average shares outstanding-basic	151.4	153.4	155.2
Effect of dilutive securities:			
Stock options, restricted stock awards and restricted stock units	1.5	1.2	1.4
	152.9	154.6	156.6
Net income per common share attributable to Bruker Corporation shareholders:			
Basic	$ 1.83	$ 1.03	$ 1.27
Diluted	$ 1.81	$ 1.02	$ 1.26

The following common share equivalents have been excluded from the computation of diluted weighted-average shares outstanding, as their effect would have been anti-dilutive (in millions of shares):

	2021	2020	2019
Stock options	—	0.2	—
Unvested restricted stock units	0.1	—	—

19. Shareholders' Equity

Share Repurchase Program

In May 2019, the Company's Board of Directors approved a share repurchase plan (the "2019 Repurchase Program") authorizing the purchase of the Company's common stock up to $300.0 million from time to time, in amounts, at prices, and at such times as management deems appropriate, subject to market conditions, legal requirements and other considerations. The Company purchased a total of 555,602 shares at an aggregate cost of $34.5 million during the year ended December 31, 2021. The Company purchased a total of 2,711,952 shares at an aggregate cost of $123.2 million during the year ended December 31, 2020. The Company completed the 2019 Repurchase Program in April 2021, after reaching the maximum cumulative spend.

In May 2021, the Company's Board of Directors approved a share repurchase plan (the "2021 Repurchase Program") authorizing the purchase of the Company's common stock up to $500.0 million from time to time over a two-year period, in amounts, at prices, and at such times as management deems appropriate, subject to market conditions, legal requirements and other considerations. The Company purchased a total of 1,537,217 shares at an aggregate cost of $118.9 million under the 2021 Repurchase Program during the year ended December 31, 2021. The remaining authorization as of December 31, 2021 is $381.1 million.

Cash Dividends on Common Stock

Dividends are declared by the Company's Board of Directors in accordance with the Company's dividend policy. Under the policy, the Company targeted a $0.16 per share cash dividend per annum to the Company's shareholders payable in equal quarterly installments. Beginning in 2022, the Company is targeting a cash dividend to our shareholders in the amount of $0.20 per share per annum, payable in equal quarterly installments.

Subsequent dividend declarations and the establishment of record and payment dates for such future dividend payments, if any, are subject to the Board of Directors' continuing determination that the dividend policy is in the best interests of the Company's shareholders. The dividend policy may be suspended or cancelled at the discretion of the Board of Directors at any time.

Accumulated Other Comprehensive Income (Loss)

The following is a summary of the components of accumulated other comprehensive income (loss), net of tax (in millions):

	Foreign Currency Translation	Derivatives Designated As Hedging Instruments	Pension Liability Adjustment	Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2018	$ 46.9	$ —	$(29.9)	$ 17.0
Other comprehensive income (loss)	(3.8)	(15.7)	(25.1)	(44.6)
Realized gain on reclassification	—	—	2.1	2.1
Balance at December 31, 2019	43.1	(15.7)	(52.9)	(25.5)
Other comprehensive income (loss)	97.8	(75.8)	2.3	24.3
Realized gain on reclassification	—	—	4.9	4.9
Balance at December 31, 2020	140.9	(91.5)	(45.7)	3.7
Other comprehensive income (loss)	(77.8)	51.4	11.6	(14.8)
Realized gain on reclassification	—	—	2.9	2.9
Balance at December 31, 2021	$ 63.1	$(40.1)	$(31.2)	$ (8.2)

Stock Compensation Plans

On March 9, 2010, the Company's Board of Directors unanimously approved and adopted the Bruker Corporation 2010 Incentive Compensation Plan (the "2010 Plan"), and on May 14, 2010, the 2010 Plan was approved by the Company's stockholders. The 2010 Plan provided for the issuance of up to 8,000,000 shares of the Company's common stock. The 2010 Plan allowed a committee of the Board of Directors determined to be the Compensation Committee, to grant incentive stock options, non-qualified stock options and restricted stock awards. The Compensation Committee had the authority to determine which employees would receive the awards, the amount of the awards and other terms and conditions of any awards. Awards granted under the 2010 Plan typically were made subject to a vesting period of three to five years. As of December 31, 2021, 5,545,090 options and 570,011 restricted stock awards have been granted under the 2010 Plan. At December 31, 2021, 533,688 options were outstanding under the 2010 Plan.

In May 2016, the Bruker Corporation 2016 Incentive Compensation Plan (the "2016 Plan") was approved by the Company's stockholders. With the approval of the 2016 Plan, no further grants will be made under the 2010 Plan. The 2016 Plan provides for the issuance of up to 9,500,000 shares of the Company's common stock and permits the grant of awards of non-qualified stock options, incentive stock options, stock appreciation rights, restricted stock, unrestricted stock, restricted stock units, performance shares and performance units, as well as cash-based awards. The 2016 Plan is administered by the Compensation Committee. The Compensation Committee has the authority to determine which employees will receive awards, the amount of any awards, and other terms and conditions of such awards. Stock option awards granted under the 2016 Plan typically vest over a period of one to four years. As of December 31, 2021, 1,485,823 options and 2,100,581 restricted stock units have been granted under the 2016 Plan. At December 31, 2021, 821,464 options and 654,470 restricted stock units were outstanding under the 2016 Plan.

Members of the Company's Board of Directors receive an annual award of restricted stock units which vest over a one-year service period. Stock options to purchase the Company's common stock are periodically awarded to executive officers and other employees of the Company subject to a vesting period of three to four years. Restricted shares of the Company's common stock were periodically awarded to executive officers, directors and certain key employees of the Company, subject to service restrictions, which vested ratably over periods of one to four years. The restricted shares of common stock may not be sold or transferred during the restriction period. Restricted stock units of the Company's common stock are periodically awarded to executive officers, directors and certain employees of the Company which vest ratably over service periods of one to four years.

Stock-based Compensation

The following presents the impact of stock-based compensation expense on our consolidated statements of income (in millions):

	2021	2020	2019
Stock options	$ 1.3	$ 1.8	$ 2.7
Restricted stock awards	—	—	0.3
Restricted stock units	13.2	11.5	8.9
Total stock-based compensation	$14.5	$13.3	$11.9

	2021	2020	2019
Cost of product revenue	$ 2.2	$ 2.0	$ 1.8
Selling, general and administrative	10.1	9.3	8.3
Research and development	2.2	2.0	1.8
Total stock-based compensation	$14.5	$13.3	$11.9

In addition to the awards above, the Company recorded stock-based compensation within other charges, net of $2.7 million and $2.6 million at December 31, 2021 and 2020, respectively, and a benefit of $2.3 million in the year ended December 31, 2019 related to the 2018 acquisition of Mestrelab Research, S.L.

At December 31, 2021, the Company expects to recognize pre-tax stock-based compensation expense of $3.0 million associated with outstanding stock option awards granted under the Company's stock plans over the weighted average remaining service period of 2.5 years. The Company also expects to recognize additional pre-tax stock-based compensation expense of $27.1 million associated with outstanding restricted stock units granted under the Company's 2016 Incentive Compensation Plan over the weighted average remaining service period of 2.4 years.

Stock Option Awards

Stock option activity for the year ended December 31, 2021 is as follows:

	Number of Options	Weighted-Average Price Per Share	Weighted - Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (in millions) (a)
Outstanding at December 31, 2020	1,856,176	$25.32	4.2	$53.5
Granted	79,632	85.10		
Exercised	(580,656)	20.31		
Forfeited/Expired	—	—		
Outstanding at December 31, 2021	1,355,152	$30.98	4.1	$71.9
Exercisable at December 31, 2021	1,093,488	$24.96	3.6	$64.5
Exercisable and expected to vest at December 31, 2021 (b)	1,326,095	$30.32	4.0	$71.2

(a) Represents the number of vested options at December 31, 2021, plus the number of unvested options at December 31, 2021 that are ultimately expected to vest based on our estimated forfeiture rate.

(b) The aggregate intrinsic value is calculated as the positive difference between the exercise price of the underlying options and the quoted price of our common stock on December 31, 2021.

The total intrinsic value of options exercised was $35.7 million, $6.1 million and $15.2 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Restricted Stock Units

Restricted stock unit activity is presented below:

	Shares Subject to Restriction	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2020	805,052	$39.63
Granted	218,223	78.03
Vested	(336,310)	37.26
Forfeited	(32,495)	43.90
Outstanding at December 31, 2021	654,470	$53.44

The total fair value of restricted stock vested was $27.1 million, $15.0 million and $7.9 million for the years ended December 31, 2021, 2020 and 2019, respectively.

20. Other Charges, Net

The components of other charges, net were as follows (in millions):

	2021	2020	2019
Acquisition-related expenses, net	$ 6.1	$ 2.4	$ 4.6
Professional fees incurred in connection with investigation matters and other legal matters	1.1	5.9	2.1
Information technology transformation costs	2.8	2.5	3.7
Restructuring charges	4.8	12.0	(3.9)
Long-lived asset impairments	(0.5)	2.1	—
Other charges, net	$14.3	$24.9	$ 6.5

Restructuring Initiatives

Restructuring charges for the years ended December 31, 2021, 2020 and 2019 included charges for various other programs which were recorded in the accompanying consolidated statements of income and comprehensive income as follows (in millions):

	2021	2020	2019
Cost of revenues	$3.4	$ 3.8	$ 5.3
Other charges, net	4.8	12.0	(3.9)
	$8.2	$15.8	$ 1.4

The restructuring charges included a gain on the sale of a building of $7.7 million in the year ended December 31, 2019.

The following table sets forth the changes in the restructuring reserves (in millions):

	Total	Severance	Exit Costs	Provisions for Excess Inventory
Balance at December 31, 2018	$ 7.3	$ 2.0	$ 1.4	$ 3.9
Restructuring charges	1.4	6.1	(5.0)	0.3
Cash payments	(6.8)	(5.3)	(1.5)	—
Non-cash adjustments	2.9	(0.5)	5.2	(1.8)
Foreign currency impact	(0.2)	(0.1)	—	(0.1)
Balance at December 31, 2019	$ 4.6	$ 2.2	$ 0.1	$ 2.3
Restructuring charges	15.8	13.6	2.0	0.2
Cash payments	(10.0)	(8.0)	(2.0)	—
Non-cash adjustments	(1.0)	(0.5)	0.7	(1.2)
Foreign currency impact	0.4	0.3	—	0.1
Balance at December 31, 2020	$ 9.8	$ 7.6	$ 0.8	$ 1.4
Restructuring charges	8.2	5.3	1.5	1.4
Cash payments	(10.3)	(9.3)	(1.0)	—
Non-cash adjustments	(1.1)	—	(1.0)	(0.1)
Foreign currency impact	(0.2)	(0.1)	—	(0.1)
Balance at December 31, 2021	$ 6.4	$ 3.5	$ 0.3	$ 2.6

21. Interest and Other Income (Expense), Net

The components of interest and other income (expense), net were as follows (in millions):

	2021	2020	2019
Interest income	$ 0.9	$ 3.2	$ 1.3
Interest expense	(14.3)	(14.4)	(16.0)
Exchange losses on foreign currency transactions	(4.1)	(8.0)	(3.3)
Pension components	(2.2)	(3.3)	(2.5)
Interest and other income (expense), net	$(19.7)	$(22.5)	$(20.5)

22. Business Segment Information

The Company has three reportable segments, BSI Life Science, BSI Nano and BEST, as discussed in Note 1 to the consolidated financial statements.

Selected reportable segment information is presented below (in millions):

	2021	2020	2019
Revenue:			
BSI Life Science	$1,510.6	$1,253.9	$1,244.9
BSI Nano	697.5	556.1	632.7
BEST	223.8	189.5	209.9
Eliminations (a)	(14.0)	(12.0)	(14.9)
Total revenue	$2,417.9	$1,987.5	$2,072.6
Operating Income:			
BSI Life Science	$ 385.4	$ 273.8	$ 290.3
BSI Nano	73.4	23.6	40.4
BEST	22.2	6.2	16.4
Corporate, eliminations and other (b)	(67.7)	(55.3)	(46.2)
Total operating income	$ 413.3	$ 248.3	$ 300.9

(a) Represents product and service revenue between reportable segments.
(b) Represents corporate costs and eliminations not allocated to the reportable segments.

Total assets by segment are as follows (in millions):

	2021	2020
Assets:		
BSI Life Science, BSI Nano & Corporate	$3,560.5	$2,964.5
BEST	97.9	88.7
Eliminations and other (a)	(8.4)	(4.2)
Total assets	$3,650.0	$3,049.0

(a) Assets not allocated to the reportable segments and eliminations of intercompany transactions.

The Company is unable, without unreasonable effort or expense to disclose the amount of total assets by the BSI Life Science and BSI Nano Segments as well as the Corporate function and further, the Company's chief operating decision maker does not receive any asset information by operating segment.

Total capital expenditures and depreciation and amortization by segment are presented below (in millions):

	2021	2020	2019
Capital Expenditures:			
BSI Life Science	$61.3	$59.1	$44.4
BSI Nano	16.8	10.6	18.5
Corporate	4.7	17.4	4.7
BEST	9.2	10.1	5.4
Total capital expenditures	$ 92.0	$ 97.2	$ 73.0
Depreciation and Amortization:			
BSI Life Science	$41.1	$35.0	$30.5
BSI Nano	37.4	35.7	35.9
Corporate	4.3	4.0	3.8
BEST	6.3	5.7	5.4
Total depreciation and amortization	$ 89.1	$ 80.4	$ 75.6

Revenue and long-lived assets (including property, plant and equipment, net and operating lease right of use assets) by geographical area are as follows (in millions):

	2021	2020	2019
Revenue:			
United States	$ 601.0	$ 455.9	$ 529.8
Germany	262.6	244.9	213.6
Rest of Europe	658.1	519.8	505.2
Asia Pacific	729.1	629.1	651.0
Other	167.1	137.8	173.0
Total revenue	$2,417.9	$1,987.5	$2,072.6

	2021	2020	2019
Long-lived assets:			
United States	$ 51.3	$ 61.3	$ 53.2
Germany	244.0	227.8	175.1
Rest of Europe	141.5	144.7	118.3
Asia Pacific	22.6	22.1	16.4
Other	6.6	7.1	8.7
Total long-lived assets	$ 466.0	$ 463.0	$ 371.7

23. Related Parties

On February 26, 2020, the Company acquired land and buildings at 15 Fortune Drive and 44 Manning Road, both in Billerica MA, for a total purchase price of $12.3 million. Each property was owned by a trust controlled equally by Bruker's President & CEO, Frank Laukien, and his half-brother, Dirk D. Laukien. Both properties acquired are adjacent to Bruker's headquarters building at 40 Manning Road, a property already owned by the Company. Bruker BioSpin formerly leased the property at 15 Fortune Drive and will continue to occupy the property for the foreseeable future. The property at 44 Manning Road, which is currently fully leased to unrelated third parties, provides for potential expansion of Bruker operations in the future.

The purchase price was allocated between the two properties as follows: $5.6 million for 15 Fortune Drive and $6.7 million for 44 Manning Road. The price for each property was established based on an independent third-party appraisal. The Audit Committee of the Board reviewed, voted on and approved this related party transaction in accordance with Bruker's Related Persons Transactions Policy and the Audit Committee charter.

ITEM 9 *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE*

None.

ITEM 9A *CONTROLS AND PROCEDURES*

Disclosure Controls and Procedures

We have established disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that are designed to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and to ensure that such information is accumulated and communicated to management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), to allow timely decisions regarding required disclosures. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2021. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of December 31, 2021.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2021, based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework* (2013). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2021.

We excluded SCI Instruments, SVXR, Inc. and Molecubes NV from our assessment of internal control over financial reporting as of December 31, 2021 because they were acquired by the Company in business combinations during 2021. The total assets and total revenues of SCI Instruments, SVXR, Inc. and Molecubes NV, wholly-owned subsidiaries, collectively represent 1.9% and 0.4%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2021.

PricewaterhouseCoopers LLP, our independent registered public accounting firm has audited the effectiveness of our internal control over financial reporting as of December 31, 2021, as stated in their report which is included herein.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2021 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B ***OTHER INFORMATION***

None.

ITEM 9C ***DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS***

Not applicable.

PART III

ITEM 10 *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The full text of our code of conduct, which applies to our Principal Executive Officer, Principal Financial Officer, Principal Accounting Officer and Board of Directors is published on our Investor Relations website at *www.bruker.com*. We intend to disclose future amendments to certain provisions of our Code, or waivers of such provisions granted to executive officers and directors, on the website within four business days following the date of such amendment or waiver.

The information required by this item of Form 10-K is incorporated by reference to our definitive proxy statement (which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act) relating to our 2022 Annual Meeting of Stockholders.

ITEM 11 *EXECUTIVE COMPENSATION*

The information required by this item of Form 10-K is incorporated by reference to our definitive proxy statement (which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act) relating to our 2022 Annual Meeting of Stockholders.

ITEM 12 *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

The information required by this item of Form 10-K is incorporated by reference to our definitive proxy statement (which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act) relating to our 2022 Annual Meeting of Stockholders.

ITEM 13 *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

The information required by this item of Form 10-K is incorporated by reference to our definitive proxy statement (which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act) relating to our 2022 Annual Meeting of Stockholders.

ITEM 14 *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

Our independent registered public accounting firm is PricewaterhouseCoopers LLP, New York, NY, PCAOB ID 238.

The information required by this item of Form 10-K is incorporated by reference to our definitive proxy statement (which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act) relating to our 2022 Annual Meeting of Stockholders.

PART IV

ITEM 15 *EXHIBITS, FINANCIAL STATEMENTS AND SCHEDULES*

(a) Financial Statements and Schedules

(1) Financial Statements

The financial statements required by this item are filed as part of this report under Item 8—Financial Statements and Supplementary Data.

(2) Financial Statement Schedules

The financial statements required by this item are filed as part of this report under Item 8—Financial Statements and Supplementary Data.

(3) Exhibits

(b) List of Exhibits

EXHIBIT INDEX

Exhibit Number	Description	Incorporated by Reference	
		Form	Filing Date
3.1	Restated Certificate of Incorporation of Bruker Corporation	Form 10-K	March 27, 2020
3.2	Amended and Restated Bylaws of Bruker Corporation	Form 10-Q	August 8, 2020
4.1	Specimen Stock Certificate Representing Shares of Common Stock of Bruker Corporation	Form 10-K	March 1, 2017
4.2	Description of the Registrant's Securities registered pursuant to Section 12 of the Securities Exchange Act of 1934	Form 10-K	March 27, 2020
10.1†	Bruker Corporation 2010 Incentive Compensation Plan	Schedule 14A	April 14, 2010
10.2†	Bruker Corporation 2010 Incentive Compensation Plan Form of Incentive Stock Option Agreement	Form 10-Q	August 9, 2010
10.3†	Bruker Corporation 2010 Incentive Compensation Plan Form of Non-Qualified Stock Option Agreement	Form 10-Q	August 9, 2010
10.4†	Bruker Corporation 2010 Incentive Compensation Plan Form of Restricted Stock Agreement	Form 10-Q	August 9, 2010
10.5†	Bruker Corporation 2016 Incentive Compensation Plan	Schedule 14A	April 22, 2016
10.6†	Bruker Corporation 2016 Incentive Compensation Plan Form of Incentive Stock Option Agreement	Form 10-Q	August 9, 2019
10.7†	Bruker Corporation 2016 Incentive Compensation Plan Form of Non-Qualified Stock Option Agreement	Form 10-Q	August 9, 2019
10.8†	Bruker Corporation 2016 Incentive Compensation Plan Form of Restricted Stock Unit Agreement	Form 10-Q	August 9, 2019

Exhibit Number	Description	Incorporated by Reference	
		Form	Filing Date
10.9†	Bruker Corporation 2016 Incentive Compensation Plan Form of Director Restricted Stock Unit Agreement	Form 10-K	March 1, 2017
10.10	Amended and Restated Credit Agreement, dated as of May 24, 2011, by and among the Company, Bruker AXS GmbH, Bruker Daltonik GmbH, Bruker Optik GmbH, Bruker Physik GmbH, Bruker BioSpin Invest AG, Bruker BioSpin AG and Bruker BioSpin International AG, the other foreign subsidiary borrowers from time to time party thereto, the lenders from time to time party thereto, Deutsche Bank Securities Inc., Commerzbank Ag, New York, Grand Cayman And Stuttgart Branches and RBS Citizens, National Association, as Co-Documentation Agents, Bank of America, N.A. as Syndication Agent and JPMorgan Chase Bank, N.A., as Administrative Agent	Form 8-K	May 25, 2011
10.11*	Note Purchase Agreement, dated January 18, 2012	Form 8-K	January 19, 2012
10.12	First Amendment to the Note Purchase Agreement, date January 18, 2012	Form 10-Q	August 7, 2020
10.13	Credit Agreement, dated October 27, 2015, by and among the Company and certain of its foreign subsidiaries as borrowers, Citizens Bank, N.A., Deutsche Bank Securities Inc. and TD Bank, N.A., as Co-Documentation Agents, Bank of America, N.A. and Wells Fargo Bank, National Association, as Co-Syndication Agents, JPMorgan Chase Bank, N.A., as Administrative Agent for itself and the other lenders party thereto, and the several banks or other financial institutions or entities from time to time party thereto as lenders	Form 8-K	October 29, 2015
10.14†	Bruker Corporation 2019 Short-Term Incentive Compensation Program	Form 8-K	February 21, 2019
10.15†**	Bruker Corporation 2022 Short-Term Incentive Compensation Program		
10.16†	Offer Letter, dated March 17, 2018, by and between the Company and Gerald N. Herman	Form 10-Q	May 10, 2018
10.17†	Offer Letter, dated June 4, 2018, by and between the Company and Gerald N. Herman	Form 10-Q	August 9, 2018
10.18†	Contract of Employment, dated May 1, 2018, by and between the Company and Falko Busse	Form 10-Q	August 9, 2018
10.19†	Employment Offer Letter Agreement, dated June 25, 2012, by and between the Company and Juergen Srega	Form 10-Q	May 9, 2013
10.20†	Managing Director Employment Contract, dated as of June 28, 2012, by and between Bruker Daltonik GmbH and Juergen Srega, as amended pursuant to the Supplement to the Managing Director Employment Contract, dated as of December 12, 2019	Form 10-K	March 27, 2020
10.21†	Form of Indemnification Agreement of Officers and Directors	Form 8-K	February 11, 2019
10.22	Purchase and Sale Agreement between Bruker Corporation and Frank Laukien and Dirk D. Laukien as Trustees of 44 Manning Road Realty Trust and Umbrina Associates, dated October 31, 2019	Form 10-Q	November 4, 2019

Exhibit Number	Description	Incorporated by Reference	
		Form	Filing Date
10.23	Credit Agreement, dated December 11, 2019, by and among the Company and certain of its subsidiaries as borrowers, Deutsche Bank Securities Inc. and Wells Fargo Bank, National Association, as Co-Syndication Agents, Citizens Bank, N.A., Credit Suisse (Switzerland) Ltd., TD Bank, N.A. and U.S. Bank National Association, as Co-Documentation Agents, Bank of America, N.A., as Administrative Agent, Swing Line Lender and Issuing Bank, and the several banks or other financial institutions or entities from time to time party thereto as lenders	Form 8-K	December 12, 2019
10.24	Term Loan Agreement, dated December 11, 2019, by and among the Company and certain of its subsidiaries, and Bank of America, N.A. as Administrative Agent, TD Bank, N.A. and the other banks or other financial institutions or entities from time to time party thereto as lenders	Form 8-K	December 12, 2019
10.25	Note Purchase Agreement dated as of December 11, 2019	Form 8-K	December 12, 2019
10.26	First Amendment to the Note Purchase Agreement, dated as of December 11, 2019	Form 10-Q	August 7, 2020
10.27	First Amendment to Term Loan Agreement, dated as of May 12, 2021	Form 10-Q	August 5, 2021
10.28	Note Purchase Agreement dated as of December 7, 2021	Form 8-K	December 8, 2021
21.1 **	Subsidiaries of the Company		
23.1 **	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm		
24.1 **	Power of attorney (included on signature page hereto)		
31.1 **	Certification by Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
31.2 **	Certification by Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		
32.1 **	Certification by Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002		
101.INS **	Inline XBRL Instance 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**	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2021 has been formatted in Inline XBRL (included in Exhibit 101)		

* Certain portions have been omitted pursuant to an order granting confidential treatment and have been filed separately with the Securities and Exchange Commission.
† Designates management contract or compensatory plan or arrangement.
** Filed or furnished herewith.

No other instruments defining the rights of holders of long-term debt of the registrant or its subsidiaries have been filed as Exhibits because no such instruments met the threshold materiality requirements under Regulation S-K. The registrant agrees, however, to furnish a copy of any such instruments to the Commission upon request.

ITEM 16 ***FORM 10-K SUMMARY***

Not Applicable.

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.

BRUKER CORPORATION

Date: February 28, 2022

By: /s/ FRANK H. LAUKIEN, PH.D.

Name: Frank H. Laukien, Ph.D.
Title: *President, Chief Executive Officer and Chairman*

We, the undersigned officers and directors of Bruker Corporation, hereby severally constitute and appoint Frank H. Laukien, Ph.D. to sign for us and in our names in the capacities indicated below, the report on Form 10-K filed herewith and any and all amendments to such report, and to file the same, with all exhibits thereto and other documents in connection therewith, in each case, with the Securities and Exchange Commission, and generally to do all such things in our names and on our behalf in our capacities consistent with the provisions of the Securities Exchange Act of 1934, as amended, and all requirements of the Securities and Exchange Commission.

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.

Name	Title	Date
/s/ FRANK H. LAUKIEN, PH.D. Frank H. Laukien, Ph.D.	President, Chief Executive Officer and Chairman (Principal Executive Officer)	February 28, 2022
/s/ GERALD N. HERMAN Gerald N. Herman	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 28, 2022
/s/ BONNIE H. ANDERSON Bonnie H. Anderson	Director	February 28, 2022
/s/ CYNTHIA M. FRIEND, PH.D. Cynthia Friend, Ph.D.	Director	February 28, 2022
/s/ MARC A. KASTNER, PH.D. Marc A. Kastner, Ph.D.	Director	February 28, 2022
/s/ WILLIAM A. LINTON William A. Linton	Director	February 28, 2022
/s/ JOHN ORNELL John Ornell	Director	February 28, 2022
/s/ RICHARD A. PACKER Richard A. Packer	Director	February 28, 2022

/s/ ADELENE Q. PERKINS Adelene Q. Perkins	Director	February 28, 2022
/s/ HERMANN REQUARDT, PH.D. Hermann Requardt, Ph.D.	Director	February 28, 2022
/s/ ROBERT ROSENTHAL, PH.D. Robert Rosenthal, Ph.D.	Director	February 28, 2022

Exhibit 10.15

Bruker Corporation
2022 Short-Term Incentive Compensation Program

Program Objectives

The Bruker Corporation ("**Bruker**" or the "**Company**") 2022 Short-Term Incentive Compensation Program (the "**ICP**" or "**Program**") is designed to reward employees for performance that contributes to the Company's growth and financial success.

The Program is designed to reward several layers of success at the Bruker Corporate, Group, Divisional, Business Unit, functional, and individual levels, while maintaining a focus on improvement over prior year results. Incentive Awards under this Program are granted as "Cash-Based Awards" pursuant to and in accordance with the terms of the Bruker Corporation 2016 Incentive Compensation Plan (the "**2016 Plan**"). Capitalized terms used but not defined herein shall have the meanings ascribed to them under the 2016 Plan.

Eligibility

Employees, including executives and managers, of the Company and its subsidiaries are eligible to participate in the Program, as the Committee (as defined below) may determine at its discretion. Sales-commissioned employees and employees participating in any other cash-based incentive plan of the Company or any of its subsidiaries are not eligible to participate in the ICP. Employees participating in this ICP are generally not eligible to participate in any other cash-based incentive plan of the Company and its subsidiaries.

Any Incentive Award for any employee who becomes eligible to participate in the Program after the beginning of the Performance Period shall be pro-rated based on the employee's participation date. An employee must commence employment or transfer into an eligible position, as applicable, prior to November 15th of the Performance Period in order to be eligible to participate in the Program for that Performance Period, unless otherwise determined by the Committee.

Incentive Targets and Incentive Awards

Each Participant shall have a pre-determined Incentive Target, which will be determined by the Committee and communicated to the Participant. Additionally, the conditions to achieve the Incentive Target shall also be pre-determined. Achievement of a Participant's Incentive Target typically depends on a combination of Company or business achievement of financial goals and

achievement of individual goals, with weightings assigned to each based on Committee discretion and the Participant's level in the organization. Incentive Award payouts are calculated and paid annually based on Company and individual performance relative to the goals, such that actual Incentive Award payouts can be below, at, or above the Incentive Target.

Incentive Award Achievement and Maximums

Financial Goals

Each financial goal has a minimum of 0% payout and a maximum of 200%, with payouts determined relative to the achievement of each of the specified performance goals on a linear basis, *e.g.*, 110% performance results in 110% payout for any one financial metric.

For purposes of this Program, financial goals may be determined pursuant to generally accepted accounting principles (GAAP) or on a non-GAAP basis and may include the following metrics or variations thereof: earnings per share (EPS); pre-tax or after-tax net income; operating income or profit; cash flow; gross or net revenues; gross or net sales; costs (including cost reductions); margins; units sold; market share; stock price; total shareholder return; return on sales, assets, equity, capital or investment; earnings before deducting one or more of interest, taxes, depreciation and amortization; capital expenditures; working capital; inventory decrease; effective tax rate in one or more jurisdictions; planning for, or completion or implementation of, acquisitions or divestitures of specific product lines, business segments, business units, divisions or subsidiaries; or other balance sheet or income statement objectives approved by the Committee.

Performance goals may be set at the consolidated level, segment level, division level, group level, business unit level, country or regional level. Additionally, performance goals may be measured on an absolute basis or relative to pre-established targets, a previous year's results or to a designated comparison group, in each case as specified by the Committee.

The Committee may, in its sole discretion and in accordance with and subject to the terms of the 2016 Plan, adjust Incentive Awards to take into account the effects of any Extraordinary Items (as defined below).

Differences in weightings of financial goals, or the financial goals themselves, may exist between the Corporate and Group/Divisional financial metrics to reflect organizational scope, responsibility, and shareholder expectations. Each of the metrics may also be weighted to reflect the relative importance of each of the goals. Participants in the operating groups may have a portion of their financial goals tied to their direct area of responsibility or some other area related

to their responsibility (*e.g.*, an organization that is "1-up" from their current direct area of accountability) to encourage teamwork, collaboration, and alignment across the organization.

The determination of achievement of financial goals for purposes of Incentive Award calculations will be based, in part, upon final audited financial statements for the Performance Period; and, where applicable, the baseline numbers will be the prior year audited financial results as approved by the Board.

Individual Goals

All individual goals will be established by the Committee and communicated to the Participant. Individual performance will be assessed by the Committee based on achievement of individual goals. Payouts will be determined by the Committee, based, in part, on the Committee's assessment of individual performance relative to each of the specified goals and the applicable annual budget. Individual performance has a minimum payout of 0% and a maximum payout of 125%.

Total Award Opportunity

Results of the financial goals relative to their respective targets will be multiplied by the corresponding payout percentage tied to the specific level of performance for each goal. Those products will then be added together to derive the final payout percentage for the financial portion of the award. Results of the individual goals will be used in determining the overall payout for the individual portion of the award.

Award Payments

After the Performance Period has ended, the Committee shall determine the amount of each Participant's Incentive Award, if any, based on the achievement of the financial goals and individual goals over the Performance Period, market conditions and the Committee's exercise of discretion. The factors used in determining the amount of the Incentive Award are in the sole discretion of the Committee, and may include the achievement of individual performance, employee contributions to other areas of the Company, compliance with Company policies and procedures, teamwork, market conditions, overall Company performance, or other factors determined by senior management from time to time.

Incentive Awards, if any, will be paid to eligible Participants in the calendar year following the calendar year in which the Performance Period ends shortly after audited results are approved by the Board and reported by the Company and the Committee determines Incentive Award amounts.

Participants must be active employees on payroll in an eligible position on the payout date to receive an Incentive Award; provided that Participants who transfer to an ineligible position after the beginning of the Performance Period will remain eligible to receive a pro-rated Incentive Award based on the time the Participant worked in the eligible position during the Performance Period. To be eligible to receive any Incentive Award under the Program, the Participant must be considered in good standing as determined by the Committee in its sole discretion and may not be on a performance improvement plan.

If an employee is terminated involuntarily prior to the end of a Performance Period, the Committee may, in its sole discretion, determine whether to pay any portion of the Incentive Award, taking into account such things as individual performance and length of time the employee performed in the designated role during the Performance Period. In no event will any employee who resigns for any reason, or who is terminated for performance reasons or for violation of Company policies prior to the date of the Incentive Award payout be eligible to receive any portion of an Incentive Award.

The payment of Incentive Awards pursuant to the achievement of the individual goals is subject to the satisfaction of minimum performance expectations, as determined by the Committee. Such minimum performance expectations include, without limitation, compliance by the Participant and the Participant's organization with the Company's Code of Conduct and other policies.

In the event the Committee determines that a Participant's performance, or the performance of the Participant's organization, has failed to meet the minimum standard of performance reasonably expected of such Participant, the Participant may receive only such portion of his or her Incentive Award calculated as payable in respect of individual goals, which could be zero, as may be so determined by the Committee.

In addition, in the event such failure to achieve minimum performance expectations is due to a material violation of the Code of Conduct or other Company policies which fall within the Participant's area of responsibility, either individually or with respect to Participant's organization, the ability of the Committee to reduce or eliminate the portion of Incentive Awards calculated as payable in respect of such individual goals shall be extended to and include the ability to eliminate or reduce the payment of amounts calculated as payable pursuant to the achievement of the financial goals.

A Participant has no contractual right to an Incentive Award. The Committee has discretion to determine whether a Participant will receive an Incentive Award and has sole discretion to determine the amount of the Incentive Award, if any. No Incentive Award is earned until the Committee has determined the amount

payable and the Participant has met all of the conditions of the Program. An Incentive Award in one year is not a guarantee of eligibility to participate in the Program, or an Incentive Award of any amount, in subsequent years.

General Provisions

Administration

The terms and conditions of the Program are subject to the provisions of the 2016 Plan. The Committee is responsible for approving Incentive Targets, establishing financial and independent goals, assessing performance and determining the amount payable with respect to each Incentive Award, and for administering the Program in accordance with and subject to the terms and conditions of the 2016 Plan. The Committee shall have full and sole discretionary authority to interpret the Program, to establish and amend rules and regulations relating to it, and to make all other determinations necessary or advisable for the administration of the Program.

All interpretations and determinations, including determinations of the amount of Incentive Awards due any Participant, made by the Committee shall be final and binding on all persons.

Termination and Amendment

The Company reserves the right to amend, modify, suspend or terminate the Program at any time solely in its discretion with or without notice to Participants.

No Right to Employment

Nothing contained herein shall in any way alter the nature of employment at the Company or constitute a contract of employment or in any way be construed to confer on the Participant any right to continue as a participant in the 2016 Plan or the Program or as an employee of the Company or any subsidiary of the Company.

Recoupment

Payments made to any Participant pursuant to an Incentive Award shall be subject to clawback: (1) to the extent of the excess of what would have been paid to the Participant under a Restatement (as defined below), (2) in the event that a Participant, during employment or other service covered by this Program, shall engage in activity detrimental to the business of the Company, (3) as required by any clawback policy implemented by the Company, or (4) as otherwise required by any provision of any law, government rule or regulation, or stock exchange listing requirement.

Tax Withholding

The Company and its subsidiaries shall have the right to withhold from any amount payable hereunder any amount it reasonably determines is sufficient to satisfy all applicable country-specific tax withholding requirements and to take such other action as may be necessary or advisable in the opinion of the Company and its subsidiaries to satisfy all obligations for withholding of such taxes.

Section 409A

The Program is intended to comply with the short-term deferral rule set forth in the regulations under section 409A of the Code, in order to avoid application of section 409A to the Program. If and to the extent that any payment under this Program is deemed to be deferred compensation subject to the requirements of section 409A, this Program shall be administered so that such payments are made in accordance with the requirements of section 409A, including the six-month delay required for "specified employees," if applicable. In no event shall a Participant, directly or indirectly, designate the calendar year of payment, except in accordance with Section 409A. Notwithstanding anything in this Program to the contrary, each Participant shall be solely responsible for the tax consequences of any Incentive Award, and in no event shall the Company or any subsidiary have any responsibility or liability if any Incentive Award does not meet the applicable requirements of Section 409A of the Code. Although the Company intends to administer the Program to prevent taxation under Section 409A of the Code, the Company does not represent or warrant that the Program or any Incentive Award complies with any provision of federal, state, local or other tax law.

Change in Control

Notwithstanding other provisions of the Program, in the event of a Change in Control of the Company:

(1) If an Incentive Award is continued or assumed and within the lesser of the expiration of the Performance Period and 12 months following the Change in Control the Company (or its successor) involuntarily terminates the Participant without Cause or the Participant voluntarily terminates for Good Reason then, upon such termination, the Incentive Target payout opportunity under such Incentive Award will be deemed to have been earned on a pro rata basis for that portion of the Performance Period(s) completed as of the effective date of such qualifying termination and will be paid to the Participant within 30 days following such termination, unless the acceleration of payment would result in additional taxes under Section 409A of the Internal Revenue Code.

(2) If an Incentive Award is not continued or assumed, the Incentive Target payout opportunity under such Incentive Award will be deemed to have been earned on a pro rata basis for that portion of the Performance Period completed as of the effective date of such Change in Control and will be paid to the Participant within 30 days following such Change in Control, unless the acceleration of payment would result in additional taxes under Section 409A of the Internal Revenue Code.

Unfunded Arrangement

The obligations of the Company under this Program shall be unsecured and unfunded obligations, and to the extent that any Participant acquires a right to receive a payment under this Program, such right shall be no greater than the right of an unsecured general creditor of the Company and no Participant shall have any right, title or interest in any of the assets of the Company or its affiliates. No assets of the Company or its affiliates shall be held under any trust, or held in any way as collateral security for the fulfilling of the obligations of the Company under this Program. Any and all assets of the Company and its affiliates shall be, and remain, the general unpledged, unrestricted assets thereof.

Transferability

No right or interest of any Participant under the Program and no Incentive Award will be assignable or transferable, in whole or in part, by the Participant either directly or by operation of law or otherwise, including without limitation by execution, levy, garnishment, attachment, pledge or in any manner; no attempted assignment or transfer thereof will be effective; and no right or interest of any Participant under the Program and any Incentive Award will be liable for, or subject to, any obligation or liability of such Participant.

Successors

The Program shall be binding upon and inure to the benefit of the Company, its successors and assigns, and each Participant and the Participant's heirs, executors, administrators and legal representatives.

Governing Law

This Program, and all agreements hereunder, shall be construed in accordance with and governed by the laws of the State of Delaware, without reference to principles of conflict of laws which would require application of the law of another jurisdiction.

Entire Agreement

This Program, together with the 2016 Plan, constitutes the entire agreement of the Company with respect to the subject matter thereof and cannot be modified by any oral statement or otherwise except by written action of the Committee or the Board.

This Program applies to all employees globally, with such adjustments for local law and local business and accounting practices as the Committee may determine, including as set forth on the Addendum attached hereto.

Definitions

Committee: means the Compensation Committee with respect to the Company's executive officers and other senior-level employees identified by the Compensation Committee, and the Participant's manager or applicable Group President with respect to all other Participants.

Extraordinary Items: means unusual or nonrecurring events affecting the Company or the financial statements of the Company, such as, but not limited to, (a) effects of changes in foreign exchange, (b) an unbudgeted material expense incurred by or at the direction of the Board or a committee thereof, (c) a material litigation judgment or settlement, (d) effects of mergers, acquisitions, divestitures, spin-offs, consolidation, acquisition of property or stock, reorganizations, restructuring charges, or joint ventures, or (e) changes in applicable laws, regulations, or accounting principles.

Incentive Award: The award payout under the Program.

Incentive Target: The incentive opportunity expressed as a percent of the Participant's base salary.

Participant: An employee who has met the eligibility criteria outlined in accordance with the Program.

Performance Period: The period of time for which performance goals are measured under this Program is generally January 1 through December 31.

Restatement: With respect to any payment under an Incentive Award, a material restatement of previously filed financial statements that is required to be prepared and filed at any time during the three-year period following such payment due to material noncompliance of the Company with any financial reporting requirements under the United States federal securities laws.

Short-Term Incentive Compensation Program Addendum

This Addendum should be read alongside the provisions of the Short-Term Incentive Compensation Program (the "**Program**"). The purpose of the Addendum is to amend the Program in accordance with the requirements of the governing law in the countries as set out below. The amendments for a given specific country set forth below (and no other country) shall apply to and be part of the Program for Participants while employed by a Bruker subsidiary in such country. Unless otherwise defined in this Addendum, the terms and conditions defined in the Program are incorporated by reference. For avoidance of doubt, if a provision of the Program is not expressly amended below for a given country, that provision remains in full force and effect in such country without amendment.

China

The following amendment shall be made to the Program if the Participant employed by a Bruker subsidiary in China.

The paragraph headed **Governing Law** shall be amended to read as follows (with the underlined wording showing the change made):

"*This Program, and all agreements hereunder, shall be construed in accordance with and governed by the laws of the Peoples Republic of China, without reference to principles of conflict of laws which would require application of the law of another jurisdiction."*

France

The following amendment shall be made to the Program if the Participant employed by a Bruker subsidiary in France.

The paragraph headed **Recoupment** shall be amended to read as follows:

"*Payments made to any Participant pursuant to an Incentive Award shall be subject to clawback: (1) to the extent of the excess of what would have been paid to the Participant under a Restatement (as defined below) or (2) as otherwise required by any provision of any law, government rule or regulation, or stock exchange listing requirement.*"

Germany

The following amendments shall be made to the Program if the Participant employed by a Bruker subsidiary in Germany.

1. The first sentence of the paragraph headed **Individual Goals** shall be amended to read as follows (with the underlined wording showing the changes made):

   "*All individual goals will be established by the Committee and communicated to the Participant at the beginning of the Performance Period."*

2. The first sentence of the first paragraph under the heading **Award Payments** shall be amended to read as follows (with the underlined wording showing the changes made):

   "*After the Performance Period has ended, the Committee shall determine the amount of each Participant's Incentive Award, if any, based on the achievement of the financial goals and individual goals over the Performance Period, market conditions and the Committee's exercise of reasonable discretion*."

3. The first sentence of the third paragraph under the heading **Award Payments** shall be deleted and the second sentence of the same paragraph shall be amended to read as follows (with the underlined wording showing the changes made):

   "*To be eligible to receive any Incentive Award under the Program, the employee Participant must be considered in good standing as determined by the Company in its sole and reasonable discretion and may not be on a performance improvement plan."*

4. The fourth paragraph under the heading **Award Payments** shall be deleted and replaced with the following:

   "Any Incentive Award for any employee whose employment terminates during the Performance Period or who otherwise ceases to be eligible to participate in the Program after the beginning of the Performance Period shall be pro-rated based on the employee's termination date or the date on which the employee's participation ceases otherwise."

5. The first sentence of the eighth paragraph under the heading **Award Payments** shall be deleted.

Switzerland

The following amendments shall be made to the Program if the Participant employed by a Bruker subsidiary in Switzerland.

1. The following sentence shall be inserted at the end of the paragraph under the heading **Incentive Payment and Incentive Awards**:

   "In any case, the Committee is free to deviate at its own discretion upwards or downwards from the Incentive Target set in its final determination of the Incentive Award."

2. The following sentences shall be inserted at the end of the second paragraph under the heading ***Award Payments***:

   "The Company may instruct subsidiaries to make the payment on behalf of the Company. The Company further has the right to pay the Incentive Award in the local currency in which the employee is usually paid whereby the exchange rate shall be determined by the Committee."

3. The third, fourth and fifth paragraphs under the heading **Award Payments** shall be amended to read as follows (with the underlined wording showing the changes made):

   "Participants must be active employees (i.e. neither terminated or under notice) on payroll in an eligible position on the payout date to receive an Incentive Award; provided that Participants who transfer to an ineligible position after the beginning of the Performance Period will remain eligible to receive a pro-rated Incentive Award based on the time the Participant worked in the eligible position during the Performance Period. To be eligible to receive any Incentive Award under the Program, the Participant must be considered in good standing as determined by the Committee in its sole discretion and may not be on a performance improvement plan.

   If an employee is terminated involuntarily prior to the end of a Performance Period (whereby the issuance of the notice is decisive and not the expiration of any notice period), the Committee may, in its sole discretion, determine whether to pay any portion of the Incentive Award, taking into account such things as individual performance and length of time the employee performed in the designated role during the Performance Period. In no event will any employee who resigns for any reason, or who is terminated for performance reasons or for violation of Company policies prior to the date of the Incentive Award payout (whereby

the issuance of the notice is decisive and not the expiration of any notice period) be eligible to receive any portion of an Incentive Award. The possible indication of reasons for termination in a notice does not allow any conclusion to be drawn as to the reasons for termination that are decisive for the Program.

The payment of Incentive Awards pursuant to the achievement of the individual goals is subject to the satisfaction of minimum performance expectations, as determined in the sole discretion by the Committee. Such minimum performance expectations include, without limitation, compliance by the Participant and the Participant's organization with the Company's Code of Conduct and other policies."

4. The following sentence shall be inserted at the end of the paragraph under the heading **Successors:**

"The Participant shall not have any right under this Program against the subsidiary employing the Participant, but only against the Company."

EXHIBIT 21.1

SUBSIDIARIES OF BRUKER CORPORATION

Name of Subsidiary	Jurisdiction of Incorporation
Acuity Spatial Genomics, Inc. (35)	Delaware, U.S.A.
Advanced Diagnostic Solutions (Pty) Ltd. (33)	South Africa
Agapetus GmbH (25)	Austria
Alicona Imaging GmbH (26)	Austria
Anasys Instruments Corporation (9)	California, U.S.A.
Biocetra AS (23)	Norway
Bruker Arabia Limited (25)	Saudi Arabia
Bruker AXS Holdings, Inc.	Delaware, U.S.A.
Bruker AXS LLC (9)	Delaware, U.S.A.
Bruker AXS Ltd. (13)	United Kingdom
Bruker AXS GmbH (4)	Germany
Bruker Austria GmbH (5)	Austria
Bruker Belgium S.A./N.V. (28)	Belgium
Bruker BioSpin Corporation	Massachusetts, U.S.A.
Bruker BioSpin GmbH (17)	Germany
Bruker Japan K.K. (11)	Japan
Bruker BioSpin MRI GmbH (8)	Germany
Bruker Business Support Center sp. Z.o.o. (34)	Poland
Bruker Daltonics GmbH & Co., KG (19)	Germany
Bruker Daltonik GmbH (18)	Germany
Bruker Daltonics Ltd. (20)	United Kingdom
Bruker do Brasil Ltda. (5)	Brazil
Bruker Detection Corporation (20)	Massachusetts, U.S.A.
Bruker EAS GmbH (2)	Germany
Bruker Energy & Supercon Technologies, Inc.	Delaware, U.S.A.
Bruker Espanola S.A. (11)	Spain
Bruker Finance BV (20)	Netherlands
Bruker France S.A.S. (11)	France
Bruker Holdings BV (20)	Netherlands
Bruker India Scientific PVT, Ltd. (21)	India
Bruker Invest AG (10)	Switzerland
Bruker Italia S.r.l. (11)	Italy
Bruker JV UK Ltd. (15)	United Kingdom
Bruker Korea Co. Ltd. (11)	Korea
Bruker Ltd. (11)	Canada
Bruker Ltd. (11)	Russia
Bruker Mexicana S.A. de C.V. (6)	Mexico
Bruker Microbiology Technology (Beijing) Co., Ltd	China
Bruker Nano GmbH (5)	Germany
Bruker Nano, Inc. (29)	Arizona, U.S.A.
Bruker Nederland B.V. (11)	Netherlands
Bruker Nordic AB (20)	Sweden
Bruker Optics GmbH & Co., KG (37)	Germany
Bruker Optics Verwaltungs GmbH (37)	Germany
Bruker Optik Holding GmbH (20)	Germany
Bruker OST LLC (1)	Delaware, U.S.A.
Bruker Physik GmbH (16)	Germany
Bruker Polska Sp. Z.o.o. (5)	Poland
Bruker Portugal Unipessoal LDA (11)	Portugal
Bruker PTY Ltd. (11)	Australia

Bruker Scientific Instruments Hong Kong Co., Ltd. (11)	Hong Kong
Bruker Scientific Israel Ltd. (11)	Israel
Bruker Scientific LLC	Delaware, U.S.A.
Bruker (Beijing) Scientific Technology Co., Ltd. (12)	China
Bruker Switzerland AG (11)	Switzerland
Bruker (Malaysia) SDN. BHD. (11)	Malaysia
Bruker Singapore Pte. Ltd. (11)	Singapore
Bruker South Africa (Pty) Ltd. (5)	South Africa
Bruker s.r.o. (36)	Czech Republic
Bruker Taiwan Co. Ltd. (20)	Taiwan
Bruker Technologies Ltd. (14)	Israel
Bruker Turkey Teknolojik Sistemler Ticaret Ltd. Sirketi (27)	Turkey
Bruker UK Ltd. (11)	United Kingdom
Bruker Verwaltungs GmbH (19)	Germany
Canopy Biosciences LLC (9)	Delaware, U.S.A.
Core Diagnostics Inc.(31)	California, U.S.A.
Hain LifeScience E.A. Ltd. (23)	Kenya
Hain LifeScience GmbH (36)	Germany
Hydrostatic Extrusions Ltd. (1)	United Kingdom
InCoaTec GmbH (7)	Germany
InVivo Biotech Svx GmbH (36)	Germany
Lifescience Solutions Africa (Pty) Ltd.(23)	South Africa
Luxendo GmbH (11)	Germany
Merlin Diagnostika GmbH (36)	Germany
Mestrelab Research S.L. (24)	Spain
Molecubes, NV (11)	Netherlands
PMOD Technologies LLC (25)	Switzerland
Precision Diagnostics, Inc. (30)	Delaware, U.S.A.
Research Instruments GmbH (3)	Germany
SAS Biocentric (23)	France
SmartTip BV (32)	Netherlands
Vutara LLC (9)	Delaware, U.S.A.
XGLabs S.r.l. (22)	Italy
Zellkraft Werk GmbH (30)	Germany

(1) These entities are wholly owned subsidiaries of Bruker Energy & Supercon Technologies, Inc.
(2) These entities are wholly owned subsidiaries of Bruker HTS GmbH.
(3) Research Instruments GmbH is 52.49% owned by Bruker Energy & Supercon Technologies, Inc. and 47.51% owned by third parties.
(4) Bruker AXS GmbH is 90% owned by Bruker AXS Holdings, Inc. and 10% owned by Bruker Corporation.
(5) These entities are wholly owned subsidiaries of Bruker AXS GmbH.
(6) Bruker Mexicana S.A de C.V. is 99.9% owned by Bruker AXS GmbH and 0.1% owned by Bruker AXS LLC.
(7) InCoaTec GmbH is 66% owned by Bruker AXS GmbH and 34% owned by third parties.
(8) Bruker BioSpin MRI GmbH 89.9% owned by Bruker Physik GmbH and 10.1% owned by Bruker Invest AG.
(9) These entities are wholly owned subsidiaries of Bruker Nano, Inc.
(10) Bruker Invest AG is 90% owned by Bruker BioSpin Corporation and 10% owned by Bruker Corporation.
(11) These entities are wholly owned subsidiaries of Bruker Invest AG.
(12) Bruker (Beijing) Scientific Technology Co., Ltd. is a wholly owned subsidiary of Bruker Singapore Pte. Ltd.
(13) Bruker AXS Ltd. is 50% owned by Bruker Invest AG and 50% owned by Bruker UK Ltd.
(14) Bruker Technologies Ltd. is a wholly owned subsidiary of Bruker Scientific Israel Ltd.
(15) Bruker JV UK Ltd. is a wholly owned subsidiary of Bruker UK Ltd.

(16) Bruker-Physik GmbH is 50.5% owned by Bruker BioSpin Corporation, 24.75% owned by Bruker Daltonik GmbH and 24.75% owned by Bruker Optik GmbH.
(17) Bruker BioSpin GmbH is owned wholly owned by Bruker-Physik GmbH.
(18) Bruker Daltonik GmbH is 90% owned by Bruker Scientific LLC and 10% owned by Bruker Corporation.
(19) These entities are wholly owned subsidiaries of Bruker Daltonik GmbH.
(20) These entities are wholly owned subsidiaries of Bruker Scientific LLC.
(21) Bruker India Scientific PVT, Ltd. is 73.59% owned by Bruker Invest AG, 6.53% owned by Bruker Daltonik GmbH and 19.88% owned by Bruker AXS GmbH.
(22) XGLabs S.r.l. is a wholly owned subsidiary of Bruker Italia S.r.l.
(23) These entities are wholly owned by Hain LifeScience GmbH.
(24) This entity is 50.998% owned by Bruker Switzerland AG and 49.002% owned by third parties.
(25) This entity is wholly owned by Bruker Switzerland AG.
(26) These entities are wholly owned by Agapetus GmbH.
(27) This entity is owned 99.74% by Bruker Invest AG and 0.26% by Bruker Switzerland AG.
(28) This entity is 99.99% owned by Bruker Invest AG and 0.01% owned by Bruker Switzerland.
(29) This entity is wholly owned by Bruker AXS Holdings, Inc.
(30) Wholly owned by Canopy BioScience LLC.
(31) Wholly owned by Precision Diagnostics, Inc.
(32) Wholly owned by Bruker Nederland BV.
(33) 50% owned by Hain Lifescience GmbH and 50% owned by Bruker South Africa (Pty) Ltd.
(34) Wholly owned by Bruker Finance BV.
(35) This entity is 94% owned by Bruker Nano, Inc.
(36) These entities are wholly owned by Bruker Daltonics GmbH & Co., KG.
(37) These entities are wholly owned by Bruker Optik Holding GmbH.

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-211686, 333-167333, 333-150430, 333-137090, 333-107294, and 333-47836) of Bruker Corporation of our report dated February 28, 2022 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
February 28, 2022

EXHIBIT 31.1

CERTIFICATION

I, Frank H. Laukien, certify that:

1. I have reviewed this annual report on Form 10-K of Bruker Corporation;

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

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

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

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

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

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

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

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

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

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

Date: February 28, 2022

By: /s/ FRANK H. LAUKIEN, PH.D.

Frank H. Laukien, Ph.D.
President, Chief Executive Officer and Chairman
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

I, Gerald N. Herman, certify that:

1. I have reviewed this annual report on Form 10-K of Bruker Corporation;

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

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

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

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

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

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

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

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

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

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

Date: February 28, 2022

By: /s/ GERALD N. HERMAN

Gerald N. Herman
Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Bruker Corporation (the "Company") on Form 10-K for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, Frank H. Laukien, President, Chief Executive Officer and Chairman of the Board of Directors of the Company, and Gerald N. Herman, Executive Vice President and Chief Financial Officer of the Company, certifies, pursuant to 18 U.S.C. section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2022

By: /s/ FRANK H. LAUKIEN, PH.D.

Frank H. Laukien, Ph.D.
President, Chief Executive Officer and Chairman
(Principal Executive Officer)

Date: February 28, 2022

By: /s/ GERALD N. HERMAN

Gerald N. Herman
Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Executive Management

Frank H. Laukien, Ph.D.
President &
Chief Executive Officer

Gerald N. Herman
Executive Vice President &
Chief Financial Officer

Mark R. Munch, Ph.D.
President of Bruker Nano Group
& Corporate Executive Vice
President

Juergen Srega
President, Bruker CALID Group

Falko Busse, Ph.D.
President, Bruker BioSpin Group

Burkhard Prause, Ph.D.
President, Bruker Energy &
Supercon Technologies (BEST)

Board of Directors

Frank H. Laukien, Ph.D.
President, Chief Executive
Officer, Chairman,
Bruker Corporation

Bonnie H. Anderson
Co-Founder & Chairwoman,
Veracyte, Inc.

Cynthia M. Friend, Ph.D.
President & CEO, the Kavli
Foundation
Director of the Energy Frontier
Research Center for Sustainable
Catalysis, Harvard University

Marc A. Kastner, Ph.D.
Former Dean of MIT School
of Science
Adjunct Professor of Physics,
Stanford University Former
President of theScience
Philanthropy Alliance

William A. Linton, Ph.D.
Chairman &
Chief Executive Officer,
Promega Corporation

Philip Ma, Ph.D.
Founder &
Chief Executive Officer,
PrognomiQ Inc.

John Ornell
Former Chief Financial Officer,
Waters Corporation

Richard A. Packer
Primary Executive Officer,
Healthcare Business Unit,
Asahi Kasei Corporation

Adelene Q. Perkins
Chair & Chief Executive Officer,
Infinity Pharmaceuticals, Inc.

Hermann Requardt, Ph.D.
Former Chief Executive Officer,
Siemens Healthcare

Robert J. Rosenthal, Ph.D.
Chairman &
Former Chief Executive Officer
Taconic Biosciences, Inc.

Corporate & Investor Information

Corporate Headquarters:
Bruker Corporation
40 Manning Road
Billerica, Massachusetts 01821

Common Stock Listing:
Common stock of Bruker
Corporation is traded on Nasdaq
under the symbol "BRKR"

Investor Relations & Corporate Development:
Justin Ward
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Secretary:
Brent Alldredge

Legal Counsel:
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Independent Registered Public Accounting Firm:
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Transfer Agent:
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