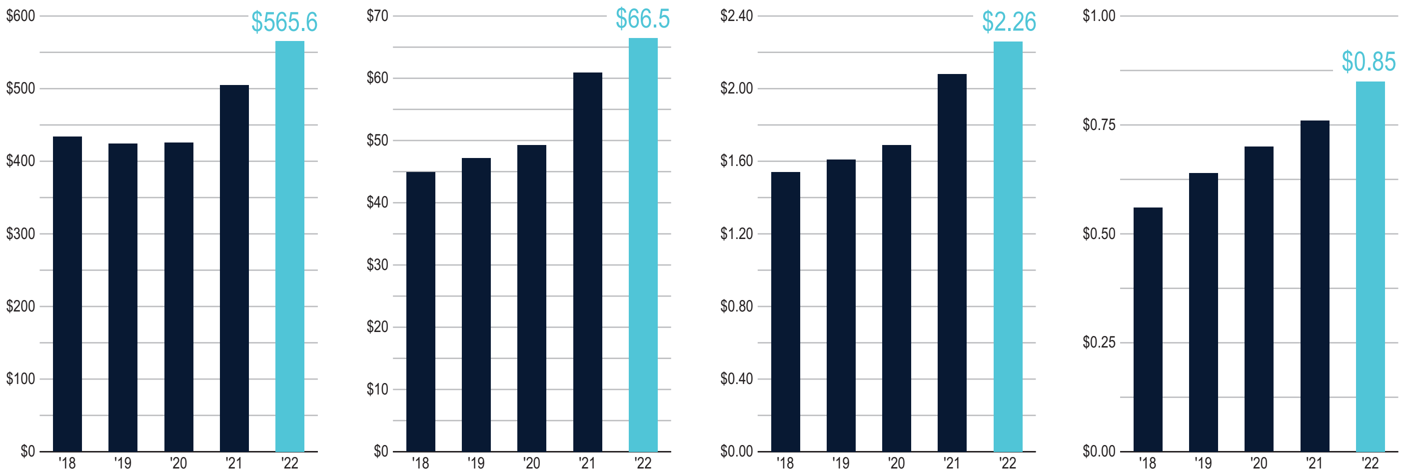
2022 BADGER METER
ANNUAL REPORT

OVERVIEW

OUR COMPANY

With more than a century of water technology innovation, Badger Meter® (NYSE:BMI) is a global provider of industry leading water solutions encompassing flow measurement, quality and other system parameters. These offerings provide our customers with the data and analytics essential to optimize their operations and contribute to the sustainable use and protection of the world's most precious resource.

December 31,	2021	2022	% Change
Operations (dollars in thousands)			
Net Sales	$ 505,198	$ 565,568	11.9
Operating Earnings	$ 78,723	$ 87,295	10.9
Net Earnings	$ 60,884	$ 66,496	9.2
Diluted per Common Share Amounts			
Diluted Earnings	$ 2.08	$ 2.26	8.7
Cash Dividends	$ 0.76	$ 0.85	11.8
Year-End Financial Position (dollars in thousands)			
Total Assets	$ 530,818	$ 603,047	
Net Cash (Debt)(1)	$ 87,174	$ 138,052	
Shareholders' Equity	$ 403,070	$ 442,422	
Other			
Free Cash Flow(2)	$ 80,764	$ 76,560	
Number of Employees	1,837	1,976	



Net Sales (in millions)

Adjusted Net Earnings (2) (in millions)

Adjusted Diluted EPS (2)

Dividends per Share

(1) Net cash (debt) equals cash and cash equivalents less any short and long term debt.

(2) See last page for reconciliation of GAAP to non-GAAP measures, including adjusted net earnings, adjusted diluted earnings per share and free cash flow.

A MESSAGE TO OUR SHAREHOLDERS

Kenneth C. Bockhorst
Chairman, President and
Chief Executive Officer

This past year was remarkable in many ways. It was a year of outstanding financial performance, including record orders, sales and profits, strong operating execution and solid cash flow. At the same time, it was a year shaped by a number of ongoing challenges, including the effects of inflation, supply chain constraints, labor challenges and geopolitical events.

Our ability to achieve record financial results in the face of these challenges is a testament to our global team – their focus on executing our strategy and unrelenting efforts to support our customers. We continued to invest in innovation – tackling complex water challenges and delivering sustainable and digitally enabled solutions that our customers value – as evidenced by our differentiated performance. And we returned value to shareholders, with 2022 marking the 30th consecutive year of annual dividend rate increases. In summary, our business model has once again proven resilient.

We celebrated a number of these milestones by ringing the closing bell at the New York Stock Exchange this past fall. It was an honor to be there, and I am proud to have represented our nearly 2,000 global Badger Meter employees and their many accomplishments.

Propelled by attractive secular trends, the demand for smart water solutions continues to strengthen. These underlying demand drivers include aging infrastructure, retiring utility employees, increased regulation and compliance, climate change, and security, among others.

We continued to demonstrate our competitive differentiation and carved out exciting strategic growth opportunities to address these challenges. Utilities and other industries across the globe are implementing our innovative smart water technologies to streamline processes, increase operational efficiencies and save water. Our end-to-end smart water solutions provide actionable data and analytics from a connected network of instruments, sensors and devices, empowering users to resourcefully use and conserve water.

Utilities are leveraging our highly reliable, infrastructure-free ORION® Cellular network offerings to make their data communication more efficient, scalable and secure. We offer fully integrated smart water solutions that provide near real-time access to detailed water usage data, water quality parameters, leak detection, and now, high-frequency pressure monitoring with the recent acquisition of Syrinix, so customers can improve efficiency, reduce water loss and enhance event management.

Our BEACON® Software as a Service (SaaS) offers a comprehensive and tailorable digital software solution that combines data, communications and analytics to enable our customers to be more efficient, resilient and sustainable throughout the water ecosystem. The integrated EyeOnWater® consumer engagement tool gives utility customers the power to manage their water use through easy-to-understand graphics and configurable notifications, providing timely, visual access to their water usage behavior and potential leaks.

We are committed to maintaining an innovation-driven, customer-centric culture, which strives to continue to increase the capabilities and advance the sustainable outcomes of our broad portfolio of products and solutions.

ADVANCING OUR COMMITMENT TO ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

As a smart water solutions provider, we play a key role in empowering our customers to drive efficiency, resiliency and sustainability into their operations. We also recognize that as a company we have a responsibility to reduce our own impact on the environment as well as lead in developing solutions that preserve and protect the world's most precious resource – water.

In 2022, we continued to make progress on our ESG journey. In summary:

- We published our 2020-2021 biennial sustainability report, which included a number of disclosure enhancements, including:
    - Advances to reporting in line with standards set forth by the Global Reporting Initiative (GRI), United Nations Sustainable Development Goals (SDGs), the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD).
    - Completion of an ESG materiality assessment, identifying the ESG topics most material to the Company and its stakeholders.
    - Enrichments to the governance structure and processes related to ESG matters at the Board of Directors, Board committee and management levels.
- We made progress on the ESG-related "SMART" goals, which are an important element to our annual performance assessment. These include employee safety, minimizing regrettable turnover and reducing greenhouse gas (GHG) emissions. Goals are cascaded throughout the organization to ensure alignment and accountability.
    - Safety remains a top ESG priority and our goal for Total Case Incident Rate (TCIR) is zero. In 2022, global TCIR was 0.59 compared to 0.75 in 2021 and 0.65 in 2020. While we are proud of our performance in 2022, most notably in relation to industry averages, we recognize there is always more work to be done.
    - Consistent with the broader labor market, our regrettable turnover increased modestly in 2022 to 10.0% compared to 9.6% in 2021 and 4.3% in 2020. Increased labor competition in the U.S. was the primary driver of the increase. We completed our second annual global engagement survey in 2022 as part of our continuous improvement process to enable positive change and increased employee engagement. The results of that survey led to our recognition as a 2023 Top Workplaces USA.

TOP WORK PLACES 2023 USA

- GHG emission intensity declined year-over-year again in 2022, the second year of our "15% reduction by 2030" goal. Electrical efficiency-related projects across multiple locations led to the decrease in intensity.

- Finally, we published a Supplement to our initial Report on Board Diversity, providing an update on our diversity journey. We believe the tone for our diversity commitment starts from the top, with 100% of the last three board appointments from underrepresented demographics. At the upcoming 2023 Annual Shareholders Meeting, we anticipate that 44% of Board nominees will be from underrepresented demographics. Of our 11 executive officers, four are from diverse groups.

ESG is an essential aspect of our business strategy, which not only fosters innovative solutions, it also fuels strong financial performance over the long-term. Enhancing shareholder value by taking care of all stakeholders – customers, employees and communities – remains key to our vision to preserve and protect the world's most precious resource.

RECORD FINANCIAL RESULTS

Despite the confluence of macro factors that made the business environment challenging in 2022, including widespread inflation and supply chain shortages, we achieved record financial results.

Robust demand for our industry-leading, comprehensive smart water solutions, coupled with our demonstrated capability to navigate external challenges and capitalize on the demand environment, differentiated Badger Meter performance in 2022.

- Total sales in 2022 were $565.6 million, an increase of 12% compared to $505.2 million in 2021. Sales into the utility water sector grew 14% illustrating the continued market adoption of smart water advanced metering infrastructure (AMI) solutions, water quality monitoring and BEACON SaaS offerings. Flow instrumentation sales increased 4% over 2021 with its focus on water-related applications.

- Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) of $113.4 million[1] increased 6% year over year, despite unprecedented inflation across input costs and supply chain disruptions that impacted operations. Favorable product mix, higher volumes, and the benefit of pricing actions enabled us to maintain strong EBITDA margins at 20.1%.[1]

- Fiscal 2022 EPS was $2.26, a 9% increase from the $2.08 delivered in 2021.

- We generated free cash flow of $76.6[1] million, representing 115%[1] conversion of net earnings into cash due to our strong earnings foundation and solid working capital management. We finished 2022 with $138.1 million of cash and cash equivalents.

[1] See last page for reconciliation of GAAP to Non-GAAP financial metrics.

DISCIPLINED CAPITAL ALLOCATION DRIVING LONG-TERM RETURNS

Badger Meter has a long track record of generating and deploying cash efficiently to drive growth, create outstanding returns for shareholders and strengthen our future. Our priorities include investments in organic growth, dividends and attractive acquisitions.

- In 2022, we reached a rare milestone for any company – delivering 30 consecutive years of annual dividend increases. The annual dividend rate now stands at $0.90 per share, an increase of 12.5% over the prior year.
- We deployed £15 million in early January 2023 for Syrinix, Ltd, a strategic acquisition that extends and augments our digital software offering with real-time pressure monitoring solutions. Over the past three years, we've deployed nearly $100 million on strategic acquisitions.

Moving forward, we will continue to generate and deploy cash in line with our capital allocation framework, with a focus on accelerating growth and creating strong returns for shareholders.

FINAL THOUGHTS

Although some of the challenges we experienced in 2022 are still with us, we enter 2023 encouraged and optimistic about our future. We have a proven strategy, incredible momentum and a winning culture. The Badger Meter team has demonstrated unwavering responsiveness during these challenging times, and our record performance is a direct result of their trust, engagement, tireless efforts and disciplined execution. It's our people, our culture and values, and our vision that make us successful. We are committed to continuing to drive strong shareholder returns while protecting the world's most precious resource.

Sincerely –

Ken Bockhorst

Ken Bockhorst
Chairman, President and
Chief Executive Officer

Every drop counts.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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, 2022

or

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

Commission File No. 001-06706

BADGER METER, INC.
(Exact name of registrant as specified in its charter)

Wisconsin	**39-0143280**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4545 W. Brown Deer Road Milwaukee, Wisconsin	**53233**
(Address of principal executive offices)	(Zip code)

(414) 355-0400
(Registrant's telephone number, including area code)

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

Common Stock	BMI	New York Stock Exchange
(Title of each class)	(Trading Symbol)	(Name of each exchange on which registered)

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 15(d) of the Act. Yes ☐ No ☒

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

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

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

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

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 ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter:
As of June 30, 2022, the aggregate market value of the shares of Common Stock held by non-affiliates of the Registrant was approximately $2.35 billion. For purposes of this calculation only, (i) shares of Common Stock are deemed to have a market value of $80.89 per share, the closing price of the Common Stock as reported on the New York Stock Exchange on June 30, 2022, and (ii) each of the Company's executive officers and directors is deemed to be an affiliate of the Company.

As of February 3, 2023, there were 29,292,952 shares of Common Stock outstanding with a par value of $1 per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission under Regulation 14A within 120 days after the end of the registrant's fiscal year, are incorporated by reference from the definitive Proxy Statement into Part III of this Annual Report on Form 10-K.

Special Note Regarding Forward Looking Statements

Certain statements contained in this Annual Report on Form 10-K, as well as other information provided from time to time by Badger Meter, Inc. (the “Company”) or its employees, may contain forward looking statements that involve risks and uncertainties that could cause actual results to differ materially from those in the forward looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “think,” “should,” “could” and “objective” or similar expressions are intended to identify forward looking statements. All such forward looking statements are based on the Company’s then current views and assumptions and involve risks and uncertainties. Some risks and uncertainties that could cause actual results to differ materially from those expressed or implied in forward looking statements include those described in Item 1A of this Annual Report on Form 10-K for the year ended December 31, 2022.

PART I

ITEM 1. BUSINESS

Badger Meter, Inc. (the “Company”) is a leading innovator, manufacturer and marketer of products incorporating flow measurement, quality, control and other system solutions serving markets worldwide. The Company was incorporated in 1905.

Throughout this 2022 Annual Report on Form 10-K, the words “we,” “us” and “our” refer to the Company.

Available Information

The Company's internet address is http://www.badgermeter.com. The Company makes available free of charge through its website its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports, on the same day they are electronically filed with, or furnished to, the Securities and Exchange Commission. The Company is not including the information contained on or available through its website as a part of, or incorporating such information by reference into, this Annual Report on Form 10-K.

Market Overview, Products, Systems and Solutions

With more than a century of water technology innovation, Badger Meter is a global provider of industry leading water solutions encompassing flow measurement, quality and other system parameters. These offerings provide customers with the data and analytics essential to optimize their operations and contribute to the sustainable use and protection of the world’s most precious resource. The Company’s flow measurement products measure water and other fluids and are known for accuracy, long-lasting durability and for providing valuable and timely measurement data through various methods. The Company’s water quality monitoring solutions include optical sensing and electrochemical instruments that provide real-time, on-demand data parameters. The Company’s products fall into two product lines: sales of water meters, radios, software and related technologies, and water quality monitoring solutions to water utilities (utility water) and sales of meters and other sensing instruments, valves, software and other solutions for industrial applications in water, wastewater, and other industries (flow instrumentation). The Company estimates that over 90% of its products are used in water related applications.

Utility water, the largest sales product line, is comprised of either mechanical or static (ultrasonic) water meters along with the related radio and software technologies and services used by water utilities as the basis for generating their water and wastewater revenues, enabling operating efficiencies and engaging with their end consumers. It further comprises other sensor technology used in the water distribution system to ensure the safe and efficient delivery of clean water. These sensors are used to detect leaks in the distribution piping system and to monitor various water quality parameters throughout the distribution system. The largest geographic market for the Company’s utility water products is North America, primarily the United States, because most of the Company's meters are designed and manufactured to conform to standards promulgated by the American Water Works Association. The majority of water meters sold by the Company continue to be mechanical in nature; however, static meters are an increasing percentage of the water meters sold by the Company and in the industry, due to a variety of attributes, including their ability to maintain measurement accuracy over their useful life. Providing ultrasonic water meter technology, combined with advanced radio technology, provides the Company with the opportunity to sell into other geographical markets, for example the Middle East, Europe and Southeast Asia.

The flow instrumentation product line primarily serves water applications throughout the broader industrial markets. This product line includes meters, valves and other sensing instruments sold worldwide to measure and control the quantity of fluids going through a pipe or pipeline including water, air, steam, and other liquids and gases. These products are used in a variety of industries and applications, with the Company’s primary market focus being water/wastewater, heating, ventilating and air conditioning (HVAC) and corporate sustainability. Flow instrumentation products are generally sold to original equipment manufacturers as the primary flow measurement device within a product or system, as well as through manufacturers’ representatives.

Utility water meters (both residential and commercial) are generally classified as either manually read meters or remotely read meters via radio technology. A manually read meter consists of a water meter and a register that provides a visual totalized meter reading. Meters equipped with radio technology (endpoints) receive flow measurement data from battery-powered encoder registers attached to the water meter, which is encrypted and transmitted via radio frequency to a receiver that collects and formats the data appropriately for water utility usage and billing systems. These remotely read systems are classified as either automatic meter reading (AMR) systems, where a vehicle equipped for meter reading purposes, including a radio receiver, computer and reading software, collects the data from the utilities' meters; or advanced metering infrastructure (AMI) systems, where data is gathered utilizing a network (either fixed or cellular) of data collectors or gateway receivers that are able to receive radio data transmission from the utilities' meters. AMI systems eliminate the need for utility personnel to drive through service territories to collect data from the meters. These systems provide utilities with more frequent and diverse data from their meters at specified intervals.

The ORION® branded family of radio endpoints provides water utilities with a range of industry-leading options for meter reading. These include ORION (ME) AMR meter reading, ORION (SE) for traditional fixed network applications, and ORION Cellular for an infrastructure-free AMI solution. ORION ME is the solution best suited for utilities that prefer mobile reading. ORION Cellular eliminates the need for utility-owned fixed network infrastructure, allows for gradual or full deployment, and decreases ongoing maintenance.

Information and analytics are critical to the smart water ecosystem. The Company's BEACON® software suite improves utility visibility to their water and water usage. BEACON is a secure, cloud-hosted software suite that includes a customizable dashboard and has the ability to establish alerts for specific conditions. It also allows for consumer engagement tools that permit end water users (such as homeowners) to view and manage their water usage activity. Benefits to the utility include improved customer service, increased visibility through faster leak detection, the ability to promote and quantify the effects of its water conservation efforts, and easier compliance reporting.

Water meter replacement and the adoption and deployment of new technology comprise the majority of smart water product sales, including radio products. To a much lesser extent, housing starts also contribute to the new product sales base. The industry continues to undergo a conversion from manually read water meters to meters with radio technology, and for AMR systems to be upgraded to AMI. The Company estimates that approximately 70% of water meters installed in the United States have been converted to some form of radio solution technology.

In addition to our water utility flow measurement solutions, the Company provides various water quality monitoring solutions utilizing optical sensors and electrochemical instruments that measure a variety of parameters including turbidity, pH, chlorine, nitrates and approximately 40 others. Utilizing these solutions, water quality can be monitored continually or periodically throughout the network from its original source to the point in which it is recycled and returned. Real-time water quality parameters enhance the scope of actionable data for water utilities to improve operational security, awareness and efficiency.

The Company's net sales and corresponding net earnings depend on unit volume and product mix, with the Company generally earning higher average selling prices and margins on meters coupled with radio technology, and on ultrasonic compared to mechanical meters. The Company also sells registers and endpoints separately to customers who wish to upgrade their existing meters in the field.

Flow instrumentation products are used in flow measurement and control applications across a broad industrial spectrum, occasionally leveraging the same technologies used in utility water. Specialized communication protocols that control the entire flow measurement process and mandatory certifications drive these markets. The Company provides both standard and customized flow instrumentation solutions.

The industries served by the Company's flow instrumentation products face accelerating demands to contain costs, reduce product variability, and meet ever-changing safety, regulatory and sustainability requirements. To address these challenges, customers must reap more value from every component in their systems. This system-wide scrutiny has heightened the focus on flow instrumentation in industrial process, manufacturing, commercial fluid, building automation and precision engineering applications where flow measurement and control are critical.

A leader in both mechanical and static flow metering technologies for industrial markets, the Company offers one of the broadest flow measurement, control and communication portfolios in the market. This portfolio carries respected brand names including Recordall®, Hedland®, Dynasonics®, Blancett®, ModMag®, and Research Control®. Customers rely on the Company for application-specific solutions that deliver accurate, timely and dependable flow data and control essential for product quality, cost control, safer operations, regulatory compliance and more sustainable operations.

In addition, the Company provides various water quality monitoring solutions utilizing optical sensors and electrochemical instruments that measure a variety of parameters providing industrial customers with both process and discharge water quality monitoring capabilities.

The Company's products are sold throughout the world through employees, resellers and representatives. Depending on the customer mix, there can be a moderate seasonal impact on sales, primarily relating to higher sales of certain utility water products during the spring and summer months. No single customer accounts for more than 10% of the Company's sales.

Competition

The Company faces competition for both its utility water and flow instrumentation product lines. The competition varies from moderate to strong depending upon the products involved and the markets served. Major competitors for utility water meters include Xylem, Inc. (“Sensus”) and Roper Technologies, Inc. (“Neptune”). Together with Badger Meter, it is estimated that these companies sell in excess of 85% of the water meters in the North American market. The remaining market share is comprised of competitors such as Master Meter, Inc., Mueller Water Products, Inc., Kamstrup A/S and Diehl Metering GmbH depending on the metering technology.

The Company's primary competitors for utility water radio products in North America are Itron, Inc., Hubbel, Inc. (Aclara Technologies), Neptune and Sensus.

The Company’s primary competitors for water quality monitoring solutions vary depending on the products and offerings. Traditional water quality monitoring relies on reagents or test kits, along with lab samples with waiting time for results. The number and scale of competition can be extensive. The Company’s online, real-time water quality monitoring capabilities generally compete with smaller, specialized firms.

A number of the Company's competitors in certain markets have greater financial resources than the Company. The Company, however, believes it currently provides the leading technologies in water meters and water-dedicated radio and software solutions. As a result of significant research and development activities, the Company enjoys favorable patent positions and trade secret protections for several of its technologies, products and processes.

There are many competitors in the flow instrumentation markets due to the various end markets and applications served. They include, among others, Emerson Electric Company, Krohne Messtechnik GmbH, Endress+Hauser AG, Yokogawa Electric Corporation and Cameron International. With a broad portfolio consisting of products utilizing eight of the ten major flow meter technologies, the Company is well positioned to compete in niche, specialized applications within these markets, primarily focused on water/wastewater and HVAC.

Raw Materials and Components

Raw materials used in the manufacture of the Company's products include purchased castings made of metal or alloys (such as brass, which uses copper as its main component, aluminum, stainless steel and cast iron), plastic resins, glass, microprocessors and other electronic subassemblies, and components. There are multiple sources for these raw materials and components, but the Company relies on single suppliers for certain brass castings, resins and electronic subassemblies. The Company believes these items would be available from other sources, but that the loss of certain suppliers may result in a higher cost of materials, delivery delays, short-term increases in inventory and higher quality control costs. The Company carries business interruption insurance on key suppliers. The Company's purchases of raw materials are based on production schedules, and as a result, inventory on hand is generally not exposed to price fluctuations. World commodity markets and currency exchange rates may also affect the prices of material purchased in the future. The Company does not hold significant amounts of precious metals.

Research and Development

Expenditures for research and development activities related to the development of new products, the improvement of existing products and manufacturing process improvements were $15.8 million in 2022, $14.7 million in 2021 and $11.6 million in 2020. Research and development activities are primarily sponsored by the Company. The Company also engages from time to time in joint research and development with other companies and organizations.

Intangible Assets

The Company owns or controls several trade secrets and many patents, trademarks and trade names in the United States and other countries that relate to its products and technologies. No single patent, trademark, trade name or trade secret is material to the Company's business as a whole.

Environmental Protection

The Company is subject to contingencies related to environmental laws and regulations. A future change in circumstances with respect to these specific matters or with respect to sites formerly or currently owned or operated by the Company, off-site disposal locations used by the Company, and property owned by third parties that is near such sites, could result in future costs to the Company and such amounts could be material. Expenditures for compliance control provisions and regulations during 2022, 2021 and 2020 were not material.

Government Regulations

The Company's operations worldwide are subject to various federal, state, local and foreign laws and regulations. Whether at the federal, state, or local level, the intent of these laws and regulations is to protect product safety, public health and the environment. Similar laws and regulations have been adopted by government authorities in other countries in which we manufacture, distribute, and sell our products.

The Company believes that its operations, including its manufacturing locations, are in substantial compliance with all applicable government laws and regulations, including those related to environmental, consumer protection, international trade, labor and employment, human rights, tax, anti-bribery and competition matters. Any additional measures to maintain compliance are not expected to materially affect the Company's capital expenditures, competitive position, financial position or results of operations.

There are currently no legislative or administrative regulations pending which we anticipate will have a substantial adverse impact on the Company's revenues, earnings or cash flows. However, if new or amended laws or regulations impose significant operational restrictions and compliance requirements upon the Company or its products, the Company's business, capital expenditures, results of operations, financial condition and competitive position could be negatively impacted. Refer to Part I, Item 1A. "Risk Factors" of this 2022 Annual Report on Form 10-K for further information.

Human Capital Resources

Our employees are our greatest strength and are critical to the achievement of our vision and successful execution of our strategies. We are committed to recruiting, developing and retaining top talent, in addition to fostering an inclusive environment where all employees can thrive.

The Company and its subsidiaries employed 1,976 persons at December 31, 2022. Approximately 105 of those employees are covered by a collective bargaining agreement with District 10 of the International Association of Machinists. The Company currently operates under a three-year contract with the union, which expires on October 31, 2025. The Company believes it has good relations with the union and its employees.

The below information strives to provide further details on our core values and the key programs and initiatives we utilize to attract, develop and retain a diverse and engaged workforce:

Core Values. Living our core values is at the heart of Badger Meter's culture. Our global employee engagement survey consistently measures this sentiment and our employees highly rate our company values. Our culture prioritizes trust, responsibility, collaboration, excellence and customer focus. The first of these, trust, calls for us to act honestly, ethically and with integrity. We maintain a formal ethics and compliance program that encourages doing the right thing. As part of this program, all ethical and legal concerns brought forth by employees are fully investigated and resolved. Employee training is used to reinforce our values companywide, with participation in trainings related to ethics at nearly 100%. In addition to trust, our values include a focus on diversity, equity, and inclusion, as well as continuous improvement and environmental responsibility.

Recruitment, Development and Retention. In addition to market competitive compensation and benefits, we focus on open, two-way communication, training and development and early talent pipeline programs, among other activities to attract and retain key talent:

- We focus on the physical, mental and financial wellbeing of our employees and this is reflected in our employee benefit offerings. We offer employee assistance and work life benefits to all global employees. Our comprehensive benefits include healthcare, disability and life insurance, paid time off, and various leave programs, as well as retirement savings plans and financial advisory services.
- We offer flexible, remote work and part-time arrangements, as business roles permit.

- Consistent with the broader labor market, our regrettable turnover increased to 10.0% in 2022, compared to 9.6% in 2021, and 4.3% in 2020. Increased labor competition in the US was the primary driver of the increase.
- We implemented our second global employee engagement survey in 2022. Over 93% of all global employees voluntarily participated. The 2022 survey showed improvement in many areas, as a result of our targeted engagement action plan and commitment to continuous improvement. We will continue to utilize feedback received from the survey to identify meaningful actions targeted at fostering improvement in employee engagement, including pulse surveys to monitor effectiveness of action plans.

Diversity, Equity and Inclusion. We believe that developing a diverse and inclusive business makes us and society stronger, energizes our growth through customer engagement and helps us attract and retain talent:

- We maintain a Human Rights policy, Equal Employment Opportunity policy and partner with a variety of recruiting and hiring agencies focused on diverse candidates.
- Currently, 36% of our executive officer group is diverse (three women, one Southeast Asian).
- We conduct an external pay equity analysis on an annual basis, taking action to make adjustments where warranted.
- We have a dedicated DEI team focused on fostering diversity, equity and inclusion across our global workforce.
- We are a signatory to the Equality Act, supporting LGBTQ rights.
- We actively participate as part of the Metropolitan Milwaukee Association of Commerce (MMAC) Diversity Pledge, a commitment to increasing diversity representation in the workforce.
- The following provides the percentage of certain employee demographic details aligned with the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) reporting frameworks:

	2022	2021
Females in the workforce, globally	40%	39%
Female representation in management, globally	27%	29%
Female representation in manufacturing, globally	51%	48%
Female representation on the Board of Directors	30%	22%
Minorities in the U.S. workforce	30%	26%
Minority representation in U.S. management	12%	11%
Minority representation in U.S. manufacturing	54%	47%

Employee Rights, Health and Safety. The safety and health of our employees is a top priority. In addition to on-the-job safety, we take a holistic view of employee health and well-being, including our multifaceted wellness program, B|Well, which aims to provide information, activities, support and rewards for smart and healthy choices.

- Safety, as measured by our global Total Case Incident Rate (TCIR), was 0.59 in 2022, compared to 0.75 in 2021, and 0.65 in 2020. Our goal is zero. While we are proud of our performance in 2022, most notably in relation to industry averages, we recognize there is more work to be done.
- Badger Meter's Human Rights Policy outlines our commitment to respecting and supporting internationally recognized human rights and freedoms.
- We provide an Employee Assistance Program (EAP) and mental health coverage.

Community and Social Activities. Through both financial contributions and volunteer efforts of our employees, Badger Meter supports programs and organizations that address water conservation and quality, education and community concerns which are all vital to community sustainability.

Information about the Company's Executive Officers

The following table sets forth certain information regarding the Executive Officers of the Registrant.

Name	Position	Age at 2/28/2023
Kenneth C. Bockhorst	Chairman, President and Chief Executive Officer	50
Robert A. Wrocklage	Senior Vice President — Chief Financial Officer	44
Karen M. Bauer	Vice President — Investor Relations, Corporate Strategy and Treasurer	55
Fred J. Begale	Vice President — Engineering	58
William R. A. Bergum	Vice President — General Counsel and Secretary	58
Sheryl L. Hopkins	Vice President — Human Resources	55
Richard Htwe	Vice President — Global Operations	56
Lars Bo Kristensen	Vice President — Global Flow Instrumentation and International Utility	57
Kimberly K. Stoll	Vice President — Sales and Marketing	56
Matthew L. Stuyvenberg	Vice President — Software and Water Quality	40
Daniel R. Weltzien	Vice President — Controller	44

There are no family relationships between any of the executive officers. Officers are elected annually at the first meeting of the Board of Directors held after each annual meeting of the shareholders. Each officer holds office until his or her successor has been elected or until his or her death, resignation or removal. There is no arrangement or understanding between any executive officer and any other person pursuant to which he or she was elected as an officer.

Mr. Bockhorst was elected President in April 2018, Chief Executive Officer in January 2019 and Chairman in January 2020 after serving as Senior Vice President - Chief Operating Officer for the Company from October 2017 to April 2018. Prior to joining the Company, Mr. Bockhorst was Executive Vice President of the Energy segment, preceded by President of Hydratight and Global Vice President Operations of Enerpac, all within Actuant Corporation (now Enerpac Tool Group) from March 2011 to October 2017.

Mr. Wrocklage was elected Vice President – Chief Financial Officer and Treasurer in 2019 and Senior Vice President – Chief Financial Officer in January 2020 after serving as Vice President - Finance for the Company from August 2018 to December 2018. Prior to joining the Company, Mr. Wrocklage spent ten years with Actuant Corporation (now Enerpac Tool Group), holding various corporate and business unit financial leadership roles, most recently as Vice President - Corporate Controller and Chief Accounting Officer.

Ms. Bauer was elected Vice President - Investor Relations, Corporate Strategy and Treasurer effective June 2019. She joined Badger Meter in July 2018 as Director, Investor Relations and Corporate Strategy. In her role she also oversees the Company's ESG (Environmental, Social & Governance) initiatives. Prior to joining Badger Meter, she served at Actuant Corporation (now Enerpac Tool Group), most recently as Director, Investor Relations & Communications.

Mr. Begale has served as Vice President - Engineering for more than five years.

Mr. Bergum has served as Vice President - General Counsel and Secretary for more than five years.

Ms. Hopkins was elected Vice President - Human Resources in October 2020. Prior to joining the Company, Ms. Hopkins served as Vice President of Human Resources for ADVENT from April 2019 to October 2020 and Senior Vice President of Human Resources for Runzheimer International from July 2010 to March 2018. Previously, she held roles of increasing responsibility at Eaton Corporation and other multinational public companies.

Mr. Htwe was elected Vice President - Global Operations in January 2023. Prior to joining the Company, Mr. Htwe served as Vice President of Global Operations for Emerson Commercial and Residential Solutions for its InSinkErator business unit from January 2022 to December 2022 and Vice President of Operations for Wahl Clipper Corporation from March 2013 to December 2021. Previously, he held roles of increasing responsibility at Oshkosh Corporation.

Mr. Kristensen was elected Vice President - Flow Instrumentation and International Utility in December 2022. Prior to joining the Company, Mr. Kristensen served as Group CEO for Agramkow Fluid Systems from October 2020 to November 2022. Additionally, Mr. Kristensen spent 20 years with Kamstrup, holding various international management roles, including General Manager for Kamstrup Water Metering, LLC and Senior Vice President of North America.

Ms. Stoll has served as Vice President - Sales and Marketing for more than five years.

Mr. Stuyvenberg was elected Vice President – Water Quality in January 2022 and Vice President - Software and Water Quality in January 2023. Mr. Stuyvenberg joined Badger Meter in April 2007 as Mechanical Engineer of Applied Research and has since held roles of increasing responsibility, including Manager of Mechanical Engineering and Director of Utility Engineering.

Mr. Weltzien was elected Vice President – Controller in March 2019. Prior to joining the Company, Mr. Weltzien spent eight years with Actuant Corporation (now Enerpac Tool Group), holding various corporate and business unit financial leadership roles, most recently as Senior Director of Finance for its Hydratight business unit.

Foreign Operations and Export Sales

The Company sells its products and software through employees, resellers and representatives throughout the world. Additionally, the Company has sales, distribution and manufacturing facilities in Neuffen, Germany and Vienna, Austria; sales and customer service offices in Mexico, United Kingdom, Singapore, China, United Arab Emirates and other similar locations throughout the world; manufacturing facilities in Nogales, Mexico, Brno, Czech Republic and Bern, Switzerland; and a development facility in Luleå, Sweden. The Company exports products from the United States that are manufactured in Milwaukee, Wisconsin, Racine, Wisconsin, Tulsa, Oklahoma and Collegeville, Pennsylvania.

Information about the Company's foreign operations and export sales is included in Note 9 “Industry Segment and Geographic Areas” in the Notes to Consolidated Financial Statements in Part II, Item 8 of this 2022 Annual Report on Form 10-K.

Financial Information about Industry Segments

The Company operates in one industry segment as an innovator, manufacturer and marketer of products incorporating flow measurement, control and communication solutions. Information about the Company's sales, operating earnings and assets is included in the Consolidated Financial Statements and in Note 9 “Industry Segment and Geographic Areas” in the Notes to Consolidated Financial Statements in Part II, Item 8 of this 2022 Annual Report on Form 10-K.

Risk Management

The Company’s Enterprise Risk Management (ERM) process aims to identify, manage and monitor significant and material risks. The ERM process assesses, manages, and monitors risks consistent with the integrated risk framework in the Enterprise Risk Management-Integrated Framework (2017) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). We believe that risk-taking is an inherent aspect of the execution of our strategy. Our goal is to manage risks pragmatically as opposed to avoiding risks altogether. We can mitigate risks and their impact on our Company only to a limited extent.

A group of executives prioritizes identified risks and assigns an executive to address each major identified risk area and lead action plans to manage each risk. Our Board of Directors provides oversight of the ERM process and reviews the significant identified risks. The Audit and Compliance Committee of the Board of Directors also reviews significant financial risk exposures and the steps management has taken to monitor, manage and mitigate them wherever possible. Our other Board committees also play a role in risk management, as detailed in their respective charters.

Our goal is to proactively manage risks using a structured approach in combination with strategic planning, with the intent to preserve and enhance shareholder value. However, the risks set forth Item 1A. Risk Factors and elsewhere in this Annual Report on Form 10-K and other risks and uncertainties could unfavorably affect us and cause our results to vary materially from recent results or from our anticipated future results.

ITEM 1A. RISK FACTORS

Shareholders, potential investors and other readers are urged to consider the significant business risks described below in addition to the other information set forth or incorporated by reference in this 2022 Annual Report on Form 10-K, including the “Special Note Regarding Forward Looking Statements” at the front of this 2022 Annual Report on Form 10-K. If any of the events contemplated by the following risks actually occur, our financial condition or results of operations could be materially adversely affected. The following list of risk factors may not be exhaustive. We operate in a continually changing business, economic and geopolitical environment, and new risk factors may emerge from time to time. We can neither predict these new risk factors with certainty nor assess the precise impact, if any, on our business, or the extent to which any factor, or combination of factors, may adversely impact our results of operations. While there is much uncertainty, we do analyze the risks we face, perform a probability assessment of their impacts and attempt to soften their potential impact when and if possible.

PRODUCTS, TECHNOLOGY AND SERVICES

The inability to develop technologically advanced products and solutions could harm our future success.

We believe our future success depends, in part, on our ability to develop technologically advanced products that meet or exceed appropriate industry standards. Although we believe that we currently have a competitive advantage in this area, maintaining such advantage will require continued investment in research and development, sales, marketing and manufacturing capabilities. There can be no assurance that we will have sufficient resources to make such investments or that we will be able to make the technological advances necessary to maintain such competitive advantage. If we are unable to maintain our competitive advantage, our future financial performance may be adversely affected. We are not currently aware of any emerging standards, technologies or new products that could render our existing products obsolete in the near term. Our radios operate on networks which are changing as part of the natural evolution of technology. The pace of that change is largely outside of the Company's control and the sun-setting of a network may have an adverse impact on the Company. The municipal water industry is continuing to see the adoption of static water meters. Static water metering has lower barriers to entry than mechanical metering that could affect the competitive landscape in North America. We believe we have a competitive product and market position. If the adoption rate for static meters were to accelerate, we believe competitors lack brand recognition and product breadth and do not have extensive water utility channel distribution to effectively reach the more than 50,000 water utilities in the United States.

Failure to manufacture quality products could have a material adverse effect on our business.

If we fail to maintain and enforce quality control and testing procedures, our products will not meet required performance standards. Our products have an extended expected life and we therefore offer extended duration warranty coverages. Product quality and performance are a priority for us since our products are used in various applications where precise control of fluids is essential. Although we believe our products are perceived as high quality, any future production and/or sale of substandard products could seriously harm our reputation, resulting in both a loss of current customers to competitors and damage to our ability to attract new customers. In addition, if any of our products prove to be defective, we may be required to participate in a recall involving such products or incur warranty related expenses. A successful claim brought against us with respect to a defective product in excess of available insurance coverage, if any, or a requirement to participate in a major product recall, could have a material adverse effect on our business, results of operations or financial condition.

If our software products do not operate as intended, our business could be materially and adversely affected.

We sell software products, including some that are provided in "the cloud," that may contain unexpected design defects or may encounter unexpected complications when used with other technologies utilized by the customer. A failure of our software products to operate as intended and in a seamless fashion with other products or a failure or breach of a cloud network could materially and adversely affect our results of operations, financial position and cash flows.

Our role as a prime contractor brings certain risks that could have a material adverse effect to our business.

We periodically assume the role of prime contractor for providing complete technology systems, installation and other services and project management to customers and governmental entities, which brings with it added risks, including but not limited to, our responsibility for managing subcontractor performance and project timelines and the potential for expanded warranty and performance obligations. While we routinely manage these types of arrangements, it is possible to encounter a situation where we may not be able to perform to the expectations of the customer or governmental entity, and thus incur additional costs that could affect our profitability or harm our reputation.

If we are not able to protect our proprietary rights to our software and related products, our ability to market our software products could be hindered and our results of operations, financial position and cash flows could be materially and adversely affected.

We rely on our agreements with customers, confidentiality agreements with employees, and our trademarks, trade secrets, copyrights and patents to protect our proprietary rights. These legal protections and precautions may not prevent misappropriation of our proprietary information. In addition, substantial litigation regarding intellectual property rights exists in the software industry, and software products and other components may increasingly be subject to third-party infringement claims. Such litigation and misappropriation of our proprietary information could hinder our ability to market and sell products and services and our results of operations, financial position and cash flows could be materially and adversely affected.

BUSINESS CONDITIONS

The inability to obtain adequate supplies of raw materials and component parts at reasonable prices could decrease our profit margins and negatively impact timely delivery to customers and could have a material adverse effect on our business, results of operations and financial condition.

We are affected by the availability and prices for raw materials and component parts, including purchased castings made of metal or alloys (such as brass, which uses copper as its main component, aluminum, stainless steel and cast iron), plastic resins, microprocessors and other electronic subassemblies, and components that are used in the manufacturing process. Further supply chain disruptions and challenges may be caused by a number of factors affecting our suppliers, including, but not limited to, capacity constraints, port congestion, labor disputes or unrest, labor shortages and costs, economic downturns, availability of credit, a high interest rate environment, impaired financial condition, sanctions/tariffs, energy inflation/availability and geopolitical risks (such as the current conflict between Russia and Ukraine). The effects of climate change, including extreme weather events, may exacerbate these risks.

The inability to obtain adequate supplies of raw materials and component parts for our products at reasonable prices could have a material adverse effect on our business, financial condition or results of operations by decreasing profit margins and by negatively impacting timely deliveries to customers. In the past, we have been able to offset price increases in raw materials and component parts by increased sales prices, active materials management, product engineering programs and the diversity of materials used in the production processes. However, we cannot be certain that we will be able to accomplish this in the future. Since we do not control the actual production of these raw materials and component parts, there may be continued delays in the production or transportation of these materials for reasons that are beyond our control. World commodity markets and the ongoing inflationary environment are affecting, and may continue to affect, raw material and component part prices. In addition, we rely on single suppliers for microprocessors, castings and components in several of our product lines and the loss of such suppliers could temporarily disrupt operations in the short term.

Global public health pandemics could have a material adverse effect on our business, results of operations and financial condition.

Global health pandemics and related containment measures taken by federal and state governments could result in business slowdowns or shutdowns, weakened economic conditions, economic uncertainty, and volatility in the financial markets and could interfere with the ability of our employees, suppliers, and customers to perform our and their respective responsibilities and obligations relative to the conduct of our business and operations.

The extent to which future pandemics impact our business operations in future periods will depend on multiple factors that cannot be accurately predicated at this time, such as the duration and scope of any pandemic, the extent and effectiveness of containment actions, the disruption caused by such actions, and the impact of these and other factors on our employees, suppliers and customers. If we are not able to respond to and manage the impact of such events effectively, we could experience a material adverse effect on our business, results of operations and overall financial performance.

Economic conditions could cause a material adverse impact on our sales and operating results.

As a supplier of products and software, the majority of which are to water utilities, we may be adversely affected by global economic conditions, rising interest rates, delays in governmental programs created to stimulate the economy, and the impact of government budget cuts or partial shutdowns of governmental operations that affect our customers, including independent distributors, large city utilities, public and private water companies and numerous smaller water utilities. These customers may delay capital projects, including non-critical maintenance and upgrades, or may not have the ability to authorize and finance purchases during economic downturns, instability in world markets, and a higher interest rate environment. We also sell products for other applications to reduce our dependency on the municipal water market. A significant downturn in this market could cause a material adverse impact on sales and operating results. Therefore, a downturn in general economic conditions, as well as in the municipal water market, rising interest rates, delays in the timing or amounts of possible annual federal funding, government budget cuts or partial shutdowns of governmental operations, or the availability of funds to municipalities could result in a reduction in demand for our products and services and could have a material adverse effect on our business, results of operations and overall financial performance.

Geopolitical crisis, including terrorism or pandemics, could adversely affect our business.

Our operations are susceptible to global events, including acts or threats of war or terrorism, international conflicts, political instability, and a widespread outbreak of an illness or other health issue. The occurrence of any of these events could have an adverse effect on our business results and financial condition.

Risks related to foreign markets could decrease our profitability.

Since we sell products worldwide as well as manufacture products in several countries, we are subject to risks associated with doing business internationally. These risks include such things as changes in foreign currency exchange rates, including the effect of a strong U.S. dollar, changes in political or economic conditions of specific countries or regions, potentially negative consequences from changes in tax laws or regulatory requirements, differing labor regulations, and the difficulty of managing widespread operations.

An inability to attract and retain skilled employees could negatively impact our growth and decrease our profitability.

Our success depends on our continued ability to identify, attract, develop and retain skilled personnel throughout our organization. Current and future compensation arrangements, including benefits, may not be sufficient to attract new employees or retain existing employees, which may hinder our growth. Increased labor competition from accelerated retirements, wage inflation and scarcity of labor may negatively impact costs and negatively impact employee engagement, productivity and efficiency.

Competitive pressures in the marketplace could decrease our revenues and profits.

Competitive pressures in the marketplace for our products could adversely affect our competitive position, leading to a possible loss of market share or a decrease in prices, either of which could result in decreased revenues and profits. We operate in an environment where competition varies from moderate to strong and a number of our competitors have greater financial resources. The principal elements of competition for our most significant product applications, residential and commercial water meters for the municipal water utility market (with various radio technology systems), are price, product technology, quality and service. The competitive environment is also affected by the movement toward radio technologies and away from manually read meters, the demand for replacement units and, to some extent, such things as global economic conditions, the timing and size of governmental programs such as stimulus programs, the ability of municipal water utility customers to authorize and finance purchases of our products, our ability to obtain financing, housing starts in the United States, and overall economic activity. For our flow instrumentation products, the competitive environment is affected by the general economic health of various industrial sectors particularly in the United States and Europe.

GOVERNMENT REGULATION

Violations or alleged violations of laws that impose requirements for the conduct of the Company's overseas operations, including the Foreign Corrupt Practices Act (FCPA) or other anti-corruption laws, trade sanctions and sanctioned parties restrictions could adversely affect our business.

In foreign countries where we operate, a risk exists that our employees, third party partners or agents could engage in business practices prohibited by applicable laws and regulations, such as the FCPA. Such anti-corruption laws generally prohibit companies from making improper payments to foreign officials, require companies to keep accurate books and records, and maintain appropriate internal controls. Our policies mandate strict compliance with such laws and we devote resources to ensure compliance. However, we operate in some parts of the world that have experienced governmental corruption, and, in certain circumstances, local customs and practice might not be consistent with the requirements of anti-corruption laws. We remain subject to the risk that our employees, third party partners or agents will engage in business practices that are prohibited by our policies and violate such laws and regulations. Violations by us or a third party acting on our behalf could result in significant internal investigation costs and legal fees, civil and criminal penalties, including prohibitions on the conduct of our business and reputational harm.

We may also be subject to legal liability and reputational damage if we violate U.S. trade sanctions administered by the U.S. Treasury Department's Office of Foreign Assets Control (OFAC), the European Union, the United Nations and trade sanction laws, such as the Iran Threat Reduction and Syria Human Rights Act of 2012 or Russian and Belarus Financial Sanctions Act of 2022. Our policies mandate strict compliance with such laws and we devote resources to ensure compliance.

Changes in environmental or regulatory requirements, including climate change legislation, could entail additional expenses that could decrease our profitability.

We are subject to a variety of laws in various countries and markets, such as those regulating lead or other material content in certain of our products, the handling, recycling and disposal of certain electronic and other materials, the use and/or licensing of radio frequencies necessary for radio products, data privacy and protection, as well as customs and trade practices. We cannot predict the nature, scope or effect of future environmental or regulatory requirements to which our operations might be subject or the manner in which existing or future laws will be administered or interpreted. Currently, the cost of complying with existing laws is included as part of our on-going expenses and does not have a material effect on our business or financial position, but a change in the future could adversely affect our profitability.

We are subject to a variety of laws in various countries and markets, such as those regulating lead or other material content in certain of our products, the handling, recycling and disposal of certain electronic and other materials, the use and/or licensing of radio frequencies necessary for radio products, data privacy and protection, as well as customs and trade practices. We cannot predict the nature, scope or effect of future environmental or regulatory requirements to which our operations might be subject or the manner in which existing or future laws will be administered or interpreted. Currently, the cost of complying with existing laws is included as part of our on-going expenses and does not have a material effect on our business or financial position, but a change in the future could adversely affect our profitability.

Concern over climate change has resulted in, and could continue to result in, new legal or regulatory requirements designed to reduce or mitigate the effects of greenhouse gas (GHG) emissions. We may become subject to additional legislation, regulations or accords regarding climate change, and compliance with any new rules could be difficult and costly, as a result of increased energy, environmental and other costs and capital expenditures. Our failure to successfully comply with any such legislation, regulation, or accord could have a material adverse effect on our business, results of operations and overall financial performance.

GENERAL

Economic impacts due to leadership or policy changes in the countries where we do business could negatively affect our profitability.

We may be affected by adjustments to economic and trade policies, such as taxation, changes to or withdrawal from international trade agreements, or the like, when countries where we produce or sell our products change leadership or economic policies. These types of changes, as well as any related regulatory changes, could significantly increase our costs and adversely affect our profitability and financial condition.

Climate change, extreme weather and other natural phenomena could adversely affect our business.

Climate changes and weather conditions may affect, or cause volatility in, our financial results. Drought conditions could drive higher demand for smart water solutions that advance conservation efforts in residential and commercial applications. Our sales also may be adversely affected by unusual weather, weather patterns or other natural phenomena that could have an impact on the timing of orders in given periods, depending on the particular mix of customers being served by us at the time. The unpredictable nature of weather conditions and climate change therefore may result in volatility for certain portions of our business, as well as the operations of certain of our customers and suppliers.

Failure to meet environmental, social and governance (ESG) expectations or standards, or to achieve our ESG goals, could adversely affect our business, results of operations and overall financial performance.

In recent years, there has been an increased focus from stakeholders on ESG matters, including GHG emissions and climate-related risks, renewable energy, water stewardship, waste management, diversity, equity and inclusion, responsible sourcing and supply chain, human rights and social responsibility. Given our commitment to certain ESG principles, we actively manage these issues and have established certain goals, commitments and targets. These goals, commitments and targets reflect our current plans and are not guarantees that we will be able to achieve them. Evolving stakeholder expectations and our efforts to manage these issues, report on them and accomplish our goals present numerous operational, regulatory, reputational, financial, legal and other risks, any of which could have a material adverse impact on our financial condition.

Litigation against us could be costly, time consuming to defend and could adversely affect our profitability.

From time to time, we are subject to legal proceedings and claims that arise in the ordinary course of business. For example, we may be subject to workers' compensation claims, employment/labor disputes, customer and supplier disputes, product liability claims, intellectual property disputes and contractual disputes related to warranties arising out of the conduct of our business. Litigation may result in substantial costs and may divert management's attention and resources, which could adversely affect our profitability or financial condition.

Disruptions and other damages to our information technology and other networks and operations, and breaches in data security or cybersecurity attacks could have a negative financial impact and damage our reputation.

Our ability to serve customers, as well as increase revenues and control costs, depends in part on the reliability of our sophisticated technologies, system networks and cloud-based software. We use information technology and other systems to manage our business in order to maximize our revenue, effectiveness and efficiency. Unauthorized parties gaining access to digital systems and networks for purposes of misappropriating assets or sensitive financial, personal or business information, corrupting data, causing operational disruptions and other cyber-related risks could adversely impact our customer relationships, business plans and our reputation. In some cases, we are dependent on third-party technologies and service providers for which there is no certainty of uninterrupted availability or through which hackers could gain access to sensitive and/or personal information. These potential disruptions and cyber-attacks could negatively affect revenues, costs, customer demand, system availability and our reputation.

Further, as the Company pursues its strategy to grow through acquisitions and to pursue newer technologies that improve our operations and cost structure, the Company is also expanding and improving its information technologies, resulting in a larger technological presence and corresponding exposure to cybersecurity risk. Certain new technologies present new and significant cybersecurity safety risks that must be analyzed and addressed before implementation. If we fail to assess and identify cybersecurity risks associated with acquisitions and new initiatives, we may become increasingly vulnerable to such risks.

Failure to successfully identify, complete and integrate acquired businesses or products could adversely affect our operations.

As part of our business strategy, we continue to evaluate and may pursue selected business or product acquisition opportunities that we believe may provide us with certain operating and financial benefits. There can be no assurance that we will identify or complete transactions with suitable acquisition candidates in the future. If we complete any such acquisitions, they may require integration into our existing business with respect to administrative, financial, legal, sales, marketing, manufacturing and other functions to realize these anticipated benefits. If we are unable to successfully integrate a business or product acquisition, we may not realize the benefits identified in our due diligence process, and our financial results may be negatively impacted. Additionally, significant unexpected liabilities may arise during or after completion of an acquisition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The Company has sales, development, distribution and manufacturing facilities and customer service offices as noted in Part I, Item 1 of this 2022 Annual Report on Form 10-K under the heading “Foreign Operations and Export Sales.” The principal facilities utilized by the Company at December 31, 2022 are listed below. The Company owns all such facilities except as noted. The Company believes that its facilities are generally well maintained and have sufficient capacity for its current needs.

Location	Principal Use	Approximate area (square feet)	
Milwaukee, Wisconsin, USA	Manufacturing and offices	324,200	
Racine, Wisconsin, USA	Manufacturing and offices	134,300	(1)
Nogales, Mexico	Manufacturing	181,300	

(1) Leased facility. Lease term expires December 31, 2025.

ITEM 3. LEGAL PROCEEDINGS

In the normal course of business, the Company is named in legal proceedings from time to time. There are currently no material legal proceedings pending with respect to the Company.

The Company is subject to contingencies related to environmental laws and regulations. Information about the Company's compliance with environmental regulations is included in Part I, Item 1 of this 2022 Annual Report on Form 10-K under the heading “Environmental Protection.”

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

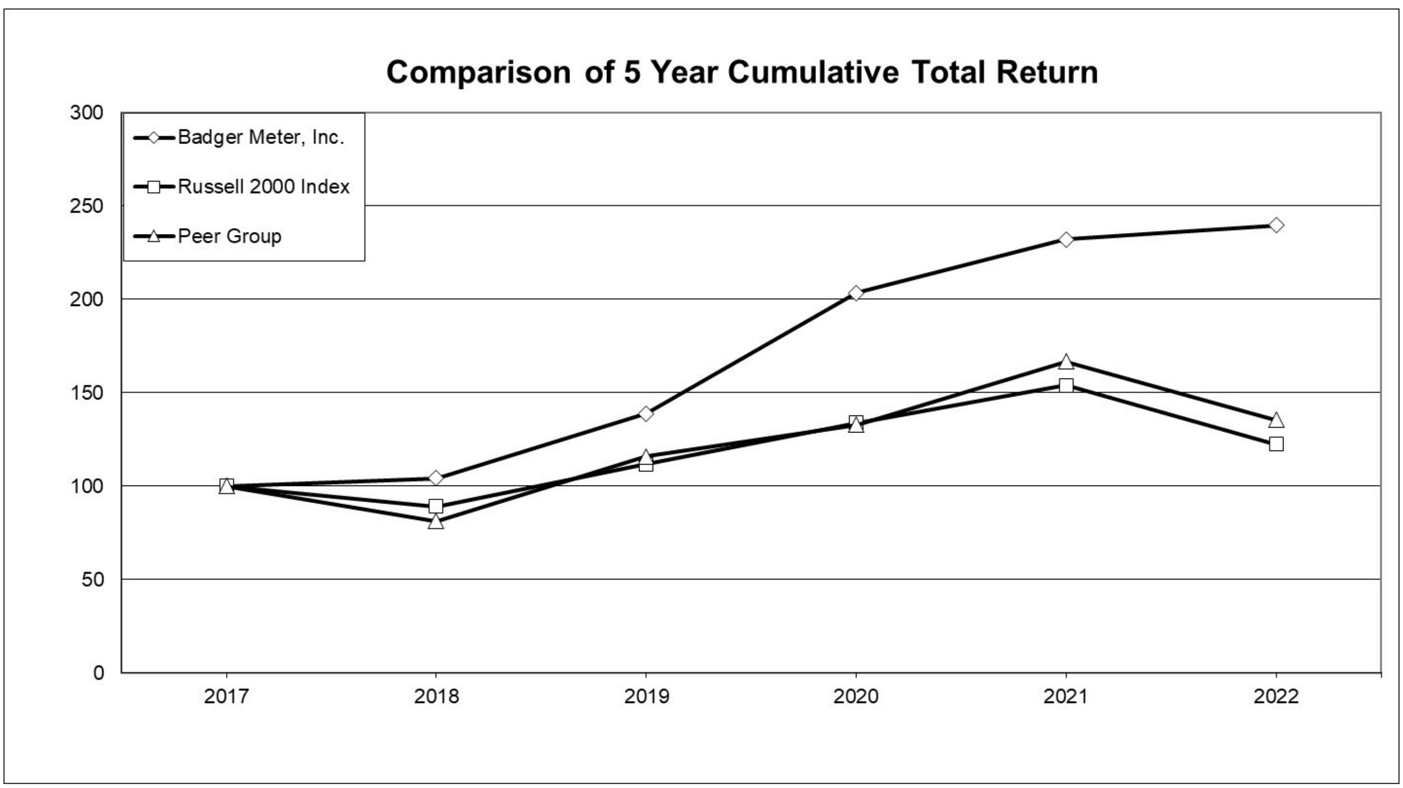
ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Company's Common Stock is traded on the New York Stock Exchange (NYSE Trading Symbol: BMI). At February 3, 2023, there were approximately 556 holders of the Company's Common Stock. Other information required by this Item is set forth in Note 2 "Common Stock" and Note 10 "Unaudited: Quarterly Results of Operations, Common Stock Price and Dividends" in the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

The following information in Item 5 of this Annual Report on Form 10-K is not deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934, as amended, or to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended, and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent the Company specifically incorporates it by reference into such a filing.

The following graph compares on a cumulative basis the yearly percentage change since January 1, 2018 in (a) the total shareholder return on the Company's Common Stock with (b) the total return on the Russell 2000® Index, and (c) the total return of the peer group made up of 18 companies, including the Company, in similar industries, employment markets and with similar market capitalization. The Russell 2000® Index is a trademark of the Frank Russell Company, and is used herein for comparative purposes in accordance with Securities and Exchange Commission regulations.

The graph assumes $100 invested on December 31, 2017. It further assumes the reinvestment of dividends. The returns of each component company in the peer groups have been weighted based on such company's relative market capitalization.



December 31		2017	2018	2019	2020	2021	2022
Badger Meter, Inc.	Return %		4.10%	33.45%	46.39%	14.12%	3.21%
	Cumulative $	$ 100.00	$ 104.10	$ 138.92	$ 203.36	$ 232.09	$ 239.54
Russell 2000 Index	Return %		-11.01%	25.52%	19.96%	14.82%	-20.44%
	Cumulative $	$ 100.00	$ 88.99	$ 111.70	$ 134.00	$ 153.85	$ 122.41
Peer Group	Return %		-18.68%	42.56%	14.50%	25.53%	-18.76%
	Cumulative $	$ 100.00	$ 81.32	$ 115.93	$ 132.74	$ 166.63	$ 135.37

The peer group consists of Evoqua Water Technologies Corp. (AQUA), Badger Meter, Inc. (BMI), Brady Corporation (BRC), CIRCOR International, Inc. (CIR), CTS Corporation (CTS), Enerpac Tool Group Corp. (EPAC), ESCO Technologies Inc. (ESE), The Gorman-Rupp Company (GRC), Helios Technologies, Inc. (HLIO), Itron, Inc. (ITRI), Kadant Inc. (KAI), Lindsay Corporation (LNN), Mueller Water Products, Inc. (MWA), Douglas Dynamics, Inc. (PLOW), Strattec Security Corporation (STRT), Standex International Corporation (SXI), Watts Water Technologies, Inc. (WTS) and Zurn Water Solutions Corporation (ZWS).

In February 2020, the Board of Directors authorized the repurchase of up to 400,000 shares of the Company's Common Stock through February 2023. The following table provides information about the Company's purchases under this repurchase program during the quarter ended December 31, 2022 of equity securities that are registered by the Company pursuant to Section 12 of the Exchange Act.

	Total number of shares purchased	**Average price paid per share**	**Total number of shares purchased as part of a publicly announced program**	**Maximum number of shares that may yet be purchased under the program**
October 1, 2022 - October 31, 2022	-	$ -	-	339,678
November 1, 2022 - November 30, 2022	-	$ -	-	339,678
December 1, 2022 - December 31, 2022	-	$ -	-	339,678
Total as of December 31, 2022	-		-	339,678

On February 10, 2023, the Board of Directors approved a new share repurchase authorization of up to 200,000 shares of the Company's Common Stock through February 10, 2026.

ITEM 6. RESERVED

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

Long Term Business Trends

Across the globe, increasing regulations and a focus on climate-change and sustainability are driving companies and utilities to better manage critical resources like water. Some customers measure fluids to identify leaks and/or misappropriation for cost control or add measurement points to help automate manufacturing. Other customers employ measurement to comply with government mandates and laws including those associated with process and discharge water quality monitoring. The Company provides flow measurement technology to primarily measure water, but also other fluids, gases and steam. This technology is critical to provide baseline usage data and to quantify reductions as customers attempt to reduce consumption. For example, once water usage metrics are better understood, a strategy for water-use reduction can be developed with specific water-reduction initiatives targeted to those areas where it is most viable. With the Company's technology, customers have found costly leaks, pinpointed equipment in need of repair, and identified areas for process improvements.

Increasingly, customers in the utility water market are interested in more frequent and diverse data collection and the use of water metering and quality analytics to evaluate water distribution activity. Specifically, AMI technology enables water utilities to capture readings from each meter at more frequent and variable intervals. There are more than 50,000 water utilities in the United States and the Company estimates that approximately 70% of their respective connections have converted to a radio solution, of which the Company estimates approximately half still utilize AMR technology. The Company believes it is well positioned to meet the continuing conversion trends to AMI with its comprehensive radio and software solutions.

In addition, certain water utilities are converting from mechanical to static meters. Ultrasonic water metering maintains a high level of measurement accuracy over the life of the meter, reducing a utility's non-revenue water. The Company has over a decade of proven reliability in the market with its ultrasonic meters and has recently launched its next generation of ultrasonic metering with its D-Flow technology, which the Company believes increases its competitive differentiation.

For over 118 years, the Company has offered innovative flow metering and control solutions for smart water management, smart buildings and smart industrial processes. The acquisitions of s::can and ATi, leading providers of water quality monitoring solutions, have added real-time water quality parameters to the Company's capabilities and has enhanced the scope of actionable data for its customers to help measure, conserve and protect water. The combined solutions from Badger Meter offer technology that measures both the quantity and quality of water.

Finally, the concept of "Smart Cities" is one avenue to affect efficient city operations, conserve resources and improve service and delivery. Smart water solutions ("Smart Water") are those that provide actionable information through data analytics from an interconnected and interoperable network of sensors and devices that help people and organizations efficiently use and conserve water. Badger Meter is well positioned to benefit from the advancement of Smart Water applications. With its strong relationship with AT&T, among others, Badger Meter stays abreast of emerging cellular technology changes which the Company believes is the premier infrastructure-free AMI solution.

Revenue and Product Mix

As the industry continues to evolve, the Company has been at the forefront of innovation across metering, radio and software technologies in order to meet its customers' increasing expectations for accurate and actionable data. As technologies such as ORION Cellular and BEACON digital solutions have become more readily adopted, the Company's revenue from Software as a Service (SaaS) has increased significantly, albeit from a small base, and is margin accretive.

In addition, the Company has expanded its smart water offering with the addition of online water quality monitoring solutions, adding real-time water quality parameters to augment the scope of actionable data for water utility and industrial customers to optimize their operations.

The Company also seeks opportunities for additional revenue enhancement. For instance, the Company has made inroads into the Middle East market with its ultrasonic meter technology and is pursuing other geographic expansion opportunities. Additionally, the Company is periodically asked to oversee and perform field installation of its products for certain customers. In these cases, the Company assumes the role of general contractor and typically hires installation subcontractors and supervises their work.

Acquisitions

Effective January 1, 2021, the Company acquired 100% of the outstanding stock of ATi, headquartered in Collegeville, Pennsylvania, a provider of water quality monitoring systems.

The total purchase consideration for ATi, net of cash acquired, was $44.0 million. The Company's allocation of the purchase price at December 31, 2021 included $3.9 million of receivables, $3.9 million of inventory, $2.5 million of other assets, $21.0 million of intangibles and $16.4 million of goodwill that is deductible for tax purposes. The intangible assets acquired are primarily customer relationships, developed technology and trademarks with estimated average useful lives of 12 to 15 years. The Company also assumed $1.4 million of accounts payable, $0.6 million of deferred tax liabilities and $1.7 million of other liabilities as part of the acquisition. The allocation of the purchase price to the assets acquired was based upon the estimated fair values at the date of acquisition.

As of December 31, 2021, the Company had completed its analysis for estimating the fair value of the assets acquired with no additional adjustments. This acquisition is further described in Note 3 "Acquisitions" in the Notes to Consolidated Financial Statements.

Effective November 2, 2020, the Company acquired 100% of the outstanding stock of s::can headquartered in Vienna, Austria. s::can specializes in optical water quality sensing solutions that provide real-time measurement of a variety of parameters in water and wastewater utilizing in-line monitoring systems and other applications.

The total purchase consideration for s::can, net of cash acquired, was $30.5 million, inclusive of $1.3 million of working capital adjustments. The Company's allocation of the purchase price at December 31, 2021 included $2.6 million of receivables, $4.3 million of inventory, $1.2 million of other assets, $12.7 million of intangibles and $17.7 million of goodwill that is not deductible for tax purposes. The intangible assets acquired are primarily customer relationships and developed technology with an estimated average useful life of 12 years. The Company also assumed $3.5 million of accounts payable, $3.2 million of deferred tax liabilities and $1.3 million of other liabilities as part of the acquisition. The allocation of the purchase price to the assets acquired was based upon the estimated fair values at the date of acquisition.

As of December 31, 2021, the Company had completed its analysis for estimating the fair value of the assets acquired with no additional adjustments. This acquisition is further described in Note 3 "Acquisitions" in the Notes to Consolidated Financial Statements.

RESULTS OF OPERATIONS

Net Sales

Net sales in 2022 increased $60.4 million, or 11.9%, to $565.6 million from $505.2 million in 2021. Excluding the unfavorable impact of the strong US dollar between years, sales increased 13.2%. Sales into the utility water market were $471.8 million, an increase of 13.6% over the prior year's $415.3 million. The utility water sales growth reflected strong market demand and the continued adoption of cellular AMI solutions, specifically ORION Cellular endpoints and BEACON SaaS revenues, as well as increased meter volumes including E-Series Ultrasonic meters. Sales of products into the global flow instrumentation end markets were $93.8 million, 4.3% higher than the prior year's $89.9 million due to strong order demand and modestly improving supply chain dynamics year-over-year. Excluding the unfavorable impact of the strong US dollar between years, flow instrumentation sales increased 7.1%.

Net sales in 2021 increased $79.7 million, or 18.7%, to $505.2 million from $425.5 million in 2020. Sales into the utility water market were $415.3 million, an increase of 20.6% over the prior year's $344.3 million. The acquisitions of s::can and ATi increased sales $40.7 million compared to 2020. The remaining increase of $39.0 million was attributable to higher sales of the Company's water meter, radio and software products including ORION Cellular endpoints as well as increased BEACON SaaS revenue associated with data collection and software analytics. These favorable trends more than offset the supply chain shortages of certain components which limited sales of certain products throughout 2021 and contributed to the record backlog level throughout 2021. Sales of products into the global flow instrumentation end markets were $89.9 million, 10.7% greater than the prior year's $81.2 million due to the stabilization of industrial demand globally and across the array of end markets served.

Operating Earnings

Operating earnings in 2022 were $87.3 million, or 15.4% of sales, compared to $78.7 million, or 15.6% of sales, in 2021. Gross margin dollars increased $14.5 million due to higher net sales, with gross margin as a percent of sales decreasing from 40.7% in 2021 to 38.9% in 2022. The year-over-year increase in inflationary cost pressures, coupled with production volatility caused by intermittent component delays, tempered gross margin percent in the current year. Selling, engineering and administration ("SEA") expenses were $132.7 million or 23.5% of sales compared to $126.8 million or 25.1% of sales in the prior year. The increase in SEA expenses year-over-year was due to higher personnel and incentive compensation costs, R&D investments, and travel.

Operating earnings in 2021 were $78.7 million, or 15.6% of sales, compared to $65.2 million, or 15.3% of sales, in 2020. Gross margin increased $37.2 million, and as a percent of sales increased from 39.5% in 2020 to 40.7% in 2021. The gross margin improvement was due to higher volumes, improved sales mix as noted above, acquisition mix and strategic pricing actions that offset inflationary cost pressures from material input costs. SEA expenses were $126.8 million or 25.1% of sales compared to $103.1 million or 24.2% of sales in the prior year. The acquired businesses added $16.9 million of SEA expenses. The remaining $6.8 million increase was primarily due to higher personnel costs including increased headcount and higher incentive compensation and benefits.

Interest (Income) Expense, Net

Net interest income was $0.6 million in 2022 and less than $0.1 million in 2021. Net interest expense was less than $0.1 million in 2020. The increase in interest income in 2022 was due to increased cash balances and an improved interest rate environment. Changes in net interest (income) expense in 2021 and 2020 were immaterial.

Income Taxes

There were no significant variations in the provision for income taxes as a percentage of earnings before income taxes which was 24.2%, 22.6% and 24.1% for 2022, 2021 and 2020, respectively.

Earnings and Diluted Earnings per Share

For 2022, the increase in operating earnings resulted in net earnings of $66.5 million compared to $60.9 million in 2021. On a diluted basis, earnings per share were $2.26 in 2022 compared to $2.08 in 2021.

For 2021, the increase in operating earnings resulted in net earnings of $60.9 million compared to $49.3 million in 2020. On a diluted basis, earnings per share were $2.08 in 2021 compared to $1.69 in 2020.

LIQUIDITY AND CAPITAL RESOURCES

The main sources of liquidity for the Company are cash from operations and borrowing capacity. In addition, depending on market conditions, the Company may access the capital markets to strengthen its capital position and to provide additional liquidity for general corporate purposes.

Primary Working Capital

We use primary working capital ("PWC") as a percentage of sales as a key metric for working capital efficiency. We define this metric as the sum of receivables and inventories less payables, divided by annual net sales. The following table shows the components of our PWC (in thousands):

	December 31, 2022		December 31, 2021	
	$	PWC%	$	PWC%
	(In thousands)			
Receivables	$ 76,651	13.5%	$ 65,866	13.1%
Inventories	119,856	21.2%	99,611	19.7%
Payables	(71,440)	-12.6%	(41,859)	-8.3%
Primary Working Capital	$ 125,067	22.1%	$ 123,618	24.5%

Overall, PWC increased $1.4 million compared to the previous year-end. Receivables at December 31, 2022 were $76.7 million compared to $65.9 million at the end of 2021, an increase of $10.8 million due to increased sales. The Company believes its receivables balance is fully collectible. Inventories at December 31, 2022 were $119.9 million compared to $99.6 million at the end of 2021. Inventory increased $20.2 million, due to component cost inflation and higher safety stock levels associated with varied component shortages. Payables at December 31, 2022 were $71.4 million compared to $41.9 million at the end of 2021. The increase was due to timing of payments and increased inventory levels between years.

Cash Provided by Operations

Cash provided by operations in 2022 was $82.5 million compared to $87.5 million in 2021. The decrease from 2021 was driven primarily by increased operating earnings offset by increased working capital requirements as described above. Operating cash flow was more than adequate to fund capital expenditures of $5.9 million and dividends of $24.9 million.

Cash provided by operations in 2021 was $87.5 million compared to $89.6 million in 2020. The decrease from 2020 was driven primarily by increased operating earnings offset by increased working capital requirements. Operating cash flow was more than adequate to fund acquisitions ($45.3 million, net of cash acquired), capital expenditures of $6.7 million and dividends of $22.2 million.

Capital expenditures were $5.9 million, $6.7 million and $9.1 million in fiscal 2022, 2021 and 2020, respectively. Capital expenditures for fiscal 2023 are expected to be in the $10.0-12.0 million range, but could vary depending on timing of projects, growth opportunities and the amount of assets purchased.

The Company had no short-term borrowings as of the end of 2022 or 2021. At the end of 2022, the Company was in a net cash position of $138.1 million.

The Company's financial condition remains strong. On July 8, 2021, the Company entered into a new credit agreement. The credit agreement includes a $150.0 million multi-currency line of credit that supports commercial paper (up to $100.0 million). The facility includes several features that enhance the Company's financial flexibility including an increase feature, acquisition holiday and favorable financial covenants. The Company was in compliance with all covenants as of December 31, 2022. The Company believes that its operating cash flows, available borrowing capacity, and its ability to raise capital provide adequate resources to fund ongoing operating requirements, future capital expenditures and the development of new products. The Company had $156.6 million of unused credit lines available at December 31, 2022.

CONTRACTUAL OBLIGATIONS

The Company's significant contractual obligations as of December 31, 2022 are discussed in Note 12 "Leases" in the Notes to Consolidated Financial Statements in Part II, Item 8 of this 2022 Annual Report on Form 10-K. There are no material undisclosed guarantees. As of December 31, 2022 the Company had no additional material purchase obligations other than those created in the ordinary course of business related to inventory and property, plant and equipment, which generally have terms of less than 90 days. The Company also has long-term obligations related to its postretirement plans which are discussed in detail in Note 7 "Employee

Benefit Plans” in the Notes to Consolidated Financial Statements in Part II, Item 8 of this 2022 Annual Report on Form 10-K. Postretirement medical claims are paid by the Company as they are submitted, and they are anticipated to be $0.4 million in 2023 based on actuarial estimates; however, these amounts can vary significantly from year to year because the Company is self-insured.

APPLICATION OF CRITICAL ACCOUNTING ESTIMATES

We believe the following accounting estimates are the most critical to the understanding of our financial statements as they could have the most significant effect on our reported results and require subjective or complex judgments by management. Accounting principles generally accepted in the United States require us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and revenues and expenses during the periods reported. These estimates are based on our best judgment about current and future conditions, but actual results could differ from those estimates. Refer to Note 1 in the Notes to Consolidated Financial Statements in Part II, Item 8 of this 2022 Annual Report on Form 10-K for information regarding our significant accounting policies.

Warranty and After-Sale Costs

Our products carry warranties that generally range from one to twenty years and are based on terms that are generally accepted in the market. We provide for the estimated cost of product warranty at the time of sale. The product warranty provision is estimated based upon warranty loss experience using actual historical failure rates and estimated costs of product replacement. The variables used in the calculation of the provision are reviewed at least annually. At times, warranty issues may arise which are beyond the scope of our historical experience. We provide for any such warranty issues as they become known and estimable. The introduction of additional technology, such as our ORION cellular radios, electronic meters and registration, have generally caused our annual warranty claims rates to increase over time. While our warranty costs have historically been within calculated estimates, it is possible that future warranty costs could differ significantly from those estimates. At December 31, 2022 and 2021, our reserve for product warranties was $9.6 million and $12.9 million, respectively.

Income Taxes

The Company operates in numerous taxing jurisdictions and is subject to regular examinations by U.S. federal, state and non-U.S. taxing authorities. Our income tax provision for income taxes is based on the interpretation of applicable taxing laws in the jurisdictions in which we conduct business. Due to the ambiguity of tax laws within each jurisdiction, the judgment involved in evaluating and estimating certain tax positions, and how these estimates impact other taxing considerations, it is possible that our income tax positions could differ from actual payments made or benefits received. The Company annually reviews all uncertain tax positions, which represent tax positions taken that are subject to varied interpretations of applicable tax law. Interest is accrued on all unrecognized tax benefits and recorded as interest expense and penalties are recorded as operating expenses in the Consolidated Statements of Operations. Accrued interest was approximately $0.1 million at both December 31, 2022 and 2021 and there were no penalties accrued in either year.

The Company recognizes deferred tax assets and liabilities for differences between the financial statement and tax basis of assets and liabilities that will result in taxable or deductible amounts in the future, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. The Company establishes valuation allowances against certain deferred tax assets that are not likely to be realized. The Company recorded valuation allowances of $2.7 million and $2.2 million as of December 31, 2022 and 2021, respectively. The valuation allowance relates primarily to foreign net operating loss carryforwards.

Goodwill and Intangible Assets

Goodwill and intangible assets arise through business acquisitions. The allocation of purchase price includes the use of estimates in determining future cash flows, the allocation of future cash flows to identifiable intangibles, and their estimated useful lives. If actual results differ from those estimates, it could result in future impairment. The Company assesses goodwill and intangible assets for impairment on an annual basis, or more frequently if an event indicates potential impairment. Potential impairment is first assessed using a qualitative assessment to determine if the fair value is more likely than not less than its carrying value. If it is estimated through the qualitative analysis that fair value is less than carrying value, a quantitative assessment is completed. This assessment uses estimates, including the estimate of future useful life, the amount and timing of future cash flows, and the fair value of future operations. Any impairment charges are recorded in the period the impairment is determined. Multiple factors can have an impact on future cash flows of a reporting unit, as such, it is possible that our estimates in evaluating impairment could differ from future results.

We completed our impairment analysis for goodwill and intangible assets in the fourth quarter for the year ended December 31, 2022. No impairment was noted and no adjustments were recorded to goodwill or intangible assets as a result of this analysis.

OTHER MATTERS

The Company is subject to contingencies related to environmental laws and regulations. A future change in circumstances with respect to these specific matters or with respect to sites formerly or currently owned or operated by the Company, off-site disposal locations used by the Company, and property owned by third parties that is near such sites, could result in future costs to the Company and such amounts could be material. Expenditures for compliance with environmental control provisions and regulations during 2022, 2021 and 2020 were not material.

See the "Special Note Regarding Forward Looking Statements" at the front of this Annual Report on Form 10-K and Part I, Item 1A "Risk Factors" in this Annual Report on Form 10-K for the year ended December 31, 2022 for a discussion of risks and uncertainties that could impact the Company's financial performance and results of operations.

MARKET RISKS

In the ordinary course of business, the Company is exposed to various market risks. The Company operates in an environment where competition varies from moderate to strong. The Company believes it currently provides the leading technology in water meters and radio systems for water utilities. A number of the Company's competitors in certain markets have greater financial resources. As the global water metering market continues to adopt static metering technology, the number of competitors in the North American market may increase. We believe new static metering market entrants lack brand recognition and product breadth and do not have the appropriate utility sales channels to meaningfully compete in the North American market. In addition, the market's level of acceptance of the Company's newer product offerings, including real-time water quality monitoring and BEACON SaaS, may have a significant effect on the Company's results of operations. As a result of significant research and development activities, the Company enjoys favorable patent positions for several of its products.

The Company's ability to generate operating income and to increase profitability depends somewhat on the general conditions of the United States and foreign economies, including to some extent such things as the length and severity of global economic downturns; the timing and size of governmental programs such as annual federal funding and periodic stimulus fund programs, as well as the impact of government budget cuts or partial shutdowns of governmental operations; international or civil conflicts that affect international trade; the ability of municipal water utility customers to authorize and finance purchases of the Company's products; the Company's ability to obtain financing; housing starts in the United States; and overall industrial activity. In addition, changes in governmental laws and regulations, particularly laws dealing with the content or handling of materials, customs or trade practices, may impact the results of operations. These factors are largely beyond the Company's control and depend on the economic condition and regulatory environment of the geographic region of the Company's operations.

The Company relies on single suppliers for certain castings and components in several of its product lines. Although alternate sources of supply exist for these items, the loss of certain suppliers could temporarily disrupt operations in the short term. The Company attempts to mitigate these risks by working closely with key suppliers, purchasing minimal amounts from alternative suppliers and by purchasing business interruption insurance where appropriate.

Raw materials used in the manufacture of the Company's products include purchased castings made of metal or alloys (such as brass, which uses copper as its main component, aluminum, stainless steel and cast iron), plastic resins, glass, microprocessors and other electronic subassemblies, and components. The Company does not hold significant amounts of precious metals. The price and availability of raw materials is influenced by economic and industry conditions, including supply and demand factors that are difficult to anticipate and cannot be controlled by the Company. Commodity risk is managed by keeping abreast of economic conditions and locking in purchase prices for quantities that correspond to the Company's forecasted usage.

The Company's foreign currency risk relates to the sales of products to foreign customers and purchases of material from foreign vendors. The Company uses lines of credit with U.S. and European banks to offset currency exposure related to European receivables and other monetary assets. The Company believes the effect of a change in foreign currency rates will not have a material adverse effect on the Company's financial position or results of operations, either from a cash flow perspective or on the financial statements as a whole.

The Company typically does not hold or issue derivative instruments and has a policy specifically prohibiting the use of such instruments for trading purposes.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information required by this Item is set forth in Part II, Item 7 “Management's Discussion and Analysis of Financial Condition and Results of Operations” under the heading “Market Risks” in this 2022 Annual Report on Form 10-K.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA

BADGER METER, INC.

Management's Annual Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Due to 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 risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022 using the criteria set forth in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on this assessment, the Company's management believes that, as of December 31, 2022, the Company's internal control over financial reporting was effective based on those criteria.

Ernst & Young LLP, an independent registered public accounting firm, has audited the Consolidated Financial Statements included in this Annual Report on Form 10-K and, as part of its audit, has issued an attestation report, included herein, on the effectiveness of the Company's internal control over financial reporting.

BADGER METER, INC.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Badger Meter, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Badger Meter, Inc.’s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Badger Meter, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, and the related consolidated statements of operations, comprehensive income, shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and our report dated February 22, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Milwaukee, Wisconsin
February 22, 2023

BADGER METER, INC.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Badger Meter, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Badger Meter, Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 22, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

	Warranty and After-Sale Costs Reserve
Description of the Matter	As described in Note 1 to the consolidated financial statements, the Company estimates and records provisions for warranties and other after-sale costs. Warranty provisions are recorded in the period of sale, using historical claims data revised for recent trending and expectations to estimate future warranty costs. After-sale costs represent costs expected to be incurred related to specifically identified product issues as well as activities outside the written warranty policy and are estimated by the Company based on the individual facts and circumstances. The Company's accrued liability was $9.6 million as of December 31, 2022, representing its best estimate of the expected warranty and after-sale costs. Auditing management's estimates for warranty and after-sale costs involved significant auditor judgment because the reserve for warranty and after-sale costs requires the Company to estimate future claims. The calculation to estimate future claims includes a number of inputs and assumptions, the most significant of which include the number and type of claims, an evaluation of warranty trends, consideration of product developments, and estimates of future costs to replace or repair specifically identified items.
How We Addressed the Matter in Our Audit	We evaluated the design and tested the operating effectiveness of internal controls over the Company's warranty and after-sale costs reserve process, including management's assessment of the assumptions and data underlying the projection of future warranty and after-sale costs. Our substantive audit procedures included, among others, evaluating the significant assumptions discussed above and the accuracy and completeness of the underlying data used in management's warranty and after-sales costs reserve calculation. We evaluated the historical activity used to develop the lag calculation, including reviewing the data for any developing trends in the claims data, considered the impact of product developments on the calculation, and evaluated the cost build up for any specific reserve items, including procedures to support the completeness of the number and type of products impacted and the estimated future cost to repair or replace the products. We assessed the historical accuracy of management's estimates by comparing the warranty and after-sale costs reserve in prior years to the actual claims paid in the subsequent years. We assessed management's methodology and tested the valuation of the warranty and after-sale costs reserve by developing an independent expectation for the reserve based on the historical amounts recorded as a percentage of sales and compared our expectation to the amount recorded by management. We evaluated the completeness of the reserve estimate for known warranty claims or product issues based on our review of after-sales costs and through inquiries of operational and executive management and evaluated whether specific product issues were appropriately considered in the determination of the warranty and after-sale costs reserve.

/s/ Ernst & Young LLP

We have served as Badger Meter, Inc.'s auditor since 1927.

Milwaukee, Wisconsin
February 22, 2023

BADGER METER, INC.

Consolidated Balance Sheets

	December 31, 2022	December 31, 2021
	(In thousands)	
Assets		
Current assets:		
Cash	$ 138,052	$ 87,174
Receivables	76,651	65,866
Inventories:		
Finished goods	31,350	25,991
Work in process	23,577	24,747
Raw materials	64,929	48,873
Total inventories	119,856	99,611
Prepaid expenses and other current assets	13,273	8,709
Total current assets	347,832	261,360
Property, plant and equipment, at cost		
Land and improvements	8,947	9,183
Building and improvements	70,845	71,103
Machinery and equipment	141,153	136,510
	220,945	216,796
Less accumulated depreciation	(147,403)	(138,746)
Net property, plant and equipment	73,542	78,050
Intangible assets, at cost less accumulated amortization	53,607	64,176
Other assets	14,048	15,390
Deferred income taxes	12,757	7,529
Goodwill	101,261	104,313
Total assets	$ 603,047	$ 530,818
Liabilities and Shareholders' equity		
Current liabilities:		
Payables	$ 71,440	$ 41,859
Accrued compensation and employee benefits	20,513	20,644
Warranty and after-sale costs	9,606	12,868
Other current liabilities	8,753	6,775
Total current liabilities	110,312	82,146
Other long-term liabilities	37,808	29,804
Deferred income taxes	4,648	5,385
Accrued non-pension postretirement benefits	3,917	5,214
Other accrued employee benefits	3,940	5,199
Commitments and contingencies (Note 6)		
Shareholders' equity:		
Common stock, $1 par, authorized 40,000,000 shares, issued 37,221,098 shares in 2022 and 2021	37,221	37,221
Capital in excess of par value	53,282	49,224
Reinvested earnings	395,155	353,535
Accumulated other comprehensive (loss) income	(5,983)	136
Less: Treasury stock, at cost, 7,928,071 shares in 2022 and 7,971,367 shares in 2021	(37,253)	(37,046)
Total shareholders' equity	442,422	403,070
Total liabilities and shareholders' equity	$ 603,047	$ 530,818

See accompanying notes.

BADGER METER, INC.

Consolidated Statements of Operations

	Years ended December 31, 2022	2021	2020
	(In thousands except per share amounts)		
Net sales	$ 565,568	$ 505,198	$ 425,544
Cost of sales	345,598	299,714	257,295
Gross margin	219,970	205,484	168,249
Selling, engineering and administration	132,675	126,761	103,093
Operating earnings	87,295	78,723	65,156
Interest (income) expense, net	(552)	(20)	30
Other pension and postretirement costs	130	120	145
Earnings before income taxes	87,717	78,623	64,981
Provision for income taxes	21,221	17,739	15,638
Net earnings	$ 66,496	$ 60,884	$ 49,343
Earnings per share:			
Basic	$ 2.28	$ 2.09	$ 1.70
Diluted	$ 2.26	$ 2.08	$ 1.69
Shares used in computation of earnings per share:			
Basic	29,218	29,144	29,052
Impact of dilutive securities	158	194	178
Diluted	29,376	29,338	29,230

See accompanying notes.

BADGER METER, INC.

Consolidated Statements of Comprehensive Income

	Years ended December 31, 2022	2021	2020
		(In thousands)	
Net earnings	$ 66,496	$ 60,884	$ 49,343
Other comprehensive income (loss):			
Foreign currency translation adjustments	(6,719)	(1,516)	1,096
Pension and postretirement benefits, net of tax	600	339	(208)
Comprehensive income	$ 60,377	$ 59,707	$ 50,231

See accompanying notes.

BADGER METER, INC.

Consolidated Statements of Cash Flows

	Years ended December 31, 2022	2021 (In thousands)	2020
Operating activities:			
Net earnings	$ 66,496	$ 60,884	$ 49,343
Adjustments to reconcile net earnings to net cash provided by operations:			
Depreciation	11,090	11,291	12,253
Amortization	15,151	16,571	12,963
Deferred income taxes	(5,619)	(3,055)	(3,082)
Noncurrent employee benefits	(648)	(234)	206
Stock-based compensation expense	3,148	2,330	1,415
Changes in:			
Receivables	(11,328)	(1,240)	3,036
Inventories	(21,021)	(13,633)	5,129
Payables	28,007	7,005	(391)
Prepaid expenses and other assets	(10,557)	(8,281)	(3,522)
Other liabilities	7,732	15,872	12,228
Total adjustments	15,955	26,626	40,235
Net cash provided by operations	82,451	87,510	89,578
Investing activities:			
Property, plant and equipment expenditures	(5,891)	(6,746)	(9,059)
Proceeds from company owned life insurance plans	-	596	-
Acquisitions, net of cash acquired	-	(45,273)	(29,134)
Net cash used for investing activities	(5,891)	(51,423)	(38,193)
Financing activities:			
Net decrease in short-term debt	-	-	(4,600)
Payment of contingent acquisition consideration	-	-	(1,001)
Dividends paid	(24,881)	(22,155)	(20,340)
Proceeds from exercise of stock options	703	2,036	1,058
Repurchase of common stock for treasury stock	(427)	(460)	(3,116)
Issuance of treasury stock	-	72	180
Net cash used for financing activities	(24,605)	(20,507)	(27,819)
Effect of foreign exchange rates on cash	(1,077)	(679)	(164)
Increase in cash and cash equivalents	50,878	14,901	23,402
Cash and cash equivalents – beginning of period	87,174	72,273	48,871
Cash and cash equivalents – end of period	$ 138,052	$ 87,174	$ 72,273
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Income taxes	$ 24,038	$ 19,981	$ 17,995
Interest	$ -	$ 118	$ 91
Property, plant and equipment acquired through operating lease	$ 2,283	$ -	$ -
Property, plant and equipment accrued and unpaid	$ 1,517	$ -	$ -

See accompanying notes.

BADGER METER, INC.

Consolidated Statements of Shareholders' Equity

	Years ended December 31,						
	Common Stock at $1 par value*	Capital in excess of par value	Reinvested earnings	Accumulated other comprehensive income (loss)	Employee benefit stock	Treasury stock (at cost)	Total
	(In thousands except share and per share amounts)						
Balance, December 31, 2019	$ 37,200	$ 41,956	$ 285,879	$ 425	$ (154)	$ (34,238)	$ 331,068
Net earnings	-	-	49,343	-	-	-	49,343
Pension and postretirement benefits (net of $69 tax effect)	-	-	-	(208)	-	-	(208)
Foreign currency translation	-	-	-	1,096	-	-	1,096
Cash dividends of $0.70 per share	-	-	(20,372)	-	-	-	(20,372)
Stock options exercised	21	877	-	-	-	160	1,058
ESSOP transactions	-	280	-	-	154	-	434
Stock-based compensation	-	1,415	-	-	-	-	1,415
Purchase of common stock for treasury stock	-	-	-	-		(3,116)	(3,116)
Issuance of treasury stock (22 shares)	-	436	-	-	-	105	541
Balance, December 31, 2020	$ 37,221	$ 44,964	$ 314,850	$ 1,313	$ -	$ (37,089)	$ 361,259
Net earnings	-	-	60,884	-	-	-	60,884
Pension and postretirement benefits (net of ($112) tax effect)	-	-	-	339	-	-	339
Foreign currency translation	-	-	-	(1,516)	-	-	(1,516)
Cash dividends of $0.76 per share	-	-	(22,199)	-	-	-	(22,199)
Stock options exercised	-	1,622	-	-	-	414	2,036
Stock-based compensation	-	2,330	-	-	-	-	2,330
Purchase of common stock for treasury stock	-	-	-	-		(460)	(460)
Issuance of treasury stock (19 shares)	-	308	-	-	-	89	397
Balance, December 31, 2021	$ 37,221	$ 49,224	$ 353,535	$ 136	$ -	$ (37,046)	$ 403,070
Net earnings	-	-	66,496	-	-	-	66,496
Pension and postretirement benefits (net of ($197) tax effect)	-	-	-	600	-	-	600
Foreign currency translation	-	-	-	(6,719)	-	-	(6,719)
Cash dividends of $0.85 per share	-	-	(24,876)	-	-	-	(24,876)
Stock options exercised	-	581	-	-	-	122	703
Stock-based compensation	-	3,148	-	-	-	-	3,148
Purchase of common stock for treasury stock	-	-	-	-		(427)	(427)
Issuance of treasury stock (24 shares)	-	329	-	-	-	98	427
Balance, December 31, 2022	$ 37,221	$ 53,282	$ 395,155	$ (5,983)	$ -	$ (37,253)	$ 442,422

* Each common share of stock equals $1 par value; therefore, the number of common shares is the same as the dollar value.

See accompanying notes.

Notes to Consolidated Financial Statements

Note 1 Basis of Presentation and Accounting Policies

Profile

With more than a century of water technology innovation, Badger Meter is a global provider of industry leading water solutions encompassing flow measurement, quality and other system parameters. These offerings provide customers with the data and analytics essential to optimize their operations and contribute to the sustainable use and protection of the world's most precious resource. The Company's flow measurement products measure water and other fluids and are known for accuracy, long-lasting durability and for providing valuable and timely measurement data through various methods. The Company's water quality monitoring solutions include optical sensing and electrochemical instruments that provide real-time, on-demand data parameters. The Company's product lines fall into two categories: sales of water meters, radios, software and related technologies, and water quality monitoring solutions to water utilities (utility water) and sales of meters and other sensing instruments, valves, software and other solutions for industrial applications in water, wastewater, and other industries (flow instrumentation). The Company estimates that over 90% of its products are used in water related applications.

Utility water, the largest sales product line, is comprised of either mechanical or static (ultrasonic) water meters along with the related radio and software technologies and services used by water utilities as the basis for generating their water and wastewater revenues, enabling operating efficiencies and engaging with their end consumers. It further comprises other sensor technology used in the water distribution system to ensure the safe and efficient delivery of clean water. These sensors are used to detect leaks in the distribution piping system and to monitor various water quality parameters throughout the distribution system. The largest geographic market for the Company's utility water products is North America, primarily the United States, because most of the Company's meters are designed and manufactured to conform to standards promulgated by the American Water Works Association. The majority of water meters sold by the Company continue to be mechanical in nature; however, static meters are an increasing percentage of the water meters sold by the Company and in the industry, due to a variety of factors, including their ability to maintain measurement accuracy over their useful life. Providing ultrasonic water meter technology, combined with advanced radio technology, provides the Company with the opportunity to sell into other geographical markets, for example the Middle East, Europe and Southeast Asia.

The flow instrumentation product line primarily serves water applications throughout the broader industrial markets. This product line includes meters, valves and other sensing instruments sold worldwide to measure and control the quantity of fluids going through a pipe or pipeline including water, air, steam, and other liquids and gases. These products are used in a variety of industries and applications, with the Company's primary market focus being water/wastewater, heating, ventilating and air conditioning (HVAC) and corporate sustainability. Flow instrumentation products are generally sold to original equipment manufacturers as the primary flow measurement device within a product or system, as well as through manufacturers' representatives.

Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of ninety days or less to be cash equivalents.

Receivables

Receivables consist primarily of trade receivables. The Company does not require collateral or other security and evaluates the collectability of its receivables based on a number of factors. An allowance for doubtful accounts is recorded for significant past due receivable balances based on a review of the past due items and the customer's ability and likelihood to pay, as well as applying a historical write-off ratio to the remaining balances. Changes in the Company's allowance for doubtful accounts are as follows:

	Balance at beginning of year	Provision and reserve adjustments	Write-offs less recoveries	Balance at end of year
		(In thousands)		
2022	$ 697	$ 515	$ (33)	$ 1,179
2021	552	191	(46)	697
2020	224	356	(28)	552

Inventories

Inventories are valued at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method. The Company estimates and records provisions for obsolete and excess inventories. Changes to the Company's obsolete and excess inventories reserve are as follows:

	Balance at beginning of year	Net additions charged to earnings	Disposals	Balance at end of year
		(In thousands)		
2022	$ 6,078	$ 1,498	$ (895)	$ 6,681
2021	6,400	1,329	(1,651)	6,078
2020	5,440	2,964	(2,004)	6,400

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is provided over the estimated useful lives of the respective assets by the straight-line method. The estimated useful lives of assets are: for land improvements, 15 years; for buildings and improvements, 10 to 39 years; and for machinery and equipment, 3 to 20 years.

Capitalized Software and Hardware

Capitalized internal use software and hardware included in other assets in the Consolidated Balance Sheets were $4.8 million and $5.6 million at December 31, 2022 and 2021, respectively. These amounts are amortized on a straight-line basis over the estimated useful lives of the software and/or hardware, ranging from 1 to 5 years. Amortization expense recognized for the years ending December 31, 2022, 2021 and 2020 was $3.8 million, $4.5 million and $3.7 million, respectively.

Long-Lived Assets

Property, plant and equipment and identifiable intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If the sum of the expected undiscounted cash flows is less than the carrying value of the related asset or group of assets, a loss is recognized for the difference between the fair value and carrying value of the asset or group of assets.

Intangible Assets

Intangible assets are amortized on a straight-line basis over their estimated useful lives, ranging from 5 to 20 years. The Company does not have any intangible assets deemed to have indefinite lives. Amortization expense was $8.6 million in 2022, $10.0 million in 2021 and $7.2 million in 2020. Amortization expense expected to be recognized is $8.0 million in 2023,

$7.9 in 2024, $7.5 million in 2025, $6.7 million in 2026, $6.1 million in 2027 and $17.4 million thereafter. The carrying value and accumulated amortization by major class of intangible assets are as follows:

	December 31, 2022		December 31, 2021	
	Gross carrying amount	Accumulated amortization	Gross carrying amount	Accumulated amortization
	(In thousands)			
Technologies	$ 58,504	$ 37,857	$ 58,789	$ 34,254
Intellectual property	6,857	840	10,169	2,744
Non-compete agreements	691	661	748	506
Licenses	650	560	650	543
Customer lists	8,058	5,097	8,083	4,501
Customer relationships	38,602	22,023	39,202	19,663
Trade names	15,880	8,597	16,050	7,304
Total intangibles	$ 129,242	$ 75,635	$ 133,691	$ 69,515

Goodwill

Goodwill is tested for impairment annually during the fourth quarter or more frequently if an event indicates that the goodwill might be impaired. Potential impairment is identified by comparing the fair value of a reporting unit with its carrying value. No adjustments were recorded to goodwill as a result of these tests during 2022, 2021 and 2020. Goodwill was $101.3 million at December 31, 2022, $104.3 million at December 31, 2021, and $88.7 million at December 31, 2020. The increase from 2020 to 2021 resulted from the acquisition of ATi, headquartered in Collegeville, Pennsylvania in 2021. This acquisition is further described in Note 3 "Acquisitions".

Warranty and After-Sale Costs

The Company estimates and records provisions for warranties and other after-sale costs in the period in which the sale is recorded, based on a lag factor and historical warranty claim experience. After-sale costs represent a variety of activities outside of the written warranty policy, such as investigation of unanticipated issues after the customer has installed the product or analysis of water quality issues. Changes in the Company's warranty and after-sale costs reserve are as follows:

	Balance at beginning of year	Provision of acquired business	Net additions charged to earnings	Costs incurred	Balance at end of year
			(In thousands)		
2022	$ 12,868	$ -	$ 5,624	$ (8,886)	$ 9,606
2021	11,617	-	5,856	(4,605)	12,868
2020	5,583	500	7,855	(2,321)	11,617

Research and Development

Research and development costs are charged to expense as incurred and amounted to $15.8 million in 2022, $14.7 million in 2021 and $11.6 million in 2020.

Healthcare

The Company estimates and records provisions for healthcare claims incurred but not reported, based on medical cost trend analysis, reviews of subsequent payments made and estimates of unbilled amounts.

Accumulated Other Comprehensive Income (Loss)

Components of accumulated other comprehensive loss at December 31, 2022 are as follows:

(In thousands)	Unrecognized pension and postretirement benefits	Foreign currency	Total
Balance at beginning of period	$ 394	$ (258)	$ 136
Other comprehensive loss before reclassifications	-	(6,719)	(6,719)
Amounts reclassified from accumulated other comprehensive income, net of tax of ($197)	600	-	600
Net current period other comprehensive loss, net of tax	600	(6,719)	(6,119)
Accumulated other comprehensive loss	$ 994	$ (6,977)	$ (5,983)

Reclassifications out of accumulated other comprehensive income during 2022 are immaterial.

Components of accumulated other comprehensive income at December 31, 2021 are as follows:

(In thousands)	Unrecognized pension and postretirement benefits	Foreign currency	Total
Balance at beginning of period	$ 55	$ 1,258	$ 1,313
Other comprehensive loss before reclassifications	-	(1,516)	(1,516)
Amounts reclassified from accumulated other comprehensive income, net of tax of ($112)	339	-	339
Net current period other comprehensive loss, net of tax	339	(1,516)	(1,177)
Accumulated other comprehensive income	$ 394	$ (258)	$ 136

Reclassifications out of accumulated other comprehensive income during 2021 were immaterial.

Use of Estimates

The preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles (“GAAP”) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Fair Value Measurements of Financial Instruments

The carrying amounts of cash, receivables and payables in the financial statements approximate their fair values due to the short-term nature of these financial instruments. Included in other assets are insurance policies on various individuals who were associated with the Company. The carrying amounts of these insurance policies approximate their fair value.

Subsequent Events

The Company evaluates subsequent events at the date of the balance sheet as well as conditions that arise after the balance sheet date but before the financial statements are issued. The effects of conditions that existed at the balance sheet date are recognized in the financial statements. Events and conditions arising after the balance sheet date but before the financial statements are issued are evaluated to determine if disclosure is required to keep the financial statements from being misleading. To the extent such events and conditions exist, if any, disclosures are made regarding the nature of events and the estimated financial effects for those events and conditions. For purposes of preparing the accompanying consolidated financial statements and the notes to these financial statements, the Company evaluated subsequent events through the date the accompanying financial statements were issued.

Effective January 1, 2023, the Company acquired 100% of the outstanding stock of Syrinix Ltd. ("Syrinix"), headquartered in the United Kingdom, a provider of high-frequency pressure monitoring and leak detection solutions. The purchase consideration, net of cash acquired, was approximately $18.0 million. The Syrinix acquisition will be accounted for under the purchase method, and accordingly, the results of operations will be included in the Company's financial statements from the date of acquisition. The acquisition is not expected to have a material impact on the Company's consolidated financial statements and notes thereto.

Recently Adopted Accounting Pronouncements

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2019-12, "Simplifying the Accounting for Income Taxes" under ASC 740, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and modifies the existing guidance to enable more consistent application. This guidance is effective for fiscal years beginning after December 15, 2020, including interim periods within that fiscal year with early adoption being permitted. The Company adopted ASU No. 2019-12 on January 1, 2021, the impact of which was not significant to the Company.

In October 2021, the FASB issued ASU No. 2021-08, "Business Combinations (Topic 805), Accounting for Contract Assets and Contract Liabilities with Customers," which requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, "Revenue from Contracts with Customers." The guidance is effective for fiscal years beginning after December 15, 2022. The Company does not currently expect a material impact to its consolidated financial statements or disclosures from the adoption of this standard.

Note 2 Common Stock

Common Stock

The authorized common stock of the Company as of December 31, 2022 consisted of 40,000,000 shares of common stock, $1 par value, of which 37,221,098 were issued and outstanding as of December 31, 2022 and 2021, respectively.

Stock Options

There were no anti-dilutive options in 2022 and 2021.

Note 3 Acquisitions

Acquisitions are accounted for under the purchase method, and accordingly, the results of operations were included in the Company's financial statements from the date of acquisition. The acquisitions did not have a material impact on the Company's consolidated financial statements or the notes thereto.

Effective January 1, 2021, the Company acquired 100% of the outstanding stock of ATi, headquartered in Collegeville, Pennsylvania, a provider of water quality monitoring systems.

The total purchase consideration for ATi, net of cash acquired, was $44.0 million. The Company's allocation of the purchase price at December 31, 2021 included $3.9 million of receivables, $3.9 million of inventory, $2.5 million of other assets, $21.0 million of intangibles and $16.4 million of goodwill that is deductible for tax purposes. The intangible assets acquired are primarily customer relationships, developed technology and trademarks with estimated average useful lives of 12 to 15 years. The Company also assumed $1.4 million of accounts payable, $0.6 million of deferred tax liabilities and $1.7 million of other liabilities as part of the acquisition. The allocation of the purchase price to the assets acquired was based upon the estimated fair values at the date of acquisition. As of December 31, 2021, the Company had completed its analysis for estimating the fair value of the assets acquired with no additional adjustments.

Effective November 2, 2020, the Company acquired 100% of the outstanding stock of s::can headquartered in Vienna, Austria. s::can specializes in optical water quality sensing solutions that provide real-time measurement of a variety of parameters in water and wastewater utilizing in-line monitoring systems and other applications.

The total purchase consideration for s::can, net of cash acquired, was $30.5 million, inclusive of $1.3 million of working capital adjustments. The Company's allocation of the purchase price at December 31, 2021 included $2.6 million of receivables, $4.3 million of inventory, $1.2 million of other assets, $12.7 million of intangibles and $17.7 million of goodwill that is not deductible for tax purposes. The intangible assets acquired are primarily customer relationships and developed technology with an estimated average useful life of 12 years. The Company also assumed $3.5 million of accounts payable, $3.2 million of deferred tax liabilities and $1.3 million of other liabilities as part of the acquisition. The allocation of the purchase price to the assets acquired was based upon the estimated fair values at the date of acquisition. As of December 31, 2021, the Company had completed its analysis for estimating the fair value of the assets acquired with no additional adjustments.

Note 4 Short-term Debt and Credit Lines

The Company did not have short-term debt at December 31, 2022 and 2021. On July 8, 2021, the Company entered into a new credit agreement. The Company amended its credit agreement to modify the benchmark interest rate on January 20, 2023. The credit agreement includes a $150.0 million multi-currency line of credit that supports commercial paper (up to $100.0 million). The facility includes several features that enhance the Company's financial flexibility including an increase feature, acquisition holiday and favorable financial covenants. The Company was in compliance with all covenants as of December 31, 2022. The Company had $156.6 million of unused credit lines available at December 31, 2022.

Note 5 Stock Compensation

As of December 31, 2022, the Company has an Omnibus Incentive Plan under which 1,000,000 shares are reserved for restricted stock, performance shares and stock options grants for employees, as well as stock grants for directors. The plan was approved in 2021 and replaced all prior stock-based plans except for shares and options previously issued under those plans. As of December 31, 2022 and 2021 there were 938,147 and 994,119 shares, respectively, of the Company's Common Stock available for grant under the 2021 Omnibus Incentive Plan. The Company recognizes the cost of stock-based awards in net earnings for all of its stock-based compensation plans on a straight-line basis over the service period of the awards. The following sections describe the four types of grants in more detail.

Stock Options

The Company estimates the fair value of its option awards using the Black-Scholes option-pricing formula, and records compensation expense for stock options ratably over the stock option grant's vesting period. Stock option compensation expense recognized by the Company for the years ended December 31, 2022, 2021 and 2020 was $0.3 million, $0.4 million and $0.4 million, respectively. No new stock options were granted in 2022 and 2021.

The following table summarizes the transactions of the Company's stock option plans for the three-year period ended December 31, 2022:

	Number of shares		Weighted-average exercise price
Options outstanding - December 31, 2019	337,332	$	31.82
Options granted	41,807		62.76
Options exercised	(55,716)		18.99
Options forfeited	(7,229)		50.19
Options outstanding - December 31, 2020	316,194	$	37.75
Options exercised	(88,932)		22.89
Options outstanding - December 31, 2021	227,262	$	43.56
Options exercised	(25,986)		27.04
Options forfeited	(4,529)		60.82
Options outstanding - December 31, 2022	196,747	$	45.35
Exercisable options —			
December 31, 2020	235,829	$	30.82
December 31, 2021	170,484		38.31
December 31, 2022	163,316		42.23

The following assumptions were used for valuing options granted in the year ended December 31, 2020:

Per share fair value of options granted during the period	$	17.49
Risk-free interest rate		0.64%
Dividend yield		1.05%
Volatility factor		30.0%
Weighted-average expected life in years		7.0

The expected life was based on historical exercise behavior and the projected exercise of unexercised stock options. The risk-free interest rate was based on the U.S. Treasury yield curve in effect on the date of grant for the respective expected life of the option. The expected dividend yield was based on the expected annual dividends divided by the grant date market value of the Company’s Common Stock. The expected volatility was based on the historical volatility of the Company’s Common Stock.

The weighted-average contractual life remaining for options outstanding as of December 31, 2022 was 4.3 years.

The following table summarizes the aggregate intrinsic value related to options exercised, outstanding and exercisable as of and for the years ended December 31:

	2022	2021	2020
		(In thousands)	
Exercised	$ 2,175	$ 7,085	$ 3,054
Outstanding	12,529	14,316	17,805
Exercisable	10,910	11,635	14,913

As of December 31, 2022, the unrecognized compensation cost related to stock options was approximately $0.4 million, which will be recognized over a weighted average period of 1.8 years.

Director Stock Grant

Non-employee directors receive an annual stock award of the Company’s Common Stock under the 2021 Omnibus Incentive Plan. The annual stock award for 2022 was $64,000. The Company values stock grants for directors at the closing price of the Company’s stock on the day the grant was awarded. The Company records compensation expense for this plan ratably over the annual service period beginning May 1. Director stock compensation expense recognized by the Company for the years ended December 31, 2022 was $0.5 million compared to $0.3 million in 2021 and $0.4 million in 2020. As of December 31, 2022, the unrecognized compensation cost related to the director stock award that is expected to be recognized over the remaining four months is estimated to be approximately $0.2 million.

Restricted Stock

The Company periodically issues nonvested shares of the Company's Common Stock to certain eligible employees. The Company values restricted stock on the closing price of the Company's stock on the day the grant was awarded. The Company records compensation expense for this plan ratably over the vesting periods. Restricted stock compensation expense recognized by the Company for the year ended December 31, 2022 was $1.6 million compared to $1.4 million in 2021 and $1.0 million in 2020.

The fair value of nonvested shares is determined based on the market price of the shares on the grant date.

	Shares	Fair value per share
Nonvested at December 31, 2019	64,480	$ 48.21
Granted	20,758	64.19
Vested	(25,044)	39.87
Forfeited	(2,645)	54.35
Nonvested at December 31, 2020	57,549	$ 57.33
Granted	17,430	99.90
Vested	(16,528)	49.31
Forfeited	(1,384)	58.68
Nonvested at December 31, 2021	57,067	$ 72.62
Granted	21,637	97.41
Vested	(23,302)	66.87
Forfeited	(4,327)	86.53
Nonvested at December 31, 2022	51,075	$ 84.85

As of December 31, 2022, there was $2.2 million of unrecognized compensation cost related to nonvested restricted stock that is expected to be recognized over a weighted average period of 1.8 years.

Performance Share Units

Beginning in 2021, the Company periodically issues performance share units to certain eligible employees. Recipients of performance share grants are eligible to receive shares of our common stock depending upon the level of our total adjusted return on invested capital (ROIC) and adjusted free cash flow conversion as measured over a three-year performance period. The number of shares earned for awards granted in 2021 and 2022 will range from 50% to 200% of the granted number of performance shares for the three-year performance period ending December 31, 2023 and December 31, 2024, respectively, and will vest, to the extent earned, in the fiscal quarter following the end of the applicable three-year performance period. Performance share compensation expense recognized by the Company for the year ended December 31, 2022 was $1.2 million compared to $0.6 million in 2021.

A summary of performance share activity for the two years ended December 31 is as follows:

	Performance Shares	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2020	—	$ —
Granted	14,748	100.37
Adjustment for expected performance results	7,374	100.37
Nonvested at December 31, 2021	22,122	$ 100.37
Granted	16,870	97.62
Adjustment for expected performance results	6,746	97.62
Forfeited	(2,892)	99.43
Nonvested at December 31, 2022	42,846	$ 98.92

As of December 31, 2022, there was $2.4 million of unrecognized compensation cost related to nonvested performance share units that is expected to be realized over a weighted average period of 1.8 years.

Note 6 Commitments and Contingencies

Commitments

The Company makes commitments in the normal course of business. The Company rents equipment, vehicles and facilities under operating leases, some of which contain renewal options. Total rental expense charged to operations under all operating leases was $3.5 million in 2022, and $3.1 million in 2021 and 2020. The Company's lease commitments and future minimum lease payments are discussed in Note 12 "Leases."

Contingencies

In the normal course of business, the Company is named in legal proceedings. There are currently no material legal proceedings pending with respect to the Company.

The Company is subject to contingencies related to environmental laws and regulations. A future change in circumstances with respect to specific matters or with respect to sites formerly or currently owned or operated by the Company, off-site disposal locations used by the Company, and property owned by third parties that is near such sites, could result in future costs to the Company and such amounts could be material. Expenditures for compliance with environmental control provisions and regulations during 2022, 2021 and 2020 were not material.

The Company relies on single suppliers for most brass castings and certain resin and electronic subassemblies in several of its product lines. The Company believes these items would be available from other sources, but that the loss of certain suppliers could result in a higher cost of materials, delivery delays, short-term increases in inventory and higher quality control costs in the short term. The Company attempts to mitigate these risks by working closely with key suppliers, purchasing minimal amounts from alternative suppliers and by purchasing business interruption insurance where appropriate.

The Company reevaluates its exposures on a periodic basis and makes adjustments to reserves as appropriate.

Note 7 Employee Benefit Plans

The Company maintains supplemental non-qualified plans for certain officers and other key employees. The expense for these plans was not material for 2022, 2021 or 2020. The discount rate used to measure the net periodic pension cost was 2.61% for 2022, 2.08% for 2021 and 2.87% for 2020. The amount accrued was $0.7 million and $0.6 million as of December 31, 2022 and 2021, respectively.

The Company also maintains an Employee Savings and Stock Ownership Plan (“ESSOP”) for the majority of the U.S. employees. The ESSOP includes a voluntary 401(k) savings plan that allows certain employees to defer up to 50% of their income on a pretax basis subject to limits on maximum amounts. The Company matches 25% of each employee’s contribution, with the match percentage applying to a maximum of 7% of each employee's salary. Compensation expense was $1.1 million in 2022 compared to $0.9 million in 2021 and $0.5 million in 2020.

The Company also contributes to a defined contribution feature within the ESSOP plan. Contributions are discretionary and are calculated as a percentage of eligible wages of the employee. Compensation expense under the defined contribution feature was $3.7 million in 2022, $3.1 million in 2021 and $2.0 million in 2020.

Other Postretirement Benefits

The Company also has a postretirement healthcare benefit plan that provides medical benefits for certain U.S. retirees and eligible dependents hired prior to November 1, 2004. Employees are eligible to receive postretirement healthcare benefits upon meeting certain age and service requirements. No employees hired after October 31, 2004 are eligible to receive these benefits. This plan requires employee contributions to offset benefit costs.

The following table sets forth the components of net periodic postretirement benefit cost for the years ended December 31, 2022, 2021 and 2020:

	2022	2021	2020
		(In thousands)	
Service cost, benefits attributed for service of active employees for the period	$ 91	$ 104	$ 103
Interest cost on the accumulated postretirement benefit obligation	119	99	154
Amortization of actuarial gain	(48)	—	(22)
Net periodic postretirement benefit cost	$ 162	$ 203	$ 235

The discount rate used to measure the net periodic postretirement benefit cost was 2.82% for 2022, 2.45% for 2021 and 3.19% for 2020. It is the Company's policy to fund healthcare benefits on a cash basis. Because the plan is unfunded, there are no plan assets. The following table provides a reconciliation of the projected benefit obligation at the Company's December 31 measurement date:

	2022	2021
	(In thousands)	
Benefit obligation at beginning of year	$ 5,544	$ 6,145
Service cost	91	104
Interest cost	119	99
Actuarial gain	(833)	(504)
Plan participants' contributions	600	603
Benefits paid	(1,277)	(903)
Benefit obligation, end of year	$ 4,244	$ 5,544

The amounts recognized in the Consolidated Balance Sheets at December 31 are:

	2022	2021
	(In thousands)	
Accrued compensation and employee benefits	$ 328	$ 331
Accrued non-pension postretirement benefits	3,916	5,213
Amounts recognized at December 31	$ 4,244	$ 5,544

The discount rate used to measure the accumulated postretirement benefit obligation was 5.16% for 2022 and 2.82% for 2021. The Company's discount rate assumptions for its postretirement benefit plan are based on the average yield of a hypothetical high quality bond portfolio with maturities that approximately match the estimated cash flow needs of the plan. Because the plan requires the Company to establish fixed Company contribution amounts for retiree healthcare benefits, future healthcare cost trends do not generally impact the Company's accruals or provisions.

Estimated future benefit payments of postretirement benefits, assuming increased cost sharing, expected to be paid in each of the next five years beginning with 2023 are $0.4 million through 2027, with an aggregate of $1.7 million for the five years thereafter. These amounts can vary significantly from year to year because the cost sharing estimates can vary from actual expenses as the Company is self-insured.

Amounts included in accumulated other comprehensive income, net of tax, at December 31, 2022 that have not yet been recognized in net periodic benefit cost are as follows:

	Pension plans	Other postretirement benefits
	(In thousands)	
Net actuarial loss (gain)	$ 101	$ (1,095)

Amounts included in accumulated other comprehensive income, net of tax, at December 31, 2022 expected to be recognized in net periodic benefit cost during the fiscal year ending December 31, 2023 are not expected to be material.

Note 8 Income Taxes

The Company is subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes and recording the related deferred tax assets and liabilities.

Details of earnings before income taxes are as follows:

	2022	2021	2020
		(In thousands)	
Domestic	$ 83,680	$ 74,509	$ 65,908
Foreign	4,037	4,114	(927)
Total	$ 87,717	$ 78,623	$ 64,981

The provision (benefit) for income taxes is as follows:

	2022	2021	2020
		(In thousands)	
Current:			
Federal	$ 20,089	$ 15,299	$ 14,482
State	4,720	3,556	3,419
Foreign	2,031	1,939	819
Deferred:			
Federal	(4,289)	(1,774)	(2,495)
State	(955)	(600)	(644)
Foreign	(375)	(681)	57
Total	$ 21,221	$ 17,739	$ 15,638

The provision for income tax differs from the amount that would be provided by applying the statutory U.S. corporate income tax rate in each year due to the following items:

	2022	2021	2020
		(In thousands)	
Provision at statutory rate	$ 18,421	$ 16,511	$ 13,646
State income taxes, net of federal tax benefit	2,938	2,288	2,196
Valuation allowance	571	168	1,302
Foreign - tax rate differential and other	388	606	(267)
Federal tax credits	(1,016)	(770)	(517)
Compensation subject to section 162(m)	693	685	110
Stock based compensation	(523)	(1,510)	(682)
Other	(251)	(239)	(150)
Actual provision	$ 21,221	$ 17,739	$ 15,638

The components of deferred income taxes as of December 31 are as follows:

	2022	2021
	(In thousands)	
Deferred tax assets:		
Reserve for receivables and inventory	$ 2,972	$ 2,532
Accrued compensation	2,209	2,641
Reserves and payables	2,340	3,101
Accrued post-retirement medical benefits	1,054	1,381
Net operating loss and credit carryforwards	2,827	2,260
Deferred compensation	1,139	1,041
Accrued qualified plan benefits	1,193	1,034
Accrued stock-based compensation	1,120	1,212
Deferred revenue	4,793	2,530
Operating lease liabilities	1,262	959
Research and development costs	2,625	—
Other	987	967
Total gross deferred tax assets	24,521	19,658
Less: valuation allowance	(2,690)	(2,169)
Total net deferred tax assets	21,831	17,489
Deferred tax liabilities:		
Property, plant and equipment	4,454	5,056
Intangible assets	7,247	8,475
Prepaids	238	413
Operating lease assets	1,258	949
Other	525	452
Total deferred tax liabilities	13,722	15,345
Net deferred tax assets	$ 8,109	$ 2,144

As of December 31, 2022, the Company had foreign net operating loss carryforwards of approximately $7.5 million, of which $7.4 million have an unlimited carryforward period. The Company also has $0.6 million in domestic tax credit carryforwards primarily related to state specific tax credits that the Company expects to fully utilize in future tax periods. The Company has recorded a full valuation allowance against certain deferred tax assets which are not likely to be realized. The valuation allowance relates primarily to foreign net operating loss carryforwards.

As a result of a law change included in the Tax Cuts and Jobs Act of 2017, the Company has capitalized certain research and development costs for tax purposes starting in 2022. Such capitalized costs are amortized over 5 years for costs incurred in the U.S. and 15 years for costs incurred outside the U.S. This law change had an immaterial impact on the Company's 2022 provision for income taxes related to costs incurred outside the U.S.

In general, it is the Company's practice and intention to reinvest earnings of its non-U.S. subsidiaries in those operations. As of December 31, 2022, the Company has not made a provision for incremental U.S. income taxes or additional foreign withholding taxes on approximately $15.6 million of such undistributed earnings, $13.8 million of which was previously subject to U.S. tax that is deemed indefinitely reinvested.

Changes in the Company's gross liability for unrecognized tax benefits, excluding interest and penalties, were as follows:

	2022	2021
	(In thousands)	
Balance at beginning of year	$ 1,172	$ 1,123
(Reductions) Increases in unrecognized tax benefits as a result of positions taken during the prior year	(89)	52
Increases in unrecognized tax benefits as a result of positions taken during the current year	231	230
Reductions to unrecognized tax benefits as a result of a lapse of the applicable statute of limitations	(275)	(233)
Balance at end of year	$ 1,039	$ 1,172

The Company does not expect a significant increase or decrease to the total amount of unrecognized tax benefits during the fiscal year ending December 31, 2022. To the extent these unrecognized tax benefits are ultimately recognized, they will impact the effective tax rate. The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction, and various state and foreign jurisdictions. The Company is no longer subject to U.S. federal income tax examinations by tax authorities for years prior to 2019, and, with few exceptions, state and local income tax examinations by tax authorities for years prior to 2018. The Company’s policy is to recognize interest related to unrecognized tax benefits as interest expense and penalties as operating expenses. Accrued interest was approximately $0.1 million at both December 31, 2022 and 2021 and there were no penalties accrued in either year.

Note 9 Industry Segment and Geographic Areas

The Company is an innovator, manufacturer, marketer and distributor of products incorporating flow measurement, control, quality and communication solutions, which comprise one reportable segment. The Company manages and evaluates its operations as one segment primarily due to similarities in the nature of the products, production processes, customers and methods of distribution.

Information regarding revenues by geographic area is as follows:

	2022	2021	2020
		(In thousands)	
Revenues:			
United States	$ 491,683	$ 432,188	$ 376,426
Foreign:			
Asia	14,995	16,736	6,437
Canada	12,768	11,867	10,406
Europe	28,718	30,359	18,255
Mexico	3,931	5,110	4,886
Middle East	9,286	7,176	6,114
Other	4,187	1,762	3,020
Total	$ 565,568	$ 505,198	$ 425,544

Information regarding assets by geographic area is as follows:

	2022	2021
	(In thousands)	
Long-lived assets:		
United States	$ 43,182	$ 46,092
Foreign:		
Europe	12,923	13,991
Mexico	17,437	17,967
Total	$ 73,542	$ 78,050

	2022	2021
	(In thousands)	
Total assets:		
United States	$ 466,697	$ 391,328
Foreign:		
Europe	$ 113,945	118,359
Mexico	$ 22,405	21,131
Total	$ 603,047	$ 530,818

Note 10 Unaudited: Quarterly Results of Operations, Common Stock Price and Dividends

The Company's Common Stock is listed on the New York Stock Exchange under the symbol BMI. Earnings per share are computed independently for each quarter. As such, the annual per share amount may not equal the sum of the quarterly amounts due to rounding. The Company currently anticipates continuing to pay cash dividends. Shareholders of record as of December 31, 2022 and 2021 totaled 560 and 557, respectively. Voting trusts and street name shareholders are counted as single shareholders for this purpose.

	Quarter ended			
	March 31	June 30	September 30	December 31
	(In thousands, except per share data)			
2022				
Net sales	$ 132,402	$ 137,833	$ 148,009	$ 147,324
Gross margin	50,723	54,760	57,522	56,965
Net earnings	14,360	16,664	17,933	17,539
Earnings per share:				
Basic	$ 0.49	$ 0.57	$ 0.61	$ 0.60
Diluted	0.49	0.57	0.61	0.60
Dividends declared	0.20	0.20	0.23	0.23
Stock price:				
High	$ 108.76	$ 102.67	$ 103.30	$ 120.54
Low	85.55	73.20	76.88	88.16
Quarter-end close	99.71	80.89	92.39	109.03
2021				
Net sales	$ 117,842	$ 122,869	$ 128,738	$ 135,748
Gross margin	49,362	50,102	51,184	54,835
Net earnings	13,781	13,972	15,855	17,276
Earnings per share:				
Basic	$ 0.47	$ 0.48	$ 0.54	$ 0.59
Diluted	0.47	0.48	0.54	0.59
Dividends declared	0.18	0.18	0.20	0.20
Stock price:				
High	$ 111.77	$ 100.01	$ 108.25	$ 112.36
Low	88.98	89.29	93.88	99.13
Quarter-end close	93.07	98.12	101.14	105.64

Note 11 Revenue Recognition

Revenue for sales of products and services is derived from contracts with customers. The products and services promised in contracts include the sale of utility water and flow instrumentation products, such as flow meters and radios, quality sensing equipment, software access and other ancillary services. Contracts generally state the terms of sale, including the description, quantity and price of each product or service. Since the customer typically agrees to a stated rate and price in the contract that does not vary over the life of the contract, the majority of the Company's contracts do not contain variable consideration. The Company establishes a provision for estimated warranty and returns as well as certain after sale costs as discussed in Note 1 “Summary of Significant Accounting Policies.”

The Company disaggregates revenue from contracts with customers into geographical regions and by the timing of when goods and services are transferred. The Company determined that disaggregating revenue into these categories depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by regional economic factors. Information regarding revenues disaggregated by geographic area is disclosed in Note 9 “Industry Segment and Geographic Areas.”

Information regarding revenues disaggregated by the timing of when goods and services are transferred is as follows for the years ended December 31:

	2022		2021	
	(In thousands)			
Revenue recognized over time	$ 35,695	6.3%	$ 28,524	5.6%
Revenue recognized at a point in time	529,873	93.7%	476,674	94.4%
Total	$ 565,568	100.0%	$ 505,198	100.0%

The Company performs its obligations under a contract by shipping products or performing services in exchange for consideration. The Company typically invoices its customers as soon as control of an asset is transferred and a receivable to the Company is established. The Company, however, recognizes a contract liability when a customer prepays for goods or services and the Company has not transferred control of the goods or services.

The Company's receivables and contract liabilities are as follows at the years ended December 31 are as follows:

	2022	2021
	(In thousands)	
Receivables	$ 76,651	$ 65,866
Contract liabilities	40,700	30,194

Contract liabilities are included in payables and other-long term liabilities on the Company’s Consolidated Balance Sheet. The balance of contract assets was immaterial as the Company did not have a significant amount of uninvoiced receivables at December 31, 2022 and 2021.

A performance obligation in a contract is a promise to transfer a distinct good or service to the customer. At contract inception, the Company assesses the products and services promised in its contracts with customers. The Company then identifies performance obligations to transfer distinct products or services to the customer. In order to identify performance obligations, the Company considers all of the products or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices.

The Company's performance obligations are satisfied at a point in time or over time as work progresses. The majority of the Company's revenue recognized at a point in time is for the sale of utility and flow instrumentation products. Revenue from these contracts is recognized when the customer is able to direct the use of and obtain substantially all of the benefits from the product which generally coincides with title transfer during the shipping process. The majority of the Company's revenue that is recognized over time relates to the BEACON software as a service (“SaaS”).

The Company records revenue for BEACON SaaS revenue over time as the customer benefits from the use of the Company's software. Control of an asset is therefore transferred to the customer over time and the Company will recognize revenue for BEACON SaaS as service units are used by the customer.

Revenue is recorded for various ancillary services, such as project management and training, over time as the customer benefits from the services provided. The majority of this revenue will be recognized equally throughout the contract period as the customer receives benefits from the Company's promise to provide such services. If the service is not provided evenly over the contract period, revenue will be recognized by the associated input/output method that best measures the progress towards contract completion.

As of December 31, 2022, the Company had certain contracts with unsatisfied performance obligations. For contracts recorded as long-term liabilities, $40.7 million was the aggregate amount of the transaction price allocated to performance obligations that were unsatisfied or partially unsatisfied as of the end of the reporting period. The Company estimates that revenue recognized from satisfying those performance obligations will be approximately $9.3 million in 2023, $5.3 million in 2024, $4.7 million in 2025, $4.1 million in 2026, $3.6 million in 2027 and $13.7 million thereafter.

The Company also has contracts that include both the sale and installation of flow meters as performance obligations. In those cases, the Company records revenue for installed flow meters at the point in time when the flow meters have been accepted by the customer. The customer cannot control the use of and obtain substantially all of the benefits from the equipment until the customer has accepted the installed product. Therefore, for both the flow meter and the related installation, the Company has concluded that control is transferred to the customer upon customer acceptance of the installed flow meter. In addition, the Company has a variety of ancillary revenue streams which are minor. The types and composition of the Company's revenue streams did not materially change during the year ended December 31, 2022.

The Company also has contracts that include both the sale and installation of flow meters as performance obligations. In those cases, the Company records revenue for installed flow meters at the point in time when the flow meters have been accepted by the customer. The customer cannot control the use of and obtain substantially all of the benefits from the equipment until the customer has accepted the installed product. Therefore, for both the flow meter and the related installation, the Company has concluded that control is transferred to the customer upon customer acceptance of the installed flow meter. In addition, the Company has a variety of ancillary revenue streams which are minor. The types and composition of the Company's revenue streams did not materially change during the year ended December 31, 2022.

The transaction price for a contract is allocated to each distinct performance obligation and recognized as revenue when, or as, each performance obligation is satisfied. 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 in a contract. The primary method used to estimate standalone selling price is the observable price when the good or service is sold separately in similar circumstances and to similar customers. If standalone selling price is not directly observable, it is estimated using either a market adjustment or cost plus margin approach.

The recording of assets recognized from the costs to obtain and fulfill customer contracts primarily relate to the deferral of sales commissions on the Company's BEACON software arrangements. The Company's costs incurred to obtain or fulfill a contract with a customer are amortized over the period of benefit of the related revenue. The Company expenses any costs incurred immediately when the amortization period would be one year or less. These costs are recorded within selling, engineering and administration expenses.

For the year ended December 31, 2022, the Company elected the following practical expedients:

In accordance with Subtopic 340-40 "Other Assets and Deferred Costs - Contracts with Customers," the Company elected to expense the incremental costs of obtaining a contract when the amortization period for such contracts would have been one year or less. The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less, and contracts for which it has the right to invoice for services performed.

The Company has made an accounting policy election to exclude all taxes by governmental authorities from the measurement of the transaction price.

Note 12 Leases

The Company rents facilities, equipment and vehicles under operating leases, some of which contain renewal options. Upon inception of a rent agreement, the Company determines whether the arrangement contains a lease based on the unique conditions present. Leases that have a term over a year are recognized on the balance sheet as right-of-use assets and lease liabilities. Right-of-use assets are included in other assets on the Company's Consolidated Balance Sheet. Lease liabilities are included in other current liabilities and other long-term liabilities on the Company's Consolidated Balance Sheet. Information regarding the Company's right-of-use assets and the corresponding lease liabilities at the years ended December 31 is as follows:

	December 31, 2022	December 31, 2021
	(In thousands)	
Right-of-use assets	$ 6,533	$ 5,877
Lease liabilities	6,792	6,177

The Company's operating lease agreements have lease and non-lease components that require payments for common area maintenance, property taxes and insurance. The Company has elected to account for both lease and non-lease components as one lease component. The fixed and in-substance fixed consideration in the Company's rent agreements constitute operating lease expense that is included in the capitalized right-of-use assets and lease liabilities. The variable and short-term lease expense payments are not included in the present value of the right-of use-assets and lease liabilities on the Consolidated Balance Sheet. The Company's rent expense for the years ended December 31 is as follows:

	2022	2021
	(In thousands)	
Operating lease expense	$ 3,447	$ 2,995
Variable and short-term lease expense	76	153
Rent expense	$ 3,523	$ 3,148

The Company records right-of-use assets and lease liabilities based upon the present value of lease payments over the expected lease term. The Company's lease agreements typically do not have implicit interest rates that are readily determinable. As a result, the Company utilizes an incremental borrowing rate that would be incurred to borrow on a collateralized basis over a similar term in a comparable economic environment. As of December 31, 2022 and 2021, the remaining lease term on the Company's leases was 5.3 years and 5.6 years, respectively. As of December 31, 2022 and 2021, the discount rate was 5.0%. The future minimum lease payments to be paid under operating leases are as follows:

	December 31, 2022 (In thousands)
2023	$ 2,399
2024	2,012
2025	1,810
2026	723
2027	112
Thereafter	747
Total future lease payments	7,803
Present value adjustment	(1,011)
Present value of future lease payments	$ 6,792

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

In accordance with Rule 13a-15(b) of the Securities Exchange Act of 1934 (the "Exchange Act"), as amended, the Company's management evaluated, with the participation of the Company's Chairman, President and Chief Executive Officer and the Company's Senior Vice President - Chief Financial Officer, the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the year ended December 31, 2022. Based upon their evaluation of these disclosure controls and procedures, the Company's Chairman, President and Chief Executive Officer and the Company's Senior Vice President - Chief Financial Officer concluded that, as of the date of such evaluation, the Company's disclosure controls and procedures were effective.

Changes in Internal Controls over Financial Reporting

There was no change in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Annual Report on Internal Control over Financial Reporting

The report of management required under this Item 9A is contained in Item 8 of this 2022 Annual Report on Form 10-K under the heading "Management's Annual Report on Internal Control over Financial Reporting."

Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting

The attestation report required under this Item 9A is contained in Item 8 of this 2022 Annual Report on Form 10-K under the heading "Report of Independent Registered Public Accounting Firm."

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

Information required by this Item with respect to directors is included under the headings “Nomination and Election of Directors” and in the Company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2023 and is incorporated herein by reference.

Information concerning the executive officers of the Company is included in Part I, Item 1 of this 2022 Annual Report on Form 10-K under the heading “Information about the Company’s Executive Officers.”

The Company has adopted the Badger Meter, Inc. Code of Conduct for Financial Executives that applies to the Company's Chairman, President and Chief Executive Officer, the Company's Senior Vice President - Chief Financial Officer and other persons performing similar functions. A copy of the Badger Meter, Inc. Code of Conduct for Financial Executives is posted on the Company's website at www.badgermeter.com. The Badger Meter, Inc. Code of Conduct for Financial Executives is also available in print to any shareholder who requests it in writing from the Secretary of the Company. The Company satisfies the disclosure requirements under Item 5.05 of Form 8-K regarding amendments to, or waivers from, the Badger Meter, Inc. Code of Conduct for Financial Executives by posting such information on the Company's website at www.badgermeter.com.

The Company is not including the information contained on its website as part of, or incorporating it by reference into, this 2022 Annual Report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item is included under the headings “Executive Compensation,” “Compensation Committee Interlocks and Insider Participation”, “CEO Pay Ratio” and "Pay Versus Performance" in the Company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2023, and is incorporated herein by reference; provided, however, that the information under the subsection “Executive Compensation - Compensation Committee Report” is not deemed to be “soliciting material” or to be “filed” with the Securities and Exchange Commission or subject to Regulation 14A or 14C under the Exchange Act or to be the liabilities of Section 18 of the Exchange Act, and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent it is specifically incorporated by reference into such a filing.

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

Information required by this Item is included under the headings “Stock Ownership of Beneficial Owners,” “Stock Ownership of Management” and “Equity Compensation Plan Information” in the Company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2023 and is incorporated herein by reference.

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

Information required by this Item is included under the headings “Related Person Transactions” and “Nomination and Election of Directors - Independence, Committees, Meetings and Attendance” in the Company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2023, and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item is included under the heading “Principal Accounting Firm Fees” in the Company's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2023, and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this Annual Report on Form 10-K:

1. Financial Statements. See the financial statements included in Part II, Item 8 “Financial Statements and Data” in this 2022 Annual Report on Form 10-K, under the headings “Consolidated Balance Sheets,” “Consolidated Statements of Operations,” “Consolidated Statements of Comprehensive Income,” “Consolidated Statements of Cash Flows” and “Consolidated Statements of Shareholders' Equity.”
2. Financial Statement Schedules. Financial statement schedules are omitted because the information required in these schedules is included in the Notes to Consolidated Financial Statements.
3. Exhibits. The exhibits listed in the following Exhibit Index are filed as part of this 2022 Annual Report on Form 10-K that is incorporated herein by reference.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 22, 2023.

BADGER METER, INC.

By: /s/ Kenneth C. Bockhorst
Kenneth C. Bockhorst
Chairman, President and Chief
Executive Officer

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 indicated on February 22, 2023.

Name	Title
/s/ Kenneth C. Bockhorst Kenneth C. Bockhorst	Chairman, President and Chief Executive Officer and Director (Principal executive officer)
/s/ Robert A. Wrocklage Robert A. Wrocklage	Senior Vice President — Chief Financial Officer (Principal financial officer)
/s/ Daniel R. Weltzien Daniel R. Weltzien	Vice President — Controller (Principal accounting officer)
/s/ Todd A. Adams Todd A. Adams	Director
/s/ Henry F. Brooks Henry F. Brooks	Director
/s/ Melanie K. Cook Melanie Cook	Director
/s/ Gale E. Klappa Gale E. Klappa	Director
/s/ Xia Liu Xia Liu	Director
/s/ James W. McGill James W. McGill	Director
/s/ Tessa M. Myers Tessa M. Myers	Director
/s/ James F. Stern James F. Stern	Director
/s/ Glen E. Tellock Glen E. Tellock	Director

BADGER METER, INC.

RECONCILIATION OF NON-GAAP PERFORMANCE MEASURES TO GAAP PERFORMANCE MEASURES
(in thousands, except share and earnings per share data)

	2022	2021	2020	2019	2018
Net earnings (GAAP measure)	$66,496	$60,884	$49,343	$47,177	$27,790
Executive retirement charges, net of tax	-	-	-	-	2,357
Pension termination settlement charge, net of tax	-	-	-	-	14,786
Adjusted net earnings	$66,496	$60,884	$49,343	$47,177	$44,933

	2022	2021	2020	2019	2018
Net earnings (GAAP measure)	$66,496	$60,884	$49,343	$47,177	$27,790
Interest (income) expense, net	(552)	(20)	30	253	1,157
Provision for income taxes	21,221	17,739	15,638	14,430	8,062
Depreciation	11,090	11,291	12,253	11,569	11,354
Amortization	15,151	16,571	12,963	12,577	12,961
Executive retirement charges	-	-	-	-	2,575
Pension termination settlement charge	-	-	-	-	19,900
Adjusted EBITDA	$113,406	$106,465	$90,227	$86,006	$83,799
Net Sales	$565,568	$505,198	$425,544	$424,625	$433,732
Adjusted EBITDA %	20.1%	21.1%	21.2%	20.3%	19.3%

	2022	2021	2020	2019	2018
Diluted earnings per share (GAAP measure)	$2.26	$2.08	$1.69	$1.61	$0.95
Executive retirement charges, net of tax	-	-	-	-	0.09
Pension termination settlement charge, net of tax	-	-	-	-	0.50
Adjusted diluted earnings per share	$2.26	$2.08	$1.69	$1.61	$1.54

	2022	2021	2020	2019	2018
Cash provided by operations (GAAP measure)	$82,451	$87,510	$89,578	$80,714	$60,350
Capital expenditures	(5,891)	(6,746)	(9,059)	(7,496)	(8,643)
Free cash flow	$76,560	$80,764	$80,519	$73,218	$51,707

	2022	2021	2020	2019	2018
Free cash flow	$76,560	$80,764	$80,519	$73,218	$51,707
Adjusted net earnings	$66,496	$60,884	$49,343	$47,177	$44,933
Free cash flow conversion	115%	133%	163%	155%	115%

CORPORATE INFORMATION

BOARD OF DIRECTORS

Todd A. Adams[2]
Chairman, President and Chief Executive Officer, Zurn Elkay Water Solutions

Kenneth C. Bockhorst
Chairman, President and Chief Executive Officer, Badger Meter, Inc.

Henry F. Brooks[2]
President – Power and Controls, Collins Aerospace

Melanie K. Cook[1]
Retired Executive, GE Appliances

Gale E. Klappa (Lead Director)[2, 3]
Executive Chairman, WEC Energy Group

Xia Liu[1]
Executive Vice President and Chief Financial Officer, WEC Energy Group

James W. McGill[2]
Retired Executive, Eaton Corporation

Tessa M. Meyers[1,3]
Senior Vice President – Intelligent Devices, Rockwell Automation

James F. Stern[1, 3]
Executive Vice President, General Counsel and Secretary, A. O. Smith Corporation

Glen E. Tellock[1,3]
Retired Chief Executive Officer, Lakeside Foods

Committees of the Board:
1. Audit and Compliance
2. Compensation and Human Resources
3. Corporate Governance and Sustainability

EXECUTIVE OFFICERS

Kenneth C. Bockhorst
Chairman, President and Chief Executive Officer

Karen M. Bauer
Vice President – Investor Relations, Corporate Strategy and Treasurer

Fred J. Begale
Vice President – Engineering

William R.A. Bergum
Vice President – General Counsel and Secretary

Sheryl L. Hopkins
Vice President – Human Resources

Richard Htwe
Vice President – Global Operations

Lars Bo Kristensen
Vice President – Global Flow Instrumentation, and International Water

Kimberly K. Stoll
Vice President – Sales and Marketing

Matthew L. Stuyvenberg
Vice President – Software and Water Quality

Daniel R. Weltzien
Vice President – Controller

Robert A. Wrocklage
Senior Vice President – Chief Financial Officer

OTHER

Badger Meter, Inc. Headquarters
4545 West Brown Deer Road
P.O. Box 245036
Milwaukee, Wisconsin 53224-9536
(414) 355-0400
www.badgermeter.com

Independent Registered Public Accounting Firm
Ernst & Young, LLP, Milwaukee, Wisconsin

Transfer Agent
American Stock Transfer & Trust Company, LLC
New York, New York
(877) 248-6415
www.amstock.com

Listing of Common Stock
New York Stock Exchange; Symbol – BMI

BMI LISTED NYSE

Form 10-K Report/Shareholder Information
The 2022 Form 10-K annual report (without exhibits) as filed with the Securities and Exchange Commission, is included in this report. Shareholder information, including news releases and Form 10-K, are available on the company's website: www.badgermeter.com.

Forward Looking Statements
Any forward looking statements contained in this document are subject to various risks and uncertainties, the most important of which are outlined in the Form 10-K.

Trademarks
Trademarks appearing in this document are the property of their respective entities.

Investor Relations
Financial analysts and investors should direct inquires to:
Karen Bauer
Vice President – Investor Relations, Corporate Strategy and Treasurer
kbauer@badgermeter.com
(414) 371-7276

Badger Meter

4545 West Brown Deer Road
P.O. Box 245036
Milwaukee, Wisconsin 53224
www.badgermeter.com