

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

FORM 10-K

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 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 number 1-6770

MUELLER INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

Delaware 25-0790410
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

150 Schilling Boulevard Suite 100
Collierville Tennessee 38017
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(901) 753-3200**

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 Par Value	MLI	New York Stock Exchange

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

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

Indicate by a 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, or a smaller reporting 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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. 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. Yes No

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). Yes No

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

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 was \$2,939,888,027.

The number of shares of the Registrant's common stock outstanding as of February 23, 2023 was 57,024,726 excluding 23,158,278 treasury shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following document are incorporated by reference into this Report: Registrant's Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, scheduled to be mailed on or about March 23, 2023 (Part III).

MUELLER INDUSTRIES, INC.

As used in this report, the terms “we,” “us,” “our,” “Company,” “Mueller,” and “Registrant” mean Mueller Industries, Inc. and its consolidated subsidiaries taken as a whole, unless the context indicates otherwise.

TABLE OF CONTENTS

	<u>Page</u>	
Part I		
Item 1.	Business	3
Item 1A.	Risk Factors	6
Item 1B.	Unresolved Staff Comments	9
Item 2.	Properties	10
Item 3.	Legal Proceedings	11
Item 4.	Mine Safety Disclosures	11
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	12
Item 6.	Reserved	14
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	14
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	14
Item 8.	Financial Statements and Supplementary Data	14
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	14
Item 9A.	Controls and Procedures	15
Item 9B.	Other Information	17
Part III		
Item 10.	Directors, Executive Officers and Corporate Governance	17
Item 11.	Executive Compensation	17
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	17
Item 13.	Certain Relationships and Related Transactions, and Director Independence	18
Item 14.	Principal Accountant Fees and Services	18
Part IV		
Item 15.	Exhibits, Financial Statement Schedules	19
Item 16.	Form 10-K Summary	20
Signatures		21
Index to Consolidated Financial Statements		F-1

PART I

ITEM 1. BUSINESS

Introduction

Mueller Industries, Inc. (the Company) is a leading manufacturer of copper, brass, aluminum, and plastic products. The range of products we manufacture is broad: copper tube and fittings; line sets; PEX plastic tube and fittings; steel nipples; brass rod, bar, and shapes; aluminum and brass forgings; aluminum impact extrusions; compressed gas valves; refrigeration valves and fittings; pressure vessels; coaxial heat exchangers; and insulated flexible duct systems. We also resell brass and plastic plumbing valves, plastic fittings, malleable iron fittings, faucets, and plumbing specialty products. Our operations are located throughout the United States and in Canada, Mexico, Great Britain, South Korea, the Middle East, and China. The Company was incorporated in Delaware on October 3, 1990.

Each of our reportable segments is composed of certain operating segments that are aggregated primarily by the nature of products offered. These are the Piping Systems, Industrial Metals, and Climate segments.

Certain administrative expenses and expenses related primarily to retiree benefits at inactive operations are combined into the Corporate and Eliminations classification.

Financial information concerning segments and geographic information appears under [“Note 3 – Segment Information”](#) in the Notes to Consolidated Financial Statements, which is incorporated herein by reference.

New housing starts and commercial construction are important determinants of our sales to the heating, ventilation, and air-conditioning (HVAC), refrigeration, and plumbing markets because the principal end use of a significant portion of our products is in the construction of single and multi-family housing and commercial buildings. Repairs and remodeling projects are also important drivers of underlying demand for these products. In addition, our products are used in various transportation, automotive, and industrial applications.

Piping Systems Segment

The Piping Systems segment is composed of Domestic Piping Systems Group, Great Lakes Copper (Great Lakes), Heatlink Group European Operations, Trading Group, Jungwoo Metal Ind. Co., LTD (Jungwoo-Mueller), and Mueller Middle East BSC (Mueller Middle East).

The Domestic Piping Systems Group manufactures and distributes copper tube, fittings, line sets, and pipe nipples, and resells steel pipe, brass and plastic plumbing valves, malleable iron fittings and faucets, and plumbing specialties. These products are manufactured in the U.S., sold in the U.S., and exported to markets worldwide. Our copper tube ranges in size from 1/8 inch to 8 1/8 inch diameter and is sold in various straight lengths and coils. We are a market leader in the plumbing, air-conditioning and refrigeration service tube markets and we also supply a variety of water tube in straight lengths and coils used for plumbing applications in virtually every type of construction project. Our copper fittings, line sets, and related components are produced for the plumbing and heating industry to be used in water distribution systems, heating systems, air-conditioning, and refrigeration applications, and drainage, waste, and vent systems.

Great Lakes manufactures copper tube and line sets in Canada and sells the products primarily in the U.S. and Canada. Heatlink Group manufactures a complete line of products for PEX plumbing and radiant systems in Canada and sells these products in Canada and the U.S. European Operations manufactures copper tube in the United Kingdom, which is sold throughout Europe. The Trading Group manufactures steel pipe nipples and resells brass and plastic plumbing valves, malleable iron fittings, faucets, and plumbing specialty products to plumbing wholesalers, distributors to the manufactured housing and recreational vehicle industries, and building materials retailers in North America. Jungwoo-Mueller, our South Korean joint venture, manufactures copper-based joining products that are sold worldwide. Mueller Middle East, our Bahraini joint venture, manufactures copper tube and serves markets in the Middle East and Northern Africa.

We acquired Die-Mold Tool Limited (Die-Mold) on March 31, 2018 and Kessler Sales and Distribution on August 2, 2020, and increased our equity interest in Mueller Middle East to 55 percent on December 7, 2021. These acquisitions complement our existing businesses in the Piping Systems segment.

We disposed of Die-Mold on September 2, 2021 in a contribution agreement with a limited liability company operating in the retail distribution business. Die-Mold manufactured PEX and other plumbing-related fittings and plastic injection tooling in Canada and sold these products in Canada and the U.S.

The segment sells products to wholesalers in the plumbing and refrigeration markets, distributors to the manufactured housing and recreational vehicle industries, building material retailers, and air-conditioning original equipment manufacturers (OEMs). It markets primarily through its own sales and distribution organization, which maintains sales offices and distribution centers throughout the United States and in Canada, Mexico, Great Britain, South Korea, and the Middle East. Additionally, products are sold and marketed through a complement of agents, which, when combined with our sales organization, provide the Company broad geographic market representation.

We compete with various companies, depending on the product line. In the U.S. copper tube business, domestic competition includes Cerro Flow Products LLC, and Cambridge-Lee Industries LLC (a subsidiary of Industrias Unidas S.A. de C.V.), as well as many actual and potential foreign competitors. In the European copper tube business, we compete with several European-based manufacturers of copper tube as well as other foreign-based manufacturers. In the Canadian copper tube business, our competitors include foreign-based manufacturers. In the copper fittings market, our domestic competitors include Elkhart Products Company (a subsidiary of Aalberts Industries N.V.) and NIBCO, Inc. We also compete with several foreign manufacturers. Additionally, our copper tube and fittings businesses compete with a large number of manufacturers of substitute products made from other metals and plastic.

Industrial Metals Segment

The Industrial Metals segment is composed of Brass Rod, Impacts & Micro Gauge, Brass Value-Added Products, and Precision Tube.

Brass Rod manufactures a broad range of brass rod and shapes in a variety of standard and lead-free alloys sold primarily to OEMs in the industrial, HVAC, plumbing, and refrigeration industries. We extrude brass, bronze, and copper alloy rod in sizes ranging from 3/8 inches to 4 inches in diameter. These alloys are used in applications that require a high degree of machinability, wear and corrosion resistance, as well as electrical conductivity.

Impacts & Micro Gauge manufactures cold-form aluminum and copper products for automotive, industrial, and recreational components, as well as high-volume machining of aluminum, steel, brass, and cast iron impacts and castings for automotive applications. It sells its products primarily to OEMs in the U.S., serving the automotive, military ordnance, aerospace, and general manufacturing industries. Typical applications for impacts are high strength ordnance, high-conductivity electrical components, builders' hardware, hydraulic systems, automotive parts, and other uses where toughness must be combined with varying complexities of design and finish.

Brass Value-Added Products manufactures brass and aluminum forgings; brass, aluminum, and stainless steel valves; fluid control solutions; and gas train assemblies. Our forgings are used in a wide variety of products, including automotive components, brass fittings, industrial machinery, valve bodies, gear blanks, and computer hardware. Our valves, fluid control systems, and gas train assemblies are used in the compressed gas, pharmaceutical, construction, and gas appliance markets.

Precision Tube manufactures specialty copper, copper alloy, and aluminum tube.

We disposed of our Copper Bar business on October 25, 2021.

The segment sells its products primarily to domestic OEMs in the industrial, construction, HVAC, plumbing, and refrigeration markets. The total amount of order backlog for the Industrial Metals Segment as of December 31, 2022 was not significant.

Competitors, primarily in the brass rod market, include Wieland Chase, LLC, a subsidiary of Wieland-Werke AG, and several foreign manufacturers.

Climate Segment

The Climate segment is composed of Refrigeration Products, Westermeyer Industries, Inc. (Westermeyer), Turbotec Products, Inc. (Turbotec), Flex Duct, and Linesets, Inc.

Refrigeration Products designs and manufactures valves, protection devices, and brass fittings for various OEMs in the commercial HVAC and refrigeration markets. Westermeyer designs, manufactures, and distributes high-pressure components

and accessories for the air-conditioning and refrigeration markets. Turbotec manufactures coaxial heat exchangers and twisted tubes for the HVAC, geothermal, refrigeration, swimming pool heat pump, marine, ice machine, commercial boiler, and heat reclamation markets. Flex Duct, which consists of ATCO Rubber Products, Inc. (ATCO) and H&C Flex, manufactures and distributes insulated HVAC flexible duct systems.

We acquired ATCO on July 2, 2018, Shoals Tubular, Inc. (Shoals) on January 17, 2020, and H&C Flex on January 29, 2021. These acquisitions complement our existing businesses in the Climate segment.

We disposed of Fabricated Tube Products and Shoals on July 28, 2021. Fabricated Tube Products manufactured tubular assemblies and fabrications for OEMs in the HVAC and refrigeration markets; Shoals manufactured brazed manifolds, headers, and distributor assemblies.

The segment sells predominantly to wholesalers and OEMs in the HVAC and refrigeration markets in the U.S. The total amount of order backlog for the Climate segment as of December 31, 2022 was not significant.

Human Capital Resources

As of December 31, 2022, the Company employed approximately 5,137 employees, of which approximately 1,635 were represented by various unions. Those union contracts will expire as follows:

<u>Location</u>	<u>Expiration Date</u>
Port Huron, Michigan (Local 218 IAM)	May 3, 2026
Wynne, Arkansas (MCTP)	November 30, 2024
Port Huron, Michigan (Local 44 UAW)	May 4, 2025
Wynne, Arkansas (B&K LLC)	August 5, 2024
Fulton, Mississippi	October 2, 2025
University Park, Illinois	June 20, 2024
Woodbridge, New Jersey	April 30, 2023

The union agreements at the Company's U.K. and Mexico operations are renewed annually. The Company expects to renew its union contracts without material disruption to its operations. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing, and integrating our existing and additional employees. The principal purposes of our equity incentive plans are to attract, retain, and motivate selected employees and directors through the granting of stock-based compensation awards. The health and safety of our employees is our high priority and in particular, in response to the COVID-19 pandemic. We have taken additional measures to limit possible infections at the workplace.

Furthermore, we expect that our employees and members of our Board of Directors will conduct themselves ethically and properly as a matter of course and comply with the guidelines set forth on our Code of Business Conduct and Ethics.

Raw Material and Energy Availability

A substantial portion of our base metal requirements (primarily copper) is normally obtained through short-term supply contracts with competitive pricing provisions (for cathode) and the open market (for scrap). Other raw materials used in the production of brass, including brass scrap, zinc, tin, and lead are obtained from zinc and lead producers, open-market dealers, and customers with brass process scrap. Raw materials used in the fabrication of aluminum and plastic products are purchased in the open market from major producers.

Adequate supplies of raw material have historically been available to us from primary producers, metal brokers, and scrap dealers. Sufficient energy in the form of natural gas, fuel oils, and electricity is available to operate our production facilities. While temporary shortages of raw material and fuels may occur occasionally, to date they have not materially hampered our operations.

Our copper tube facilities can accommodate both refined copper and certain grades of copper scrap as the primary feedstock. The Company has commitments from refined copper producers for a portion of its metal requirements for

2023. Adequate quantities of copper are currently available. While we will continue to react to market developments, resulting pricing volatility or supply disruptions, if any, could nonetheless adversely affect the Company.

Environmental Proceedings

Compliance with environmental laws and regulations is a matter of high priority for the Company. Mueller's provision for environmental matters related to all properties was \$1.4 million for 2022, \$5.0 million for 2021, and \$4.2 million for 2020. The reserve for environmental matters was \$20.5 million at December 31, 2022 and \$27.4 million at December 25, 2021. Environmental expenses related to non-operating properties are presented below operating income in the Consolidated Statements of Income, and costs related to operating properties are included in cost of goods sold. We currently anticipate that we will need to make expenditures of approximately \$6.8 million for compliance activities related to existing environmental matters during the next three fiscal years.

For a description of material pending environmental proceedings, see "[Note 14 – Commitments and Contingencies](#)" in the Notes to Consolidated Financial Statements, which is incorporated herein by reference.

Other Business Factors

Our business is not materially dependent on patents, trademarks, licenses, franchises, or concessions held. In addition, expenditures for Company-sponsored research and development activities were not material during 2022, 2021, or 2020. No material portion of our business involves governmental contracts.

Seasonality

Our net sales typically moderate in the fourth quarter as a result of the seasonal construction markets and customer shutdowns for holidays, year-end plant maintenance, and physical inventory counts. Also, our working capital typically increases in the first quarter in preparation for the construction season.

SEC Filings

We make available through our internet website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). To retrieve any of this information, you may access our internet home page at www.muellerindustries.com, select Investors, and then select SEC Filings.

ITEM 1A. RISK FACTORS

The Company is exposed to risk as it operates its businesses. To provide a framework to understand our operating environment, we are providing a brief explanation of the more significant risks associated with our businesses. Although we have tried to identify and discuss key risk factors, others could emerge in the future. These risk factors should be considered carefully when evaluating the Company and its businesses.

Risks Related to the Economy and Other External Factors

Increases in costs and the availability of energy and raw materials used in our products could impact our cost of goods sold and our distribution expenses, which could have a material adverse impact on our operating margins.

Both the costs of raw materials used in our manufactured products (copper, brass, zinc, aluminum, and plastic resins) and energy costs (electricity, natural gas and fuel) have been volatile during the last several years, which has resulted in changes in production and distribution costs. For example, recent and pending climate change regulation and initiatives on the state, regional, federal, and international levels that have focused on reducing greenhouse gas (GHG) emissions from the energy and utility sectors may affect energy availability and costs in the near future. While we typically attempt to pass costs through to our customers or to modify or adapt our activities to mitigate the impact of increases, we may not be able to do so successfully. Failure to fully pass increases to our customers or to modify or adapt our activities to mitigate the impact could have a material adverse impact on our operating margins. Additionally, if we are for any reason unable to obtain raw materials or energy, our ability to manufacture our products would be impacted, which could have a material adverse impact on our operating margins.

Economic conditions in the housing and commercial construction industries, as well as inflation and changes in interest rates, could have a material adverse impact on our business, financial condition, and results of operations.

Our business is sensitive to changes in general economic conditions, particularly in the housing and commercial construction industries. Prices for our products are affected by overall supply and demand in the market for our products and for our competitors' products. In particular, market prices of building products historically have been volatile and cyclical, and we may be unable to control the timing and extent of pricing changes for our products. Prolonged periods of weak demand or excess supply in any of our businesses could negatively affect our revenues and margins and could result in a material adverse impact on our business, financial condition, and results of operations.

The markets that we serve, including, in particular, the housing and commercial construction industries, are significantly affected by movements in interest rates and the availability of credit. Significantly higher interest rates could have a material adverse effect on our business, financial condition, and results of operations.

Our businesses are also affected by a variety of other factors beyond our control, including, but not limited to, employment levels, foreign currency exchange rates, consumer confidence, and unforeseen inflationary pressures. In the last year, inflationary pressures have increased. Although we generally attempt to pass along higher raw material costs to our customers in the form of price increases, there can be a delay between an increase in our raw material costs and our ability to raise the prices of our products. Additionally, we may not be able to increase the prices of our products due to other factors including competitive pricing pressure. If the Company is unable to offset significant cost increases through customer price increases, productivity improvements, cost reduction or other programs, Mueller's business, operating results or financial condition could be materially adversely affected.

Since we operate in a variety of geographic areas, our businesses are subject to the economic conditions in each such area. General economic downturns or localized downturns in the regions where we have operations could have a material adverse effect on our business, financial condition, and results of operations. Additionally, the impact of economic conditions on the operations or liquidity of any party with which we conduct our business, including our suppliers and customers, may adversely impact our business.

Our exposure to exchange rate fluctuations on cross border transactions and the translation of local currency results into U.S. dollars could have an adverse impact on our results of operations or financial position.

We conduct our business through subsidiaries in several different countries and export our products to many countries. Fluctuations in currency exchange rates could have a significant impact on the competitiveness of our products as well as the reported results of our operations, which are presented in U.S. dollars. A portion of our products are manufactured in or acquired from suppliers located in lower cost regions. Cross border transactions, both with external parties and intercompany relationships, result in increased exposure to foreign exchange fluctuations. The strengthening of the U.S. dollar could expose our U.S. based businesses to competitive threats from lower cost producers in other countries such as China. Lastly, our sales are translated into U.S. dollars for reporting purposes. The strengthening of the U.S. dollar could result in unfavorable translation effects when the results of foreign operations are translated into U.S. dollars. Accordingly, significant changes in exchange rates, particularly the British pound sterling, Mexican peso, Canadian dollar, South Korean won, and Bahraini dinar, could have an adverse impact on our results of operations or financial position.

Market and Competition Risks

Competitive conditions, including the impact of imports and substitute products and technologies, could have a material adverse effect on the demand for our products as well as our margins and profitability.

The markets we serve are competitive across all product lines. Some consolidation of customers has occurred and may continue, which could shift buying power to customers. In some cases, customers have moved production to low-cost countries such as China, or sourced components from there, which has reduced demand in North America for some of the products we manufacture. These conditions could have a material adverse impact on our ability to maintain margins and profitability. The potential threat of imports and substitute products is based upon many factors, including raw material prices, distribution costs, foreign exchange rates, production costs, and the development of emerging technologies and applications. The end use of alternative import and/or substitute products could have a material adverse effect on our business, financial condition, and results of operations. Likewise, the development of new technologies and applications could result in lower demand for our products and have a material adverse effect on our business.

Litigation and Regulatory Risks

We are subject to claims, litigation, and regulatory proceedings that could have a material adverse effect on us.

We are, from time-to-time, involved in various claims, litigation matters, and regulatory proceedings. These matters may include contract disputes, personal injury claims, environmental claims and administrative actions, Occupational Safety and Health Administration inspections or proceedings, other tort claims, employment and tax matters and other litigation including class actions that arise in the ordinary course of our business. Although we intend to defend these matters vigorously, we cannot predict with certainty the outcome or effect of any claim or other litigation matter, and there can be no assurance as to the ultimate outcome of any litigation or regulatory proceeding. Litigation and regulatory proceedings may have a material adverse effect on us because of potential adverse outcomes, defense costs, the diversion of our management's resources, availability of insurance coverage and other factors.

We are subject to environmental, health, and safety laws and regulations and future compliance may have a material adverse effect on our results of operations, financial position, or cash flows.

The nature of our operations exposes us to the risk of liabilities and claims with respect to environmental, health, and safety matters. While we have established accruals intended to cover the cost of environmental remediation at contaminated sites, the actual cost is difficult to determine and may exceed our estimated reserves. Further, changes to, or more rigorous enforcement or stringent interpretation of environmental or health and safety laws could require significant incremental costs to maintain compliance. Recent and pending climate change regulation and initiatives on the state, regional, federal, and international levels may require certain of our facilities to reduce GHG emissions. While not reasonably estimable at this time, this could require capital expenditures for environmental control facilities and/or the purchase of GHG emissions credits in the coming years. In addition, with respect to environmental matters, future claims may be asserted against us for, among other things, past acts or omissions at locations operated by predecessor entities, or alleging damage or injury or seeking other relief in connection with environmental matters associated with our operations. Future liabilities, claims, and compliance costs may have a material adverse effect on us because of potential adverse outcomes, defense costs, diversion of our resources, availability of insurance coverage, and other factors. The overall impact of these requirements on our operations could increase our costs and diminish our ability to compete with products that are produced in countries without such rigorous standards; the long run impact could negatively impact our results and have a material adverse effect on our business.

Operational Risks

A strike, other work stoppage or business interruption, or our inability to renew collective bargaining agreements on favorable terms, could impact our cost structure and our ability to operate our facilities and produce our products, which could have an adverse effect on our results of operations.

We have a number of employees who are covered by collective bargaining or similar agreements. If we are unable to negotiate acceptable new agreements with the unions representing our employees upon expiration of existing contracts, we could experience strikes or other work stoppages. Strikes or other work stoppages could cause a significant disruption of operations at our facilities, which could have an adverse impact on us. New or renewal agreements with unions representing our employees could call for higher wages or benefits paid to union members, which would increase our operating costs and could adversely affect our profitability. Higher costs and/or limitations on our ability to operate our facilities and manufacture our products resulting from increased labor costs, strikes or other work stoppages could have a material adverse effect on our results of operations.

In addition, unexpected interruptions in our operations or those of our customers or suppliers due to such causes as weather-related events or acts of God, such as earthquakes, could have an adverse effect on our results of operations. For example, the Environmental Protection Agency has found that global climate change would be expected to increase the severity and possibly the frequency of severe weather patterns such as hurricanes. Although the financial impact of such future events is not reasonably estimable at this time, should they occur, our operations in certain coastal and flood-prone areas or operations of our customers and suppliers could be adversely affected.

If we do not successfully execute or effectively operate, integrate, leverage and grow acquired businesses, our financial results may suffer.

Our strategy for long-term growth, productivity and profitability depends in part on our ability to make prudent strategic acquisitions and to realize the benefits we expect when we make those acquisitions. In furtherance of this strategy, over the past several years, we have acquired businesses in Europe, Canada, South Korea, the Middle East, and the United States.

While we currently anticipate that our past and future acquisitions will enhance our value proposition to customers and improve our long-term profitability, there can be no assurance that we will realize our expectations within the time frame we have established, if at all, or that we can continue to support the value we allocate to these acquired businesses, including their goodwill or other intangible assets.

We may be subject to risks relating to our information technology systems.

We rely on information technology systems to process, transmit and store electronic information and manage and operate our business. The incidence of cyber attacks, computer hacking, computer viruses, worms, and other disruptive software, denial of service attacks, and other malicious cyber activities are on the rise worldwide. A breach of our information technology systems or those of our commercial partners could expose us, our customers, our suppliers, and our employees to risks of misuse or improper disclosure of data, business information (including intellectual property) and other confidential information. We operate globally, and the legal rules governing data storage and transfers are often complex, unclear, and changing. A breach could also result in manipulation and destruction of data, production downtimes and operations disruptions. Any such breaches or events could expose us to legal liability and adversely affect our reputation, competitive position, business or results of operations.

General Risk Factors

The unplanned departure of key personnel could disrupt our business.

We depend on the continued efforts of our senior management. The unplanned loss of key personnel, or the inability to hire and retain qualified executives, could negatively impact our ability to manage our business.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Information pertaining to our major operating facilities is included below. Except as noted, we own all of the principal properties. In addition, we own and/or lease other properties used as distribution centers and corporate offices. Our plants are in satisfactory condition and are suitable for the purpose for which they were designed and are now being used.

Location of Facility	Building Space (Sq. Ft.)	Primary Use	Owned or Leased
<u>Piping Systems Segment</u>			
Fulton, MS	778,065	Manufacturing, Packaging, & Distribution	Owned
Bilston, England	402,500	Manufacturing	Owned
Wynne, AR	400,000	Manufacturing & Distribution	Owned
Yangju City, Gyeonggi Province, South Korea	343,909	Manufacturing	Owned
Cedar City, UT	260,000	Manufacturing & Distribution	Owned
Woodbridge, NJ	247,000	Distribution	Leased
Olive Branch, MS	205,264	Manufacturing & Distribution	Owned
London, Ontario, Canada	200,400	Manufacturing	Owned
Al Hidd, Kingdom of Bahrain	186,162	Manufacturing	Owned
Wynne, AR	180,000	Distribution	Owned
Covington, TN	176,000	Manufacturing	Owned
North Wales, PA	174,000	Manufacturing	Owned
Monterrey, Mexico	152,000	Manufacturing & Distribution	Leased
Monterrey, Mexico	132,000	Manufacturing	Leased
Sanger, CA	127,390	Manufacturing & Distribution	Leased
Ennis, TX	109,700	Distribution	Leased
University Park, IL	90,100	Distribution	Leased
Ansonia, CT	89,396	Manufacturing & Distribution	Owned
Kansas City, MO	85,000	Distribution	Leased
St. Thomas, Ontario, Canada	73,124	Distribution	Leased
Shelby, OH	61,750	Distribution	Leased
Atlanta, GA	60,293	Distribution	Leased
Dallas, TX	55,585	Distribution	Leased
Ontario, CA	54,209	Distribution	Leased
Jacksonville, FL	48,000	Distribution	Leased
Calgary, Alberta, Canada	22,084	Distribution	Leased
Calgary, Alberta, Canada	21,117	Manufacturing	Leased
Calgary, Alberta, Canada	6,600	Manufacturing	Leased
<u>Industrial Metals Segment</u>			
Port Huron, MI	450,000	Manufacturing	Owned
New Market, VA	413,120	Manufacturing & Distribution	Owned
Belding, MI	293,068	Manufacturing	Owned
Brooklyn, OH	163,200	Manufacturing	Leased
Marysville, MI	81,500	Manufacturing	Owned
Brighton, MI	65,000	Machining	Leased
<u>Climate Segment</u>			
Plainville, GA	313,835	Manufacturing & Distribution	Owned
Fort Worth, TX	266,485	Manufacturing	Owned

Location of Facility	Building Space (Sq. Ft.)	Primary Use	Owned or Leased
Cartersville, GA	260,924	Manufacturing	Owned
Phoenix, AZ	250,250	Manufacturing & Distribution	Owned
Tampa, FL	202,614	Manufacturing & Distribution	Owned
Crawsfordville, IN	153,600	Manufacturing & Distribution	Owned
Fort Worth, TX	153,374	Manufacturing	Owned
Vineland, NJ	136,000	Manufacturing & Distribution	Owned
Guadalupe, Mexico	130,110	Manufacturing	Leased
Sacramento, CA	121,240	Manufacturing & Distribution	Owned
Bluffs, IL	107,000	Manufacturing	Owned
Fort Worth, TX	103,125	Manufacturing & Distribution	Owned
Hickory, NC	100,000	Manufacturing	Owned
Hartsville, TN	92,000	Manufacturing	Owned
Houston, TX	72,000	Manufacturing & Distribution	Owned
Monterrey, MX	65,000	Manufacturing & Distribution	Leased
Baltimore, MD	62,500	Manufacturing & Distribution	Owned
Springdale, AR	57,600	Manufacturing & Distribution	Owned
Hartsville, TN	45,000	Distribution	Leased
Lawrenceville, GA	42,000	Manufacturing	Leased
Xinbei District, Changzhou, China	33,940	Manufacturing	Leased
Kansas City, MO	30,500	Manufacturing	Leased
Ansonia, CT	24,000	Manufacturing	Leased
Hartsville, TN	4,000	Warehouse	Leased

ITEM 3. LEGAL PROCEEDINGS

The Company is involved in certain litigation as a result of claims that arose in the ordinary course of business. Additionally, we may realize the benefit of certain legal claims and litigation in the future; these gain contingencies are not recognized in the Consolidated Financial Statements.

For a description of material pending legal proceedings, see “[Note 14 – Commitments and Contingencies](#)” in the Notes to Consolidated Financial Statements, which is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Our common stock is listed on the New York Stock Exchange (NYSE) under the symbol "MLI." As of February 23, 2023, the number of holders of record of Mueller's common stock was 585.

During fiscal 2021, we paid a quarterly cash dividend of \$0.13 per share of common stock. During fiscal 2022, we paid a quarterly cash dividend of \$0.25 per share of common stock.

Payment of dividends in the future is dependent upon the Company's financial condition, cash flows, capital requirements, earnings, and other factors.

See "[Part III, Item 12, Equity Compensation Plan Information](#)" for information regarding securities authorized for issuance under the Company's equity compensation plans.

Issuer Purchases of Equity Securities

The Company's Board of Directors has extended, until July 2023, the authorization to repurchase up to 20 million shares of the Company's common stock through open market transactions or through privately negotiated transactions. The Company may cancel, suspend, or extend the time period for the purchase of shares at any time. Any repurchases will be funded primarily through existing cash and cash from operations. The Company may hold any shares repurchased in treasury or use a portion of the repurchased shares for its stock-based compensation plans, as well as for other corporate purposes. From its initial authorization in 1999 through December 31, 2022, the Company has repurchased approximately 7.2 million shares under this authorization. Below is a summary of the Company's stock repurchases for the quarter ended December 31, 2022.

	(a) Total Number of Shares Purchased ⁽¹⁾	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number of Shares That May Yet Be Purchased Under the Plans or Programs ⁽²⁾
September 25, 2022 – October 29, 2022	2,098	61.72	—	12,759,795
October 30, 2022 – November 26, 2022	—	—	—	12,759,795
November 27, 2022 – December 31, 2022	527	61.27	—	12,759,795
Total	2,625		—	

⁽¹⁾ Includes shares tendered to the Company by holders of stock-based awards in payment of the purchase price and/or withholding taxes upon exercise and/or vesting.

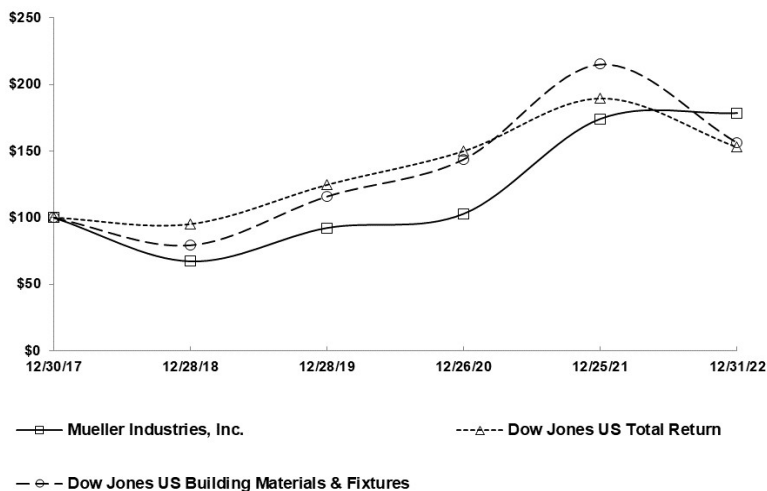
⁽²⁾ Shares available to be purchased under the Company's 20 million share repurchase authorization until July 2023. The extension of the authorization was announced on October 19, 2022.

Company Stock Performance

The following graph compares total stockholder return since December 30, 2017 to the Dow Jones U.S. Total Return Index (Total Return Index) and the Dow Jones U.S. Building Materials & Fixtures Index (Building Materials Index). Total return values for the Total Return Index, the Building Materials Index and the Company were calculated based on cumulative total return values assuming reinvestment of (i) regular quarterly dividends paid by the Company, (ii) the cash paid by the Company in conjunction with the special dividend and (iii) the proceeds of an assumed sale at par of the Debentures paid by the Company in connection with the special dividend.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Mueller Industries, Inc., the Dow Jones US Total Return Index
and the Dow Jones US Building Materials & Fixtures Index



*\$100 invested on 12/30/17 in stock or index, including reinvestment of dividends.
Indexes calculated on month-end basis.

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	2017	2018	2019	2020	2021	2022
Mueller Industries, Inc.	100.00	67.04	92.16	102.81	174.23	178.57
Dow Jones U.S. Total Return Index	100.00	95.03	124.62	150.05	189.81	152.98
Dow Jones U.S. Building Materials & Fixtures Index	100.00	79.24	115.95	143.87	215.35	156.35

ITEM 6. RESERVED

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

Management's discussion and analysis of financial condition and results of operations is contained under the caption "Financial Review" submitted as a separate section of this Annual Report on Form 10-K commencing on page [F-2](#).

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Quantitative and qualitative disclosures about market risk are contained under the caption "Financial Review" submitted as a separate section of this Annual Report on Form 10-K commencing on page [F-2](#).

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial Statements required by this item are contained in a separate section of this Annual Report on Form 10-K commencing on page [F-17](#).

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**

The Company maintains disclosure controls and procedures designed to ensure information required to be disclosed in Company reports filed under the Securities Exchange Act of 1934, as amended (the Exchange Act), is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in Company reports filed under the Exchange Act is accumulated and communicated to management, including the Company's Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures pursuant to Rule 13a-15(e) of the Exchange Act as of December 31, 2022. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective as of December 31, 2022 to ensure that information required to be disclosed in Company reports filed under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to management, including the Company's principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Pursuant to the rules and regulations of the SEC, internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, and effected by the Company's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States and includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Company's assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the issuer are being made only in accordance with authorizations of the Company's management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements. Due to inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Further, because of changes in conditions, effectiveness of internal control over financial reporting may vary over time.

As required by Rule 13a-15(c) under the Exchange Act, the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's internal control over financial reporting as of December 31, 2022 based on the control criteria established in a report entitled *Internal Control—Integrated Framework*, (2013 Framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on such evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2022.

Ernst & Young LLP, the independent registered public accounting firm that audited the Company's financial statements included in this Annual Report on Form 10-K, has issued an attestation report on the Company's internal control over financial reporting, which is included herein.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the Company's fiscal quarter ended December 31, 2022, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Mueller Industries, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Mueller Industries, 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, Mueller Industries, 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 December 25, 2021, the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated February 28, 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 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.

Ernst + Young LLP

Memphis, Tennessee
February 28, 2023

ITEM 9B. OTHER INFORMATION

None.

PART III**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE**

The information required by Item 10 is contained under the captions “Ownership of Common Stock by Directors and Executive Officers and Information about Director Nominees,” “Corporate Governance,” “Report of the Audit Committee of the Board of Directors,” and “Section 16(a) Beneficial Ownership Compliance Reporting” in the Company’s Proxy Statement for its 2023 Annual Meeting of Stockholders to be filed with the SEC on or about March 23, 2023, which is incorporated herein by reference.

The Company has adopted a Code of Business Conduct and Ethics that applies to its chief executive officer, chief financial officer, and other financial executives. We have also made the Code of Business Conduct and Ethics available on the Company’s website at www.muellerindustries.com.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is contained under the caption “Compensation Discussion and Analysis,” “Summary Compensation Table for 2022,” “2022 Grants of Plan Based Awards Table,” “Outstanding Equity Awards at Fiscal 2022 Year-End,” “2022 Option Exercises and Stock Vested,” “Potential Payments Upon Termination of Employment or Change in Control as of the End of 2022,” “2022 Director Compensation,” “Report of the Compensation Committee of the Board of Directors on Executive Compensation” and “Corporate Governance” in the Company’s Proxy Statement for its 2023 Annual Meeting of Stockholders to be filed with the SEC on or about March 23, 2023, which is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**Equity Compensation Plan Information**

The following table discloses information regarding the securities to be issued and the securities remaining available for issuance under the Registrant’s stock-based incentive plans as of December 31, 2022 (shares in thousands):

Plan category	(a) Number of securities to be issued upon exercise of outstanding options, warrants, and rights	(b) Weighted average exercise price of outstanding options, warrants, and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	442	\$ 29.20	1,204
Equity compensation plans not approved by security holders	—	—	—
Total	442	\$ 29.20	1,204

Other information required by Item 12 is contained under the captions “Principal Stockholders” and “Ownership of Common Stock by Directors and Executive Officers and Information about Director Nominees” in the Company’s Proxy Statement for

its 2023 Annual Meeting of Stockholders to be filed with the SEC on or about March 23, 2023, which is incorporated herein by reference.

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

The information required by Item 13 is contained under the caption “Corporate Governance” in the Company’s Proxy Statement for its 2023 Annual Meeting of Stockholders to be filed with the SEC on or about March 23, 2023, which is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is contained under the caption “Appointment of Independent Registered Public Accounting Firm” in the Company’s Proxy Statement for its 2023 Annual Meeting of Stockholders to be filed with the SEC on or about March 23, 2023, which is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. Financial Statements: the financial statements, notes, and report of independent registered public accounting firm described in Item 8 of this Annual Report on Form 10-K are contained in a separate section of this Annual Report on Form 10-K commencing on page [F-1](#).
2. Financial Statement Schedule: the financial statement schedule described in Item 8 of this report is contained in a separate section of this Annual Report on Form 10-K commencing on page [F-1](#).

3. Exhibits:

Certificate of Incorporation and Bylaws

- 3.a [Restated Certificate of Incorporation of the Registrant dated February 8, 2007 \(Incorporated herein by reference to Exhibit 3.1 of the Registrant's Annual Report on Form 10-K, dated February 28, 2007, for the fiscal year ended December 30, 2006\).](#)
- 3.b [Amended and Restated By-laws of the Registrant, effective as of February 17, 2023 \(Incorporated herein by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, dated February 21, 2023\).](#)

Long-Term Debt Instruments

- 4.1 Certain instruments with respect to long-term debt of the Registrant have not been filed as Exhibits to this Report since the total amount of securities authorized under any such instruments does not exceed 10 percent of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant agrees to furnish a copy of each such instrument upon request of the SEC.
- 4.2 [Description of securities](#)

Consulting, Employment, and Compensatory Plan Agreements

- 10.1 [Mueller Industries, Inc. 2009 Stock Incentive Plan \(Incorporated by reference from Appendix I to the Company's 2009 Definitive Proxy Statement with respect to the Company's 2009 Annual Meeting of Stockholders, as filed with the Securities and Exchange Commission on March 26, 2009\).](#)
- 10.2 [Mueller Industries, Inc. 2014 Stock Incentive Plan \(Incorporated by reference from Appendix I to the Company's 2014 Definitive Proxy Statement with respect to the Company's 2014 Annual Meeting of Stockholders, as filed with the Securities and Exchange Commission on March 19, 2014\).](#)
- 10.3 [Amendment to the Mueller Industries, Inc. 2009 Stock Incentive Plan, dated July 11, 2011 \(Incorporated herein by reference to Exhibit 10.17 of the Registrant's Annual Report on Form 10-K, dated February 28, 2012, for the fiscal year ended December 31, 2011\).](#)
- 10.4 [2019 Incentive Plan \(incorporated by reference to Annex 1 to the Company's definitive proxy statement filed with the SEC on March 28, 2019\).](#)
- 10.5 [Mueller Industries, Inc. 2011 Annual Bonus Plan \(Incorporated herein by reference to Exhibit 10.18 of the Registrant's Annual Report on Form 10-K, dated February 28, 2012, for the fiscal year ended December 31, 2011\).](#)
- 10.6 [Summary description of the Registrant's 2023 incentive plan for certain key employees.](#)
- 10.7 [Change in Control Agreement, effective July 26, 2016 by and between the Registrant and Brian K. Barksdale \(Incorporated herein by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q, for the period ended July 2, 2016, dated July 28, 2016\).](#)

- 10.8 [Change in Control Agreement, effective July 26, 2016 by and between the Registrant and Mark Millerchip \(Incorporated herein by reference to Exhibit 10.6 of the Registrant’s Quarterly Report on Form 10-Q, for the period ended July 2, 2016, dated July 28, 2016\).](#)
- 10.9 [Change in Control Agreement, effective July 26, 2016 by and between the Registrant and Steffen Sigloch \(Incorporated herein by reference to Exhibit 10.8 of the Registrant’s Quarterly Report on Form 10-Q, for the period ended July 2, 2016, dated July 28, 2016\).](#)
- 10.10 [Employment Agreement, dated as of March 15, 2018, by and between Mueller Industries, Inc. and Gregory L. Christopher \(Incorporated herein by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K, dated March 19, 2018\).](#)
- 10.11 [Change in Control Agreement, effective February 22, 2022 by and between the Registrant and Jeffrey A. Martin \(Incorporated herein by reference to Exhibit 10.13 of the Registrant’s Annual Report on Form 10-K, for the period ended December 25, 2021, dated February 23, 2022\).](#)
- 10.12 [Change in Control Agreement, effective February 22, 2022 by and between the Registrant and Christopher J. Miritello \(Incorporated herein by reference to Exhibit 10.14 of the Registrant’s Annual Report on Form 10-K, for the period ended December 25, 2021, dated February 23, 2022\).](#)

Financing Agreements

- 10.13 [Credit Agreement, dated as of March 31, 2021, among the Company \(as borrower\), Bank of America, N.A. \(as administrative agent\), and certain lenders named therein \(Incorporated herein by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K, dated April 5, 2021\).](#)

Other Exhibits

- 21.0 [Subsidiaries of the Registrant.](#)
- 23.0 [Consent of Independent Registered Public Accounting Firm.](#)
- 31.1 [Certification of Chief Executive Officer pursuant to Rule 13a-14\(a\) and Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended.](#)
- 31.2 [Certification of Chief Financial Officer pursuant to Rule 13a-14\(a\) and Rule 15d-14\(a\) of the Securities Exchange Act of 1934, as amended.](#)
- 32.1 [Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 32.2 [Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 99.1 [Insider Trading Policy of the Registrant](#)
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase
- 101.DEF XBRL Taxonomy Extension Definition Linkbase
- 101.INS XBRL Instance Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase
- 101.PRE XBRL Presentation Linkbase Document
- 101.SCH XBRL Taxonomy Extension Schema

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 28, 2023.

MUELLER INDUSTRIES, INC.

/s/ Gregory L. Christopher

Gregory L. Christopher, Chief Executive Officer
(Principal Executive Officer) and Chairman of the Board

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gregory L. Christopher</u> Gregory L. Christopher	Chief Executive Officer (Principal Executive Officer) and Chairman of the Board	February 28, 2023
<u>/s/ Terry Hermanson</u> Terry Hermanson	Lead Independent Director	February 28, 2023
<u>/s/ Elizabeth Donovan</u> Elizabeth Donovan	Director	February 28, 2023
<u>/s/ William C. Drummond</u> William C. Drummond	Director	February 28, 2023
<u>/s/ Gary S. Gladstein</u> Gary S. Gladstein	Director	February 28, 2023
<u>/s/ Scott J. Goldman</u> Scott J. Goldman	Director	February 28, 2023
<u>/s/ John B. Hansen</u> John B. Hansen	Director	February 28, 2023
<u>/s/ Charles P. Herzog, Jr.</u> Charles P. Herzog, Jr.	Director	February 28, 2023

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

<u>Signature and Title</u>	<u>Date</u>
<u>/s/ Jeffrey A. Martin</u> Jeffrey A. Martin Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	February 28, 2023
<u>/s/ Anthony J. Steinriede</u> Anthony J. Steinriede Vice President – Corporate Controller	February 28, 2023

MUELLER INDUSTRIES, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Financial Review	F-2
Consolidated Statements of Income for the years ended December 31, 2022, December 25, 2021, and December 26, 2020	F-17
Consolidated Statements of Comprehensive Income for the years ended December 31, 2022, December 25, 2021, and December 26, 2020	F-18
Consolidated Balance Sheets for the years ended December 31, 2022 and December 25, 2021	F-19
Consolidated Statements of Cash Flows for the years ended December 31, 2022, December 25, 2021, and December 26, 2020	F-20
Consolidated Statements of Changes in Equity for the years ended December 31, 2022, December 25, 2021, and December 26, 2020	F-21
Notes to Consolidated Financial Statements	F-23
Report of Independent Registered Public Accounting Firm Ernst & Young LLP (PCAOB ID: 42)	F-61

FINANCIAL STATEMENT SCHEDULE

Schedule for the years ended December 31, 2022, December 25, 2021, and December 26, 2020

Valuation and Qualifying Accounts (Schedule II)	F-63
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FINANCIAL REVIEW

The Financial Review section of our Annual Report on Form 10-K consists of the following: Management's Discussion and Analysis of Results of Operations and Financial Condition (MD&A), the Consolidated Financial Statements, and Other Financial Information, all of which include information about our significant accounting policies, practices, and the transactions that impact our financial results. The following MD&A describes the principal factors affecting the results of operations, liquidity and capital resources, contractual cash obligations, and the critical accounting estimates of the Company. The discussion in the Financial Review section should be read in conjunction with the other sections of this Annual Report, particularly "[Item 1: Business](#)" and our other detailed discussion of risk factors included in this MD&A.

OVERVIEW

We are a leading manufacturer of copper, brass, aluminum, and plastic products. The range of products we manufacture is broad: copper tube and fittings; line sets; brass rod, bar, and shapes; aluminum and brass forgings; aluminum impact extrusions; PEX plastic tube and fittings; refrigeration valves and fittings; compressed gas valves; pressure vessels; steel nipples; and insulated flexible duct systems. We also resell brass and plastic plumbing valves, plastic fittings, malleable iron fittings, faucets and plumbing specialty products. Mueller's operations are located throughout the United States and in Canada, Mexico, Great Britain, South Korea, the Middle East, and China.

Each of the reportable segments is composed of certain operating segments that are aggregated primarily by the nature of products offered as follows:

- **Piping Systems:** The Piping Systems segment is composed of Domestic Piping Systems Group, Great Lakes Copper, Heatlink Group, European Operations, Trading Group, Jungwoo-Mueller (our South Korean joint venture), and Mueller Middle East (our Bahraini joint venture). The Domestic Piping Systems Group manufactures and distributes copper tube, fittings, and line sets. These products are manufactured in the U.S., sold in the U.S., and exported to markets worldwide. Great Lakes Copper manufactures copper tube and line sets in Canada and sells the products primarily in the U.S. and Canada. Heatlink Group manufactures a complete line of products for PEX plumbing and radiant systems in Canada and sells these products in Canada and the U.S. European Operations manufacture copper tube in the United Kingdom, which is sold throughout Europe. The Trading Group manufactures pipe nipples and sources products for import distribution in North America. Jungwoo-Mueller manufactures copper-based joining products that are sold worldwide. Mueller Middle East manufactures copper tube and serves markets in the Middle East and Northern Africa. The Piping Systems segment sells products to wholesalers in the plumbing and refrigeration markets, distributors to the manufactured housing and recreational vehicle industries, building material retailers, and air-conditioning original equipment manufacturers (OEMs).
- **Industrial Metals:** The Industrial Metals segment is composed of Brass Rod, Impacts & Micro Gauge, Brass Value-Added Products, and Precision Tube. The segment manufactures and sells brass rod, bar, and shapes; aluminum and brass forgings; aluminum impact extrusions; gas valves and assemblies; and specialty copper, copper alloy, and aluminum tube. The segment manufactures and sells its products primarily to domestic OEMs in the industrial, transportation, construction, heating, ventilation, and air-conditioning, plumbing, refrigeration, and energy markets.
- **Climate:** The Climate segment is composed of Refrigeration Products, Westermeyer, Turbotec, Flex Duct (ATCO and H&C Flex), and Linesets, Inc. The segment manufactures and sells refrigeration valves and fittings, high pressure components, coaxial heat exchangers, insulated HVAC flexible duct systems, and line sets. The segment sells its products primarily to the heating, ventilation, air-conditioning, and refrigeration markets in the U.S.

New housing starts and commercial construction are important determinants of our sales to the heating, ventilation, and air-conditioning, refrigeration, and plumbing markets because the principal end use of a significant portion of our products is in the construction of single and multi-family housing and commercial buildings. Repairs and remodeling projects are also important drivers of underlying demand for these products. In addition, our products are used in various transportation, automotive, and industrial applications.

According to the U.S. Census Bureau, actual housing starts in the U.S. were 1.55 million in 2022, which compares to 1.60 million in 2021 and 1.38 million in 2020. The average 30-year fixed mortgage rate was approximately 5.34 percent in 2022 and 2.96 percent in 2021. The private nonresidential construction sector, includes offices, industrial, health care, and retail projects. According to the U.S. Census Bureau, the value of private nonresidential construction put in place was \$530.1 billion in 2022, \$485.8 billion in 2021, and \$479.0 billion in 2020.

Profitability of certain of our product lines depends upon the “spreads” between the cost of raw material and the selling prices of our products. The open market prices for copper cathode and copper and brass scrap, for example, influence the selling price of copper tube and brass rod, two principal products manufactured by the Company. We attempt to minimize the effects on profitability from fluctuations in material costs by passing through these costs to our customers; however margins of our businesses that account for inventory on a FIFO basis may be impacted in periods of significant fluctuations in material costs. Our earnings and cash flow are dependent upon these spreads that fluctuate based upon market conditions.

Earnings and profitability are also impacted by unit volumes that are subject to market trends, such as substitute products, imports, technologies, and market share. We intensively manage our pricing structure while attempting to maximize profitability. From time-to-time, this practice results in lost sales opportunities and lower volume. For plumbing systems, plastics are the primary substitute product; these products represent an increasing share of consumption. For certain air-conditioning and refrigeration applications, aluminum-based systems are the primary substitution threat. We cannot predict the acceptance or the rate of switching that may occur. U.S. consumption of copper tube and brass rod is still predominantly supplied by U.S. manufacturers. In recent years, brass rod consumption in the U.S. has declined due to the outsourcing of many manufactured products to offshore regions.

RESULTS OF OPERATIONS

Consolidated Results

The following table compares summary operating results for 2022, 2021, and 2020:

<i>(In thousands)</i>	2022	2021	2020	Percent Change	
				2022 vs. 2021	2021 vs. 2020
Net sales	\$ 3,982,455	\$ 3,769,345	\$ 2,398,043	5.7 %	57.2 %
Operating income	877,149	655,845	245,838	33.7	166.8
Net income	658,316	468,520	139,493	40.5	235.9

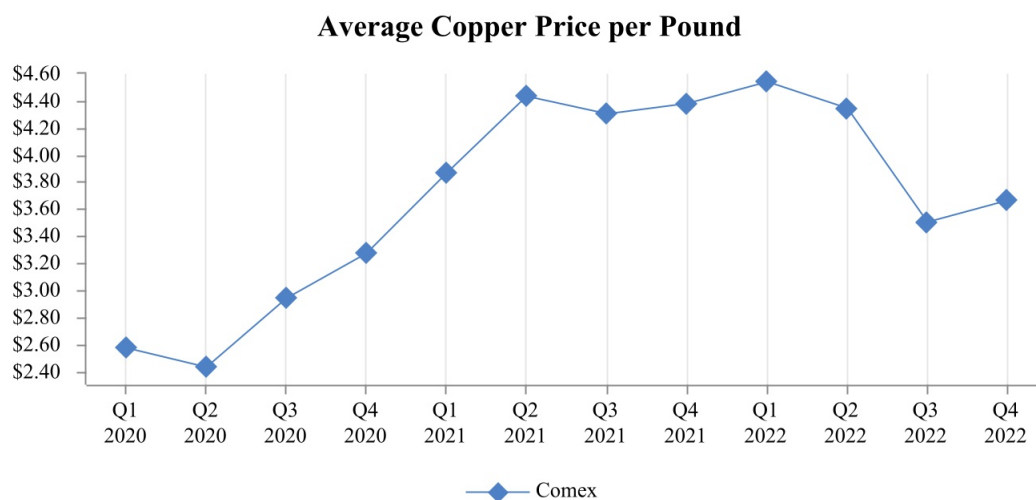
The following are components of changes in net sales compared to the prior year:

	2022 vs. 2021	2021 vs. 2020
Net selling price in core product lines	6.1 %	37.0 %
Unit sales volume in core product lines	(5.9)	6.4
Acquisitions	1.9	8.6
Dispositions	(2.2)	(0.7)
Other	5.8	5.9
	5.7 %	57.2 %

The increase in net sales in 2022 was primarily due to (i) higher net selling prices of \$228.5 million in our core product lines, primarily copper tube, (ii) an increase in sales of \$217.0 million in our other product lines, (iii) incremental sales of \$38.6 million recorded by Mueller Middle East, acquired in December 2021, and (iv) incremental sales of \$33.3 million recorded by H&C Flex, acquired in January 2021. These increases were slightly offset by (i) lower unit sales volume of \$222.0 million in our core product lines, primarily non-U.S. copper tube and brass rod, and (ii) a decrease in sales of \$82.7 million as a result of the dispositions of Die-Mold, Copper Bar, FTP, and STI during 2021.

The increase in net sales in 2021 was primarily due to (i) higher net selling prices of \$886.5 million in our core product lines, primarily copper tube and brass rod, (ii) higher unit sales volume of \$154.4 million in our core product lines, (iii) incremental sales of \$152.7 million recorded by Kessler, acquired in August 2020, (iv) an increase in sales of \$140.6 million in our non-core product lines, (v) sales of \$48.9 million recorded by H&C Flex, and (vi) sales of \$4.6 million recorded by Mueller Middle East. These increases were slightly offset by a decrease in sales of \$16.5 million as a result of the dispositions of Die-Mold, FTP, and STI during 2021.

Net selling prices generally fluctuate with changes in raw material costs. Changes in raw material costs are generally passed through to customers by adjustments to selling prices. The following graph shows the Comex average copper price per pound by quarter for the most recent three-year period:



The following tables compare cost of goods sold and operating expenses as dollar amounts and as a percent of net sales for 2022, 2021, and 2020:

(In thousands)

	2022	2021	2020
Cost of goods sold	\$ 2,864,862	\$ 2,938,989	\$ 1,966,161
Depreciation and amortization	43,731	45,390	44,843
Selling, general, and administrative expense	203,086	184,052	159,483
Litigation settlement, net	—	—	(22,053)
Gain on sale of businesses	—	(57,760)	—
Gain on sale of assets, net	(6,373)	—	—
Impairment charges	—	2,829	3,771
Operating expenses	\$ 3,105,306	\$ 3,113,500	\$ 2,152,205

	2022	2021	2020
Cost of goods sold	71.9 %	78.0 %	82.0 %
Depreciation and amortization	1.1	1.2	1.9
Selling, general, and administrative expense	5.1	4.9	6.6
Litigation settlement, net	—	—	(0.9)
Gain on sale of businesses	—	(1.5)	—
Gain on sale of assets, net	(0.2)	—	—
Impairment charges	—	—	0.1
Operating expenses	77.9 %	82.6 %	89.7 %

The decrease in cost of goods sold in 2022 was primarily due to a decrease in the average cost of copper and lower sales volume in certain core product lines. Gross margin as a percentage of sales was 28.1 percent compared with 22.0 percent in the prior year. The combination of strong demand for our products, inflationary pressures, and industry wide supply constraints contributed to an environment of higher selling prices and improved margins for the majority of our businesses. The increase in cost of goods sold in 2021 was primarily due to the increase in the average cost of copper, an increase in sales volume across all product lines, and an increase in sales volume resulting from the acquisitions of Kessler, H&C Flex, and Mueller Middle East.

Depreciation and amortization decreased slightly in 2022 as a result of long-lived assets of businesses sold and increased slightly in 2021 as a result of long-lived assets of businesses acquired.

Selling, general, and administrative expenses increased in 2022 primarily due to (i) an increase in employment costs, including incentive compensation, of \$13.3 million, (ii) incremental expenses of \$3.2 million associated with H&C Flex and Mueller Middle East, (iii) the absence of fees of \$2.6 million received as a settlement of preexisting relationships recognized in the prior year, and (iv) higher travel and entertainment expense of \$1.2 million. These increases were partially offset by the absence of expenses associated with FTP, STI, and Die-Mold of \$2.9 million. The increase in selling, general, and administrative expenses in 2021 was primarily due to (i) an increase in employment costs, including incentive compensation, of \$11.4 million, (ii) an increase in agent commissions of \$8.7 million, (iii) incremental expenses of \$6.1 million associated with Kessler and H&C Flex, (iv) an increase of \$1.4 million in professional fees, and (v) expenses of \$1.3 million associated with the write-off of vendor deposits. These increases were partially offset by (i) fees of \$2.6 million received as a settlement of preexisting relationships and (ii) the absence of expenses associated with FTP, STI, and Die-Mold of \$1.8 million.

During 2022, we recognized gains of \$6.4 million on the sale of assets within Corporate and Eliminations.

During 2021, we recognized gains of \$46.6 million on the sale of the FTP and STI businesses, \$4.7 million on the disposition of the Die-Mold business, and \$6.5 million on the sale of the Copper Bar business, as well as asset impairment charges of \$2.8 million related to goodwill and fixed assets. The gain on the sale of FTP and STI and the deconsolidation of Die-Mold were reported within Corporate and Eliminations and the gain on the sale of Copper Bar was recorded in the Industrial Metals segment. Prior to the dispositions, the results of FTP and STI were included within the Climate segment, the results of Die-Mold were included within the Piping Systems segment, and the results of Copper Bar were included within the Industrial Metals segment.

During 2020, we recognized a gain of \$22.1 million for the settlement of our claim under the Deepwater Horizon Economic and Property Damage Settlement Program and asset impairment charges of \$3.8 million related to production equipment that was idled.

Interest expense decreased in 2022 primarily as a result of the redemption of our Subordinated Debentures during the second quarter of 2021 and there being no borrowings outstanding under the Credit Agreement during 2022. The decrease in 2021 was primarily a result of the redemption of our Subordinated Debentures during the second quarter of 2021.

During 2021, we recognized expense of \$5.7 million for a redemption premium related to our Subordinated Debentures redeemed.

Environmental expense for our non-operating properties was lower in 2022 and 2021 than in 2020 primarily as a result of lower remediation costs.

During 2022, we recognized a \$13.1 million expense related to the complete withdrawal from a multiemployer pension plan. During 2020, we recognized a \$17.8 million expense to terminate our U.S. defined benefit pension plan, which consisted of an \$11.6 million non-cash charge and \$6.2 million in federal excise tax on surplus assets returned to the Company.

Other income, net, was higher in 2022 primarily as a result of (i) higher interest income on short-term investments, (ii) a gain on the sale of securities, and (iii) a curtailment gain related to our other postemployment benefit plans. It was lower in 2021 primarily as a result of lower net periodic benefit income from our benefit plans.

Income tax expense was \$223.3 million in 2022, representing an effective tax rate of 25.5 percent. This rate was higher than what would be computed using the U.S. statutory federal rate primarily due to (i) the provision for state and local income taxes, net of the federal benefit, of \$32.2 million, (ii) the effect of foreign statutory rates different from the U.S. federal rate and other foreign adjustments of \$7.4 million, and (iii) the impact of investments in unconsolidated affiliates of \$0.2 million. These increases were partially offset by other adjustments of \$0.5 million.

Income tax expense was \$165.9 million in 2021, representing an effective tax rate of 25.9 percent. This rate was higher than what would be computed using the U.S. statutory federal rate primarily due to (i) the provision for state and local income taxes, net of the federal benefit, of \$21.1 million and (ii) the effect of foreign statutory rates different from the U.S. federal rate and other foreign adjustments of \$11.2 million. These increases were partially offset by (i) the impact of investments in unconsolidated affiliates of \$0.7 million and (ii) other adjustments of \$0.4 million.

Income tax expense was \$55.3 million in 2020, representing an effective tax rate of 26.4 percent. This rate was higher than what would be computed using the U.S. statutory federal rate primarily due to (i) the provision for state and local income taxes, net of the federal benefit, of \$5.9 million, (ii) the effect of foreign statutory rates different from the U.S. federal rate of \$2.8 million, and (iii) other adjustments of \$3.0 million. These increases were partially offset by the impact of investments in unconsolidated affiliates of \$0.4 million.

During 2022, we recognized income of \$10.1 million on our investments in unconsolidated affiliates, net of foreign tax, compared to losses of \$0.2 million in 2021. The income on these investments for 2022 included net gains of \$5.2 million for Tecumseh and net gains of \$4.9 million for the retail distribution business.

During 2021, we recognized losses of \$0.2 million on our investments in unconsolidated affiliates, net of foreign tax, compared to losses of \$10.2 million in 2020. The loss on these investments for 2021 included net losses of \$1.7 million for Tecumseh, partially offset by net gains of \$0.8 million for the retail distribution business and a gain on fair value recognition related to our investment in Mueller Middle East of \$0.7 million.

During 2020, we recognized losses of \$10.2 million on our investments in unconsolidated affiliates, net of foreign tax. The loss of these investments for 2020 included net losses of \$10.4 million for Tecumseh and net gains of \$0.2 million for Mueller Middle East.

Piping Systems Segment

The following table compares summary operating results for 2022, 2021, and 2020 for the businesses comprising our Piping Systems segment:

<i>(In thousands)</i>	2022	2021	2020	Percent Change	
				2022 vs. 2021	2021 vs. 2020
Net sales	\$ 2,730,084	\$ 2,600,030	\$ 1,583,002	5.0 %	64.2 %
Operating income	671,062	486,287	165,719	38.0	193.4

The following are components of changes in net sales compared to the prior year:

	2022 vs. 2021	2021 vs. 2020
Net selling price in core product lines	8.4 %	45.7 %
Unit sales volume in core product lines	(6.6)	6.8
Acquisitions	1.5	10.0
Dispositions	(0.4)	(0.2)
Other	2.1	1.9
	5.0 %	64.2 %

The increase in net sales in 2022 was primarily attributable to (i) higher net selling prices of \$219.6 million in the segment's core product lines, primarily copper tube, (ii) an increase in sales of \$61.1 million in the segment's other product lines, and (iii) incremental sales of \$38.6 million recorded by Mueller Middle East. These increases were partially offset by (i) lower unit sales volume of \$172.3 million in the segment's core product lines, primarily non-U.S. copper tube, and (ii) a decrease in sales of \$10.9 million as a result of the disposition of Die-Mold.

The increase in net sales in 2021 was primarily attributable to (i) higher net selling prices of \$719.0 million in the segment's core product lines, primarily copper tube, (ii) incremental sales of \$152.7 million recorded by Kessler, (iii) higher unit sales volume of \$107.6 million in the segment's core product lines, (iv) an increase in sales of \$44.6 million in the segment's non-core product lines and (v) sales of \$4.6 million recorded by Mueller Middle East. These increases were slightly offset by a decrease in sales of \$2.6 million as a result of the disposition of Die-Mold.

The following tables compare cost of goods sold and operating expenses as dollar amounts and as a percent of net sales for 2022, 2021, and 2020:

(In thousands)

	2022	2021	2020
Cost of goods sold	\$ 1,943,174	\$ 1,996,610	\$ 1,311,697
Depreciation and amortization	22,193	23,384	23,071
Selling, general, and administrative expense	93,655	93,749	78,744
Impairment charges	—	—	3,771
Operating expenses	<u>\$ 2,059,022</u>	<u>\$ 2,113,743</u>	<u>\$ 1,417,283</u>

	2022	2021	2020
Cost of goods sold	71.2 %	76.8 %	82.9 %
Depreciation and amortization	0.8	0.9	1.5
Selling, general, and administrative expense	3.4	3.6	4.9
Impairment charges	—	—	0.2
Operating expenses	<u>75.4 %</u>	<u>81.3 %</u>	<u>89.5 %</u>

Gross margin as a percentage of sales was 28.8 percent compared with 23.2 percent in the prior year. The increase in gross margin percent reflects effective price management in response to significant inflation in wages, consumable, freight, and distribution costs, as well as fluctuating material costs. The decrease in cost of goods sold in 2022 was primarily due to a decrease in the average cost of copper and lower sales volume in certain core product lines. The increase in cost of goods sold in 2021 was primarily due to the increase in the cost of copper, an increase in sales volume in the segment's core product lines, and an increase in sales volume resulting from the acquisitions of Kessler and Mueller Middle East.

Depreciation and amortization decreased slightly in 2022 and 2021, compared to 2020, as a result of long-lived assets of businesses sold, partially offset by depreciation and amortization of the long-lived assets of Mueller Middle East.

Selling, general, and administrative expense for 2022 was consistent with 2021. The increase in 2021 was primarily due to (i) higher employment costs, including incentive compensation, of \$6.1 million, (ii) incremental expenses of \$4.3 million associated with Kessler, (iii) an increase in agent commissions of \$2.0 million, (iv) expenses of \$1.3 million associated with the write-off of vendor deposits, and (v) the absence of \$1.3 million of government subsidies provided to certain businesses related to the COVID-19 pandemic recorded in 2020.

During 2020, we recognized asset impairment charges of \$3.8 million related to production equipment that was idled.

Industrial Metals Segment

The following table compares summary operating results for 2022, 2021, and 2020 for the businesses comprising our Industrial Metals segment:

<i>(In thousands)</i>	2022	2021	2020	Percent Change	
				2022 vs. 2021	2021 vs. 2020
Net sales	\$ 644,689	\$ 703,363	\$ 472,159	(8.3)%	49.0 %
Operating income	82,464	85,475	54,065	(3.5)	58.1

The following are components of changes in net sales compared to the prior year:

	2022 vs. 2021	2021 vs. 2020
Net selling price in core product lines	1.3 %	36.7 %
Net sales volume in core product lines	(7.3)	10.3
Dispositions	(5.3)	—
Other	3.0	2.0
	(8.3)%	49.0 %

The decrease in net sales in 2022 was primarily due to (i) lower unit sales volume of \$49.2 million in the segment's core product lines, primarily brass rod, (ii) a decrease in sales of \$36.2 million as a result of the disposition of Copper Bar, and (iii) lower sales of \$4.4 million in the segment's non-core product lines. These decreases were slightly offset by higher net selling prices of \$8.9 million in the segment's core product lines.

The increase in net sales in 2021 was primarily due to (i) higher net selling prices of \$167.5 million in the segment's core product lines, primarily brass rod, (ii) higher unit sales volume of \$46.8 million in the segment's core product lines, and (iii) higher sales of \$8.4 million in the segment's non-core product lines.

The following tables compare cost of goods sold and operating expenses as dollar amounts and as a percent of net sales for 2022, 2021, and 2020:

<i>(In thousands)</i>	2022	2021	2020
Cost of goods sold	\$ 543,004	\$ 605,715	\$ 398,000
Depreciation and amortization	7,647	6,929	7,528
Selling, general, and administrative expense	11,574	11,698	12,566
Gain on sale of businesses	—	(6,454)	—
Operating expenses	\$ 562,225	\$ 617,888	\$ 418,094

	2022	2021	2020
Cost of goods sold	84.2 %	86.1 %	84.3 %
Depreciation and amortization	1.2	1.0	1.6
Selling, general, and administrative expense	1.8	1.6	2.6
Gain on sale of businesses	—	(0.9)	—
Operating expenses	87.2 %	87.8 %	88.5 %

Gross margin as a percentage of sales was 15.8 percent compared with 13.9 percent in the prior year. The decrease in cost of goods sold in 2022 was primarily due to the decrease in the average cost of brass scrap and lower sales volume in the segment's core product lines and the disposition of Copper Bar. The increase in cost of goods sold in 2021 was primarily due to the increase in selling prices and sales volume in the segment's core product lines.

Depreciation and amortization increased slightly in 2022 as a result of long-lived assets placed into service. Depreciation and amortization decreased slightly in 2021 as a result of several long-lived assets becoming fully depreciated.

Selling, general, and administrative expense in 2022 was consistent with 2021 and 2020.

During 2021, we recognized a gain of \$6.5 million on the sale of the Copper Bar business.

Climate Segment

The following table compares summary operating results for 2022, 2021, and 2020 for the businesses comprising our Climate segment:

<i>(In thousands)</i>				Percent Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Net sales	\$ 650,307	\$ 495,414	\$ 370,131	31.3 %	33.8 %
Operating income	188,067	85,536	56,802	119.9	50.6

Net sales for 2022 increased primarily as a result of an increase in volume and price in certain product lines, as well as incremental sales of \$33.3 million recorded by H&C Flex. These increases were partially offset by a decrease in sales of \$35.6 million as a result of the dispositions of FTP and STI in 2021. Net sales for 2021 increased primarily as a result of an increase in volume and price in certain product lines, as well as sales of \$48.9 million recorded by H&C Flex. These increases were partially offset by a decrease in sales of \$13.8 million as a result of the dispositions of FTP and STI in 2021.

The following tables compare cost of goods sold and operating expenses as dollar amounts and as a percent of net sales for 2022, 2021, and 2020:

<i>(In thousands)</i>	2022	2021	2020
Cost of goods sold	\$ 416,953	\$ 367,343	\$ 276,274
Depreciation and amortization	9,174	10,379	10,249
Selling, general, and administrative expense	36,113	29,327	26,806
Impairment charges	\$ —	\$ 2,829	\$ —
Operating expenses	\$ 462,240	\$ 409,878	\$ 313,329

	2022	2021	2020
Cost of goods sold	64.1 %	74.1 %	74.6 %
Depreciation and amortization	1.4	2.1	2.8
Selling, general, and administrative expense	5.6	6.0	7.3
Impairment charges	—	0.6	—
Operating expenses	71.1 %	82.8 %	84.7 %

Cost of goods sold increased in 2022, consistent with the increase in net sales. Gross margin as a percentage of sales was 35.9 percent compared with 25.9 percent in the prior year. The increase in gross margin percent reflects effective price management in response to significant inflation in wages, consumable, freight, and distribution costs, as well as fluctuations in material costs. Cost of goods sold increased in 2021, consistent with the increase in net sales. Depreciation and amortization decreased in 2022 as a result of long-lived assets of businesses sold. Depreciation and amortization in 2021 was consistent with 2020. Selling, general, and administrative expenses increased in 2022 as a result of (i) higher agent commissions of \$4.6 million, (ii) incremental expenses associated with H&C Flex of \$2.1 million, and (iii) higher employment costs, including incentive compensation, of \$1.8 million. These were partially offset by the absence of expenses associated with FTP and STI of \$2.4 million. Selling, general, and administrative expenses increased in 2021 as a result of (i) higher employment costs of \$2.7

million and (ii) expenses associated with H&C Flex of \$1.8 million. These were partially offset by the absence of expenses associated with FTP and STI of \$1.4 million.

During 2021, the segment recognized impairment charges on goodwill and long-lived assets of \$2.8 million.

LIQUIDITY AND CAPITAL RESOURCES

The following table presents selected financial information for 2022, 2021, and 2020:

<i>(In thousands)</i>	2022	2021	2020
Increase (decrease) in:			
Cash, cash equivalents, and restricted cash	\$ 374,920	\$ (37,000)	\$ 29,334
Short-term investments	217,863	—	—
Property, plant, and equipment, net	(5,612)	8,990	13,444
Total debt	154	(326,001)	(58,378)
Working capital, net of cash and current debt	176,700	141,525	38,855
Net cash provided by operating activities	723,943	311,701	245,073
Net cash (used in) provided by investing activities	(242,003)	29,073	(125,622)
Net cash used in financing activities	(102,655)	(376,722)	(92,264)

Cash Provided by Operating Activities

During 2022, net cash provided by operating activities was primarily attributable to (i) consolidated net income of \$662.8 million, (ii) a decrease in accounts receivable of \$82.7 million, (iii) depreciation and amortization of \$44.1 million, and (iv) stock-based compensation expense of \$17.8 million. These cash increases were partially offset by (i) a decrease in current liabilities of \$26.6 million, (ii) an increase in inventories of \$24.2 million, (iii) an increase in other assets of \$9.0 million, and (iv) income from unconsolidated affiliates of \$10.1 million.

During 2021, net cash provided by operating activities was primarily attributable to (i) consolidated net income of \$475.1 million, (ii) an increase in current liabilities of \$73.8 million, (iii) depreciation and amortization of \$45.7 million, and (iv) stock-based compensation expense of \$9.8 million. These cash increases were partially offset by (i) an increase in accounts receivable of \$124.7 million, (ii) an increase in inventories of \$119.5 million, and (iii) gains of \$57.8 million recorded on the sales of the FTP, STI, Die-Mold, and Copper Bar businesses. The fluctuations of accounts receivable, inventories, and current liabilities were primarily due to increased sales volume in certain businesses and higher material costs during 2021.

During 2020, net cash provided by operating activities was primarily attributable to (i) consolidated net income of \$143.6 million, (ii) an increase in current liabilities of \$74.1 million, (iii) depreciation and amortization of \$45.2 million, (iv) a decrease in other assets of \$20.6 million, (v) a non-cash charge related to the termination of the U.S. pension plan of \$11.6 million, (vi) losses from unconsolidated affiliates of \$10.2 million, (vii) stock-based compensation expense of \$8.6 million, and (viii) a decrease in inventories of \$5.2 million. These cash increases were partially offset by an increase in accounts receivable of \$76.4 million.

Cash (Used in) Provided by Investing Activities

The major components of net cash used in investing activities in 2022 included (i) the purchase of short-term investments of \$217.9 million and (ii) capital expenditures of \$37.6 million. These uses were partially offset by (i) proceeds from the sale of properties of \$7.9 million, (ii) insurance proceeds for property and equipment of \$3.4 million, and (iii) dividends received from unconsolidated affiliates of \$2.3 million.

The major components of net cash provided by investing activities in 2021 included (i) proceeds of \$81.9 million from the sale of the FTP, STI, and Copper Bar businesses, net of cash sold, and (ii) payments received on notes receivable of \$8.5 million. These sources were partially offset by (i) capital expenditures of \$31.8 million and (ii) \$30.2 million for the purchases of H&C Flex and Mueller Middle East, net of cash acquired.

The major components of net cash used in investing activities in 2020 included (i) \$72.6 million for the purchases of Kessler and STI, net of cash acquired, (ii) capital expenditures of \$43.9 million, and (iii) the issuance of notes receivable of \$9.3 million.

Cash Used in Financing Activities

For 2022, net cash used in financing activities consisted primarily of (i) \$55.8 million used for the payment of regular quarterly dividends to stockholders of the Company, (ii) \$38.1 million used for the repurchase of common stock, and (iii) \$7.2 million used for the payment of dividends to noncontrolling interests.

For 2021, net cash used in financing activities consisted primarily of (i) \$630.0 million used to reduce the debt outstanding under our Credit Agreement, (ii) \$290.2 million used for the redemption of the Subordinated Debentures, (iii) \$29.1 million used for the payment of regular quarterly dividends to stockholders of the Company, (iv) \$9.7 million used for the payment of dividends to noncontrolling interests, (v) \$5.1 million used for repayment of debt by Jungwoo-Mueller, and (vi) \$4.9 million used to repurchase common stock. These uses of cash were partially offset by the issuance of debt under our Credit Agreement of \$595.0 million.

For 2020, net cash used in financing activities consisted primarily of (i) \$245.0 million used to reduce the debt outstanding under our Credit Agreement, (ii) \$22.3 million used for the payment of regular quarterly dividends to stockholders of the Company, (iii) \$7.0 million used for the payment of contingent consideration related to ATCO, and (iv) \$5.6 million used to repurchase common stock. These uses of cash were partially offset by the issuance of debt under our Credit Agreement of \$190.0 million.

Liquidity and Outlook

We believe that cash provided by operations, funds available under the Credit Agreement, and cash on hand will be adequate to meet our liquidity needs, including working capital, capital expenditures, and debt payment obligations. Our current ratio was 4.4 to 1 as of December 31, 2022.

As of December 31, 2022, \$82.0 million of our cash and cash equivalents were held by foreign subsidiaries. The undistributed earnings of most of the foreign subsidiaries are considered to be permanently reinvested. These earnings could be remitted to the U.S. with a minimal tax cost. Accordingly, no additional income tax liability has been accrued with respect to these earnings or on any additional outside basis differences that may exist with respect to these entities.

We believe that cash held domestically, funds available through the Credit Agreement, and cash generated from U.S. based operations will be adequate to meet the future needs of our U.S. based operations.

Fluctuations in the cost of copper and other raw materials affect the Company's liquidity. Changes in material costs directly impact components of working capital, primarily inventories, accounts receivable, and accounts payable. The price of copper has fluctuated significantly and averaged approximately \$4.01 in 2022, \$4.24 in 2021, and \$2.80 in 2020.

We have significant environmental remediation obligations which we expect to pay over future years. Approximately \$8.3 million was spent during 2022 for environmental matters. As of December 31, 2022, we expect to spend \$4.0 million in 2023, \$2.0 million in 2024, \$0.8 million in 2025, \$0.7 million in 2026, \$0.7 million in 2027, and \$12.3 million thereafter for ongoing projects.

Cash used to fund pension and other postretirement benefit obligations was \$0.5 million in 2022 and \$0.6 million in 2021. We anticipate making contributions of approximately \$1.1 million to these plans in 2023.

The Company declared and paid a quarterly cash dividend of 10.0 cents per common share during each quarter of 2020, 13.0 cents per common share during each quarter of 2021, and 25.0 cents per common share during each quarter of 2022. Payment of dividends in the future is dependent upon our financial condition, cash flows, capital requirements, and other factors.

Capital Expenditures

During 2022 our capital expenditures were \$37.6 million. We anticipate investing approximately \$35.0 million to \$40.0 million for capital expenditures in 2023.

Long-Term Debt

The Company's Credit Agreement provides for an unsecured \$400.0 million revolving credit facility, which matures on March 31, 2026. Funds borrowed under the Credit Agreement may be used for working capital purposes and other general corporate purposes. In addition, the Credit Agreement provides a sublimit of \$50.0 million for the issuance of letters of credit, a sublimit of \$35.0 million for loans and letters of credit made in certain foreign currencies, and a swing line loan sublimit of \$25.0 million. Outstanding letters of credit and foreign currency loans reduce borrowing availability under the Credit Agreement. There were no borrowings outstanding under the Credit Agreement at December 31, 2022.

Jungwoo-Mueller has several secured revolving credit arrangements with a total borrowing capacity of KRW 20.0 billion (or approximately \$15.0 million). Borrowings are secured by the real property and equipment of Jungwoo-Mueller. There were no borrowings outstanding at Jungwoo-Mueller as of December 31, 2022.

As of December 31, 2022, the Company's total debt was \$2.0 million or 0.1 percent of its total capitalization.

Covenants contained in the Company's financing obligations require, among other things, the maintenance of minimum levels of tangible net worth and the satisfaction of certain minimum financial ratios. As of December 31, 2022, we were in compliance with all of our debt covenants.

Share Repurchase Program

The Company's Board of Directors has extended, until July 2023, its authorization to repurchase up to 20 million shares of the Company's common stock through open market transactions or through privately negotiated transactions. We may cancel, suspend, or extend the time period for the repurchase of shares at any time. Any repurchases will be funded primarily through existing cash and cash from operations. The Company may hold any shares repurchased in treasury or use a portion of the repurchased shares for stock-based compensation plans, as well as for other corporate purposes. From its initial authorization in 1999 through December 31, 2022, the Company had repurchased approximately 7.2 million shares under this authorization.

CONTRACTUAL CASH OBLIGATIONS

The following table presents payments due by the Company under contractual obligations with minimum firm commitments as of December 31, 2022:

(In millions)	Total	Payments Due by Year			
		2023	2024-2025	2026-2027	Thereafter
Total debt	\$ 2.7	\$ 0.8	\$ 0.4	\$ —	\$ 1.5
Operating and capital leases	26.0	6.3	8.1	6.0	5.6
Heavy machinery and equipment	12.5	12.5	—	—	—
Purchase commitments ⁽¹⁾	984.5	984.5	—	—	—
Transition tax on accumulated foreign earnings	1.9	—	1.9	—	—
Total contractual cash obligations	\$ 1,027.6	\$ 1,004.1	\$ 10.4	\$ 6.0	\$ 7.1

⁽¹⁾ This includes contractual supply commitments totaling \$916.1 million at year-end prices; these contracts contain variable pricing based on Comex and the London Metals Exchange quoted prices. These commitments are for purchases of raw materials, primarily copper cathode and brass scrap, that are expected to be consumed in the ordinary course of business.

The above obligations will be satisfied with existing cash, funds available under the Credit Agreement, and cash generated by operations. The Company has no off-balance sheet financing arrangements.

MARKET RISKS

The Company is exposed to market risks from changes in raw material and energy costs, interest rates, and foreign currency exchange rates. To reduce such risks, we may periodically use financial instruments. Hedging transactions are authorized and executed pursuant to policies and procedures. Further, we do not buy or sell financial instruments for trading purposes. A discussion of the Company's accounting for derivative instruments and hedging activities is included in "[Note 1 - Summary of Significant Accounting Policies](#)" in the Notes to Consolidated Financial Statements.

Cost and Availability of Raw Materials and Energy

Raw materials, primarily copper and brass, represent the largest component of the Company's variable costs of production. The cost of these materials is subject to global market fluctuations caused by factors beyond our control. Significant increases in the cost of metal, to the extent not reflected in prices for our finished products, or the lack of availability could materially and adversely affect our business, results of operations and financial condition.

The Company occasionally enters into forward fixed-price arrangements with certain customers. We may utilize futures contracts to hedge risks associated with these forward fixed-price arrangements. We may also utilize futures contracts to manage price risk associated with inventory. Depending on the nature of the hedge, changes in the fair value of the futures contracts will either be offset against the change in fair value of the inventory through earnings or recognized as a component of accumulated other comprehensive income (AOCI) in equity and reflected in earnings upon the sale of inventory. Periodic value fluctuations of the contracts generally offset the value fluctuations of the underlying fixed-price transactions or inventory. At December 31, 2022, we held open futures contracts to purchase approximately \$91.8 million of copper over the next nine months related to fixed-price sales orders and to sell approximately \$10.7 million of copper over the next five months related to copper inventory.

We may enter into futures contracts or forward fixed-price arrangements with certain vendors to manage price risk associated with natural gas purchases. The effective portion of gains and losses with respect to positions are deferred in equity as a component of AOCI and reflected in earnings upon consumption of natural gas. Periodic value fluctuations of the futures contracts generally offset the value fluctuations of the underlying natural gas prices. There were no open futures contracts to purchase natural gas at December 31, 2022.

Interest Rates

The Company had no variable-rate debt outstanding at December 31, 2022 and December 25, 2021. At this borrowing level, a hypothetical 10 percent increase in interest rates would have had an insignificant unfavorable impact on our pre-tax earnings and cash flows. The primary interest rate exposure on variable-rate debt is based on the Secured Overnight Financing Rate (SOFR).

Foreign Currency Exchange Rates

Foreign currency exposures arising from transactions include firm commitments and anticipated transactions denominated in a currency other than an entity's functional currency. The Company and its subsidiaries generally enter into transactions denominated in their respective functional currencies. We may utilize certain futures or forward contracts with financial institutions to hedge foreign currency transactional exposures. Gains and losses with respect to these positions are deferred in equity as a component of AOCI and reflected in earnings upon collection of receivables or payment of commitments. At December 31, 2022, we had open forward contracts with a financial institution to sell approximately 4.6 million euros, 36.4 million Swedish kronor, and 12.6 million Norwegian kroner through April 2023.

The Company's primary foreign currency exposure arises from foreign-denominated revenues and profits and their translation into U.S. dollars. The primary currencies to which we are exposed include the Canadian dollar, the British pound sterling, the Mexican peso, the South Korean won, and the Bahraini dinar. The Company generally views its investments in foreign subsidiaries with a functional currency other than the U.S. dollar as long-term. As a result, we generally do not hedge these net investments. The net investment in foreign subsidiaries translated into U.S. dollars using the year-end exchange rates was \$338.6 million at December 31, 2022 and \$362.1 million at December 25, 2021. The potential loss in value of the Company's net investment in foreign subsidiaries resulting from a hypothetical 10 percent adverse change in quoted foreign currency exchange rates at December 31, 2022 and December 25, 2021 amounted to \$33.9 million and \$36.2 million, respectively. This change would be reflected in the foreign currency translation component of AOCI in the equity section of our Consolidated Balance Sheets until the foreign subsidiaries are sold or otherwise disposed.

We have significant investments in foreign operations whose functional currency is the British pound sterling, the Mexican peso, the Canadian dollar, the South Korean won, and the Bahraini dinar. In 2022, the value of the British pound decreased approximately eleven percent, the Mexican peso increased approximately six percent, the Canadian dollar decreased approximately six percent, the South Korean won decreased approximately seven percent, and the Bahraini dinar remained consistent, relative to the U.S. dollar. The resulting net foreign currency translation losses were included in calculating net other comprehensive loss for the year ended December 31, 2022 and were recorded as a component of AOCI.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The Company's accounting policies are more fully described in "[Note 1 - Summary of Significant Accounting Policies](#)" in the Notes to Consolidated Financial Statements. As disclosed in Note 1, the preparation of financial statements in conformity with general accepted accounting principles in the United States requires management to make estimates and assumptions about future events that affect amounts reported in the financial statements and accompanying notes. Actual results could differ significantly from those estimates. Management believes the following discussion addresses our most critical accounting policies, which are those that are most important to the portrayal of the Company's financial condition and results of operations and require management's most difficult, subjective, and complex judgments.

Inventory Valuation Reserves

Our inventories are valued at the lower-of-cost-or-market. The market price of copper cathode and scrap are subject to volatility. During periods when open market prices decline below net realizable value, the Company may need to provide an allowance to reduce the carrying value of its inventory. In addition, certain items in inventory may be considered excess or obsolete and, as such, we may establish an allowance to reduce the carrying value of those items to their net realizable value. Changes in these estimates related to the value of inventory, if any, may result in a materially adverse impact on our reported financial position or results of operations. The Company recognizes the impact of any changes in estimates, assumptions, and judgments in income in the period in which they are determined.

As of December 31, 2022 and December 25, 2021, our inventory valuation reserves were \$14.3 million and \$10.1 million, respectively. The expense recognized in each of these periods was immaterial to our Consolidated Financial Statements.

Impairment of Goodwill

As of December 31, 2022, we had \$157.6 million of recorded goodwill from our business acquisitions, representing the excess of the purchase price over the fair value of the net assets we have acquired.

Goodwill is subject to impairment testing, which is performed annually as of the first day of the fourth quarter unless circumstances indicate the need to accelerate the timing of the tests. These circumstances include a significant change in the business climate, operating performance indicators, competition, or sale or disposition of a significant portion of one of our businesses. In our evaluation of goodwill impairment, we perform a qualitative assessment at the reporting unit level that requires management judgment and the use of estimates to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative assessment is not conclusive, management compares the fair value of a reporting unit with its carrying amount and will recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, not to exceed the total amount of goodwill allocated to the reporting unit.

We identify reporting units by evaluating components of our operating segments and combining those components with similar economic characteristics. Reporting units with significant recorded goodwill include Domestic Piping Systems, B&K LLC, Great Lakes, Heatlink Group, European Operations, Jungwoo-Mueller, Mueller Middle East, Westermeyer, and Flex Duct.

The fair value of each reporting unit is estimated using a combination of the income and market approaches, incorporating market participant considerations and management's assumptions on revenue growth rates, operating margins, discount rates and expected capital expenditures. Estimates used by management can significantly affect the outcome of the impairment test. Changes in forecasted operating results and other assumptions could materially affect these estimates.

We evaluated each reporting unit during the fourth quarters of 2022 and 2021, as applicable. With the exception of the Turbotec reporting unit, the estimated fair value of each of these reporting units exceeded its carrying values in 2022 and 2021, and we do not believe that any of these reporting units were at risk of impairment as of December 31, 2022. During the third quarter of 2021, the Company recognized an impairment charge of \$2.1 million related to Turbotec, reported within the Climate segment.

Pension Benefit Plans

We sponsor several qualified and nonqualified pension benefit plans in certain foreign locations. We recognize the overfunded or underfunded status of the plans as an asset or liability in the Consolidated Balance Sheets with changes in the funded status recorded through comprehensive income in the year in which those changes occur. The obligations for these plans are actuarially determined and affected by assumptions, including discount rates, expected long-term return on plan assets for defined benefit pension plans, and certain employee-related factors, such as retirement age and mortality. We evaluate the assumptions periodically and makes adjustments as necessary.

The expected return on plan assets is determined using the market value of plan assets. Differences between assumed and actual returns are amortized to the market value of assets on a straight-line basis over the average remaining service period of the plan participants using the corridor approach. The corridor approach defers all actuarial gains and losses resulting from variances between actual results and actuarial assumptions. These unrecognized gains and losses are amortized when the net gains and losses exceed 10 percent of the greater of the market value of the plan assets or the projected benefit obligation. The amount in excess of the corridor is amortized over the average remaining service period of the plan participants. For 2022, the average remaining service period for the pension plans was 11.5 years.

We determine the discount rate (which is required to be the rate at which the projected benefit obligation could be effectively settled as of the measurement date) with the assistance of actuaries, who calculate the yield available on high quality corporate bonds of a term that reflects the maturity and duration of expected benefit payments.

Environmental Reserves

We recognize an environmental reserve when it is probable that a loss is likely to occur and the amount of the loss is reasonably estimable. We estimate the duration and extent of our remediation obligations based upon reports of outside consultants, internal and third party estimates and analyses of cleanup costs and ongoing monitoring costs, communications with regulatory agencies, and changes in environmental law. If we were to determine that our estimates of the duration or extent of our environmental obligations were no longer accurate, we would adjust our environmental reserve accordingly in the period that such determination is made. Estimated future expenditures for environmental remediation are not discounted to their present value.

Environmental expenses that relate to ongoing operations are included as a component of cost of goods sold. Environmental expenses related to non-operating properties are presented below operating income in the Consolidated Statements of Income.

Income Taxes

We estimate total income tax expense based on domestic and international statutory income tax rates in the tax jurisdictions where we operate, permanent differences between financial reporting and tax reporting, and available credits and incentives.

Deferred income tax assets and liabilities are recognized for the future tax effects of temporary differences between the treatment of certain items for financial statement and tax purposes using tax rates in effect for the years in which the differences are expected to reverse. Realization of certain components of deferred tax assets is dependent upon the occurrence of future events.

Valuation allowances are recorded when, in the opinion of management, it is more likely than not that all or a portion of the deferred tax assets will not be realized. These valuation allowances can be impacted by changes in tax laws, changes to statutory tax rates, and future taxable income levels, and are based on our judgment, estimates, and assumptions. In the event we were to determine that we would not be able to realize all or a portion of the net deferred tax assets in the future, we would increase the valuation allowance through a charge to income tax expense in the period that such determination is made. Conversely, if we were to determine that we would be able to realize our deferred tax assets in the future, in excess of the net carrying amounts, we would decrease the recorded valuation allowance through a decrease to income tax expense in the period that such determination is made.

We record liabilities for known or anticipated tax issues based on our analysis of whether, and the extent to which, additional taxes will be due. These unrecognized tax benefits are retained until the associated uncertainty is resolved. Tax benefits for uncertain tax positions that are recognized in the Consolidated Financial Statements are measured as the largest amount of benefit, determined on a cumulative probability basis, that is more likely than not to be realized upon ultimate settlement. To the extent we prevail in matters for which a liability for an uncertain tax position is established or are required to pay amounts in excess of the liability, our effective tax rate in a given period may be materially affected.

New Accounting Pronouncements

See [“Note 1 – Summary of Significant Accounting Policies”](#) in our Consolidated Financial Statements.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This Annual Report contains various forward-looking statements and includes assumptions concerning the Company’s operations, future results, and prospects. These forward-looking statements are based on current expectations and are subject to risk and uncertainties, and may be influenced by factors that could cause actual outcomes and results to be materially different from those predicted. The forward-looking statements reflect knowledge and information available as of the date of preparation of the Annual Report, and the Company undertakes no obligation to update these forward-looking statements. We identify the forward-looking statements by using the words “anticipates,” “believes,” “expects,” “intends” or similar expressions in such statements.

In connection with the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995, the Company provides the following cautionary statement identifying important economic, political, and technological factors, among others, which could cause actual results or events to differ materially from those set forth in or implied by the forward-looking statements and related assumptions. In addition to those factors discussed under “Risk Factors” in this Annual Report on Form 10-K, such factors include: (i) the current and projected future business environment, including interest rates and capital and consumer spending; (ii) the domestic housing and commercial construction industry environment; (iii) availability and price fluctuations in commodities (including copper, natural gas, and other raw materials, including crude oil that indirectly affects plastic resins); (iv) competitive factors and competitor responses to the Company’s initiatives; (v) stability of government laws and regulations, including taxes; (vi) availability of financing; and (vii) continuation of the environment to make acquisitions, domestic and foreign, including regulatory requirements and market values of candidates.

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF INCOME
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

(In thousands, except per share data)

	2022	2021	2020
Net sales	\$ 3,982,455	\$ 3,769,345	\$ 2,398,043
Cost of goods sold	2,864,862	2,938,989	1,966,161
Depreciation and amortization	43,731	45,390	44,843
Selling, general, and administrative expense	203,086	184,052	159,483
Litigation settlement, net	—	—	(22,053)
Gain on sale of businesses	—	(57,760)	—
Gain on sale of assets, net	(6,373)	—	—
Impairment charges	—	2,829	3,771
Operating income	877,149	655,845	245,838
Interest expense	(810)	(7,709)	(19,247)
Redemption premium	—	(5,674)	—
Environmental expense	(1,298)	(5,053)	(4,454)
Pension plan termination expense	(13,100)	—	(17,835)
Other income, net	14,090	3,730	4,887
Income before income taxes	876,031	641,139	209,189
Income tax expense	(223,322)	(165,858)	(55,321)
Income (loss) from unconsolidated affiliates, net of foreign tax	10,111	(157)	(10,219)
Consolidated net income	662,820	475,124	143,649
Net income attributable to noncontrolling interests	(4,504)	(6,604)	(4,156)
Net income attributable to Mueller Industries, Inc.	\$ 658,316	\$ 468,520	\$ 139,493
Weighted average shares for basic earnings per share	55,779	56,011	55,821
Effect of dilutive stock-based awards	776	787	569
Adjusted weighted average shares for diluted earnings per share	56,555	56,798	56,390
Basic earnings per share	\$ 11.80	\$ 8.36	\$ 2.50
Diluted earnings per share	\$ 11.64	\$ 8.25	\$ 2.47
Dividends per share	\$ 1.00	\$ 0.52	\$ 0.40

See accompanying notes to consolidated financial statements.

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

(In thousands)

	2022	2021	2020
Consolidated net income	\$ 662,820	\$ 475,124	\$ 143,649
Other comprehensive (loss) income, net of tax:			
Foreign currency translation	(30,382)	(6,730)	10,350
Net change with respect to derivative instruments and hedging activities, net of tax of \$(200), \$47, and \$(146)	683	(181)	508
Net change in pension and postretirement obligation adjustments, net of tax of \$(4,381), \$(1,379), and \$(1,560)	12,722	5,703	4,652
Attributable to unconsolidated affiliates, net of tax of \$(784), \$(284), and \$38	2,702	978	(132)
Total other comprehensive (loss) income, net	(14,275)	(230)	15,378
Consolidated comprehensive income	648,545	474,894	159,027
Comprehensive income attributable to noncontrolling interests	(1,057)	(4,838)	(5,647)
Comprehensive income attributable to Mueller Industries, Inc.	\$ 647,488	\$ 470,056	\$ 153,380

See accompanying notes to consolidated financial statements.

MUELLER INDUSTRIES, INC.
CONSOLIDATED BALANCE SHEETS
As of December 31, 2022 and December 25, 2021

(In thousands, except share data)

	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 461,018	\$ 87,924
Short-term investments	217,863	—
Accounts receivable, less allowance for doubtful accounts of \$2,687 in 2022 and \$2,590 in 2021	380,352	471,859
Inventories	448,919	430,244
Other current assets	26,501	28,976
Total current assets	1,534,653	1,019,003
Property, plant, and equipment, net	379,950	385,562
Operating lease right-of-use assets	22,892	23,510
Goodwill, net	157,588	171,330
Intangible assets, net	54,785	61,714
Investment in unconsolidated affiliates	72,364	61,133
Other noncurrent assets	20,167	6,684
Total Assets	\$ 2,242,399	\$ 1,728,936
Liabilities		
Current liabilities:		
Current portion of debt	\$ 811	\$ 811
Accounts payable	128,000	180,793
Accrued wages and other employee costs	61,915	49,629
Current portion of operating lease liabilities	4,942	6,015
Other current liabilities	152,627	145,191
Total current liabilities	348,295	382,439
Long-term debt, less current portion	1,218	1,064
Pension liabilities	4,078	5,572
Postretirement benefits other than pensions	8,977	11,961
Environmental reserves	16,380	17,678
Deferred income taxes	16,258	14,347
Noncurrent operating lease liabilities	16,880	17,099
Other noncurrent liabilities	16,349	21,813
Total liabilities	428,435	471,973
Equity		
Mueller Industries, Inc. stockholders' equity:		
Preferred stock - \$1.00 par value; shares authorized 5,000,000; none outstanding	—	—
Common stock - \$.01 par value; shares authorized 100,000,000; issued 80,183,004; outstanding 57,001,617 in 2022 and 57,295,961 in 2021	802	802
Additional paid-in capital	297,270	286,208
Retained earnings	2,059,796	1,458,489
Accumulated other comprehensive loss	(64,175)	(53,347)
Treasury common stock, at cost	(502,779)	(470,034)
Total Mueller Industries, Inc. stockholders' equity	1,790,914	1,222,118
Noncontrolling interests	23,050	34,845
Total equity	1,813,964	1,256,963
Commitments and contingencies	—	—
Total Liabilities and Equity	\$ 2,242,399	\$ 1,728,936

See accompanying notes to consolidated financial statements.

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

(In thousands)

	2022	2021	2020
Operating activities:			
Consolidated net income	\$ 662,820	\$ 475,124	\$ 143,649
Reconciliation of consolidated net income to net cash provided by operating activities:			
Depreciation	38,157	39,120	38,715
Amortization of intangibles	5,574	6,270	6,128
Amortization of debt issuance costs	357	265	319
(Income) loss from unconsolidated affiliates	(10,111)	157	10,219
Insurance proceeds - noncapital related	1,646	—	—
Redemption premium	—	5,674	—
Stock-based compensation expense	17,801	9,822	8,570
Provision for doubtful accounts receivable	323	1,216	1,208
Non-cash pension plan termination expense	—	—	11,642
(Gain) loss on disposals of assets	(6,373)	(769)	132
Gain on sale of businesses	—	(57,760)	—
Impairment charges	—	2,829	3,771
Deferred income tax (benefit) expense	(3,880)	7,413	(4,046)
Changes in assets and liabilities, net of effects of businesses acquired and sold:			
Receivables	82,713	(124,708)	(76,404)
Inventories	(24,189)	(119,514)	5,207
Other assets	(8,971)	919	20,609
Current liabilities	(26,633)	73,755	74,097
Other liabilities	(7,564)	(5,467)	(1,142)
Other, net	2,273	(2,645)	2,399
Net cash provided by operating activities	723,943	311,701	245,073

See accompanying notes to consolidated financial statements.

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(continued)
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

(In thousands)

	2022	2021	2020
Investing activities:			
Proceeds from sale of assets, net of cash transferred	7,850	2,302	181
Purchase of short-term investments	(217,863)	—	—
Acquisition of businesses, net of cash acquired	—	(30,206)	(72,648)
Proceeds from sale of business, net of cash sold	—	81,884	—
Capital expenditures	(37,639)	(31,833)	(43,885)
Payment received for (issuance of) notes receivable	—	8,539	(9,270)
Insurance proceeds - capital related	3,354	—	—
Dividends from unconsolidated affiliates	2,295	—	—
Investments in unconsolidated affiliates	—	(1,613)	—
Net cash (used in) provided by investing activities	<u>(242,003)</u>	<u>29,073</u>	<u>(125,622)</u>
Financing activities:			
Dividends paid to stockholders of Mueller Industries, Inc.	(55,787)	(29,137)	(22,341)
Dividends paid to noncontrolling interests	(7,248)	(9,722)	—
Issuance of long-term debt	—	595,000	190,038
Repayments of long-term debt	(204)	(920,610)	(246,898)
Issuance (repayment) of debt by consolidated joint ventures, net	67	(5,113)	(259)
Repurchase of common stock	(38,054)	(4,864)	(5,574)
Payment of contingent consideration	—	(1,250)	(7,000)
Net cash (used) received to settle stock-based awards	(1,429)	85	(230)
Debt issuance costs	—	(1,111)	—
Net cash used in financing activities	<u>(102,655)</u>	<u>(376,722)</u>	<u>(92,264)</u>
Effect of exchange rate changes on cash	<u>(4,365)</u>	<u>(1,052)</u>	<u>2,147</u>
Increase (decrease) in cash, cash equivalents, and restricted cash	374,920	(37,000)	29,334
Cash, cash equivalents, and restricted cash at the beginning of the year	<u>90,376</u>	<u>127,376</u>	<u>98,042</u>
Cash, cash equivalents, and restricted cash at the end of the year	<u>\$ 465,296</u>	<u>\$ 90,376</u>	<u>\$ 127,376</u>

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

<i>(In thousands)</i>	2022		2021		2020	
	Shares	Amount	Shares	Amount	Shares	Amount
Common stock:						
Balance at beginning of year	80,183	\$ 802	80,183	\$ 802	80,183	\$ 802
Balance at end of year	<u>80,183</u>	<u>\$ 802</u>	<u>80,183</u>	<u>\$ 802</u>	<u>80,183</u>	<u>\$ 802</u>
Additional paid-in capital:						
Balance at beginning of year		\$ 286,208		\$ 280,051		\$ 278,609
Acquisition (issuance) of shares under incentive stock option plans		830		720		(745)
Stock-based compensation expense		17,801		9,822		8,570
Issuance of restricted stock		<u>(7,569)</u>		<u>(4,385)</u>		<u>(6,383)</u>
Balance at end of year		<u>\$ 297,270</u>		<u>\$ 286,208</u>		<u>\$ 280,051</u>
Retained earnings:						
Balance at beginning of year		\$ 1,458,489		\$ 1,019,694		\$ 903,070
Net income attributable to Mueller Industries, Inc.		658,316		468,520		139,493
Dividends paid or payable to stockholders of Mueller Industries, Inc.		<u>(57,009)</u>		<u>(29,725)</u>		<u>(22,869)</u>
Balance at end of year		<u>\$ 2,059,796</u>		<u>\$ 1,458,489</u>		<u>\$ 1,019,694</u>
Accumulated other comprehensive loss:						
Balance at beginning of year		\$ (53,347)		\$ (54,883)		\$ (68,770)
Total other comprehensive (loss) income attributable to Mueller Industries, Inc.		<u>(10,828)</u>		<u>1,536</u>		<u>13,887</u>
Balance at end of year		<u>\$ (64,175)</u>		<u>\$ (53,347)</u>		<u>\$ (54,883)</u>

MUELLER INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(continued)

Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

<i>(In thousands)</i>	2022		2021		2020	
	Shares	Amount	Shares	Amount	Shares	Amount
Treasury stock:						
Balance at beginning of year	22,887	\$ (470,034)	23,096	\$ (468,919)	23,234	\$ (470,243)
Issuance of shares under incentive stock option plans	(77)	(2,260)	(88)	(636)	(71)	515
Repurchase of common stock	719	(38,054)	97	(4,864)	248	(5,574)
Issuance of restricted stock	(348)	7,569	(218)	4,385	(315)	6,383
Balance at end of year	23,181	\$ (502,779)	22,887	\$ (470,034)	23,096	\$ (468,919)
Noncontrolling interests:						
Balance at beginning of year		\$ 34,845		\$ 24,315		\$ 18,668
Purchase of Mueller Middle East		(5,604)		15,414		—
Dividends paid to noncontrolling interests		(7,248)		(9,722)		—
Net income attributable to noncontrolling interests		4,504		6,604		4,156
Foreign currency translation		(3,447)		(1,766)		1,491
Balance at end of year		\$ 23,050		\$ 34,845		\$ 24,315

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

Note 1 – Summary of Significant Accounting Policies

Nature of Operations

The principal business of Mueller Industries, Inc. is the manufacture and sale of copper tube and fittings; line sets; PEX plastic tube and fittings; steel nipples; brass rod, bar, and shapes; aluminum and brass forgings; aluminum impact extrusions; compressed gas valves; refrigeration valves and fittings; pressure vessels; coaxial heat exchangers; and insulated flexible duct systems. The Company also resells brass and plastic plumbing valves, plastic fittings, malleable iron fittings, faucets, and plumbing specialty products. The Company markets its products to the HVAC, plumbing, refrigeration, hardware, and other industries. Mueller's operations are located throughout the United States and in Canada, Mexico, Great Britain, South Korea, the Middle East, and China.

Fiscal Years

The Company's fiscal year ends on the last Saturday of December and consisted of 53 weeks in 2022 and 52 weeks in 2021 and 2020. These dates were December 31, 2022, December 25, 2021, and December 26, 2020.

Basis of Presentation

The Consolidated Financial Statements include the accounts of Mueller Industries, Inc. and its majority-owned subsidiaries. The noncontrolling interests represent a private ownership interest of 40 percent of Jungwoo Metal Ind. Co., LTD (Jungwoo-Mueller) and 45 percent of Mueller Middle East BSC (Mueller Middle East).

Revenue Recognition

Given the nature of the Company's business and product offerings, sales transactions with customers are generally comprised of a single performance obligation that involves delivery of the products identified in the contracts with customers. Performance obligations are generally satisfied at the point in time of shipment and payment is generally due within 60 days. Variable consideration is estimated for future rebates on certain product lines and product returns. The Company records variable consideration as an adjustment to the transaction price in the period it is incurred. Since variable consideration is settled within a short period of time, the time value of money is not significant. The cost of shipping product to customers is expensed as incurred as a component of cost of goods sold.

The Company's Domestic Piping Systems Group engages in certain transactions where it acts as an agent. Revenue from these transactions is recorded on a net basis.

See "[Note 3 – Segment Information](#)" for additional information on disaggregation of revenue from contracts with customers.

Acquisitions

Accounting for acquisitions requires the Company to recognize separately from goodwill the assets acquired and liabilities assumed at their acquisition date fair values. Goodwill is measured as the excess of the purchase price over the net amount allocated to the identifiable assets acquired and liabilities assumed. While management uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, the estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. The operating results generated by the acquired businesses are included in the Consolidated Statements of Income from their respective dates of acquisition. Acquisition related costs are expensed as incurred. See "[Note 2 – Acquisitions & Dispositions](#)" for additional information.

Cash Equivalents and Restricted Cash

Temporary investments with original maturities of three months or less are considered to be cash equivalents. These investments are stated at cost. At December 31, 2022 and December 25, 2021, temporary investments consisted of money market mutual funds, commercial paper, bank repurchase agreements, and U.S. and foreign government securities totaling approximately \$329.4 million and \$1.4 million, respectively.

Amounts included in restricted cash relate to required deposits in brokerage accounts that facilitate the Company's hedging activities as well as imprest funds for the Company's self-insured workers' compensation program. See "[Note 4 – Cash, Cash Equivalents, and Restricted Cash](#)" for additional information.

Short-Term Investments

The fair value of short-term investments at December 31, 2022, consisting of U.S. treasury bills with maturities exceeding three months at the time of purchase, approximates the carrying value on that date. These treasury bills are stated at fair value and are classified as trading securities. The fair value of treasury bills is classified as level 1 within the fair value hierarchy. This classification is defined as a fair value determined using observable inputs that reflect quoted prices in active markets for identical assets.

Allowance for Doubtful Accounts

The Company routinely grants credit to many of its customers without collateral. The risk of credit loss in trade receivables is substantially mitigated by the credit evaluation process. The Company provides an allowance for receivables that may not be fully collected. In circumstances where the Company is aware of a customer's inability to meet their financial obligations (e.g., bankruptcy filings or substantial credit rating downgrades), it records an allowance for doubtful accounts against amounts due to reduce the net recognized receivable to the amount it believes most likely will be collected. For all other customers, the Company recognizes an allowance for doubtful accounts based on its historical collection experience and the impact of current economic conditions. If circumstances change (e.g., greater than expected defaults or an unexpected material change in a major customer's ability to meet their financial obligations), the Company could change its estimate of the recoverability of amounts due by a material amount. Historically, credit losses have been within management's expectations. The balance for uncollectible accounts was \$2.7 million and \$2.6 million as of December 31, 2022 and December 25, 2021, respectively.

Inventories

The Company's inventories are valued at the lower-of-cost-or-market. The material component of its U.S. copper tube and copper fittings inventories is valued on a LIFO basis and the non-material components of U.S. copper tube and copper fittings inventories are valued on a FIFO basis. The material component of its U.K. and Canadian copper tube inventories are valued on a FIFO basis. The material component of its brass rod and forgings inventories are valued on a FIFO basis. Certain inventories are valued on an average cost basis. Elements of cost in finished goods inventory in addition to the cost of material include depreciation, amortization, utilities, maintenance, production wages, and transportation costs.

The market price of copper cathode and scrap is subject to volatility. During periods when open market prices decline below net book value, the Company may need to provide an allowance to reduce the carrying value of its inventory. In addition, certain items in inventory may be considered obsolete and, as such, the Company may establish an allowance to reduce the carrying value of those items to their net realizable value. Changes in these estimates related to the value of inventory, if any, may result in a materially adverse impact on the Company's reported financial position or results of operations. The Company recognizes the impact of any changes in estimates, assumptions, and judgments in income in the period in which it is determined. See "[Note 5 – Inventories](#)" for additional information.

Leases

The Company leases certain manufacturing facilities, distribution centers, office space, and equipment. Leases with an initial term of twelve months or less are not recorded on the balance sheet; expense for these leases is recognized on a straight line-basis over the term of the lease. Most of the Company's leases include one or more options to renew up to five years and have remaining terms of one to 15 years. These options are not included in the Company's valuation of the right-of-use assets as the Company is not reasonably certain to exercise the options.

The Company has certain vehicle leases that are financing; however, these leases are deemed immaterial for disclosure. See "[Note 8 – Leases](#)" for additional information.

Property, Plant, and Equipment

Property, plant, and equipment is stated at cost less accumulated depreciation. Expenditures for major additions and improvements are capitalized, while minor replacements, maintenance, and repairs are charged to expense as incurred. Depreciation of buildings, machinery, and equipment is provided on the straight-line method over the estimated useful lives ranging from 20 to 40 years for buildings and five to 20 years for machinery and equipment. Leasehold improvements are amortized over the lesser of their useful life or the remaining lease term.

The Company continually evaluates these assets to determine whether events or changes in circumstances have occurred that may warrant revision of the estimated useful life or whether the remaining balance should be evaluated for possible impairment. See "[Note 9 – Property, Plant, and Equipment, Net](#)" for additional information.

Goodwill

Goodwill is recognized for the excess of the purchase price over the fair value of tangible and identifiable intangible net assets of businesses acquired. Several factors give rise to goodwill in business acquisitions, such as the expected benefit from synergies of the combination and the existing workforce of the acquired business. Goodwill is evaluated annually for possible impairment as of the first day of the fourth quarter unless circumstances indicate the need to accelerate the timing of the evaluation. In the evaluation of goodwill impairment, management performs a qualitative assessment to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative assessment is not conclusive, management compares the fair value of a reporting unit with its carrying amount and will recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, not to exceed the total amount of goodwill allocated to the reporting unit.

Fair value for the Company's reporting units is determined using a combination of the income and market approaches (level 3 within the fair value hierarchy), incorporating market participant considerations and management's assumptions on revenue growth rates, operating margins, discount rates and expected capital expenditures. The market approach measures the fair value of a business through the analysis of publicly traded companies or recent sales of similar businesses. The income approach uses a discounted cash flow model to estimate the fair value of reporting units based on expected cash flows (adjusted for capital investment required to support operations) and a terminal value. This cash flow stream is discounted to its present value to arrive at a fair value for each reporting unit. Future earnings are estimated using the Company's most recent annual projections, applying a growth rate to future periods. Those projections are directly impacted by the condition of the markets in which the Company's businesses participate. The discount rate selected for the reporting units is generally based on rates of return available for comparable companies at the date of valuation. Fair value determinations may include both internal and third-party valuations. See "[Note 10 – Goodwill and Other Intangible Assets](#)" for additional information.

Investments in Unconsolidated Affiliates

Tecumseh

The Company owns a 50 percent interest in an unconsolidated affiliate that acquired Tecumseh Products Company (Tecumseh) and an entity that provides financing to Tecumseh. This investment is recorded using the equity method of accounting, as the Company can exercise significant influence but does not own a majority equity interest or otherwise control the entity. Under the equity method of accounting, this investment is stated at initial cost and is adjusted for subsequent additional investments and the Company's proportionate share of earnings or losses and distributions.

The Company records its proportionate share of the investee's net income or loss, net of foreign taxes, one quarter in arrears as income (loss) from unconsolidated affiliates, net of foreign tax, in the Consolidated Statements of Income. The Company's proportionate share of the investee's other comprehensive income (loss), net of income taxes, is recorded in the Consolidated Statements of Comprehensive Income and Consolidated Statements of Changes in Equity. The U.S. tax effect of the Company's proportionate share of Tecumseh's income or loss is recorded in income tax expense in the Consolidated Statements of Income. In general, the equity investment in unconsolidated affiliates is equal to the current equity investment less the investees' net accumulated losses.

Retail Distribution

The Company acquired a 17 percent noncontrolling equity interest in a limited liability company in the retail distribution business by contributing the outstanding common stock of Die-Mold in exchange for the equity method interest. The transaction was recorded as a deconsolidation of a subsidiary and the recognition of an equity method investment at fair value,

as described in [“Note 2 - Acquisitions and Dispositions.”](#) This investment is recorded using the equity method of accounting. The Company records its proportionate share of the investees’ net income or loss one month in arrears as income (loss) from unconsolidated affiliates in the Consolidated Statements of Income. The Company’s proportionate share of the investees’ other comprehensive income (loss), net of income taxes, is recorded in the Consolidated Statements of Comprehensive Income and Consolidated Statements of Changes in Equity.

The investments in unconsolidated affiliates are assessed periodically for impairment and written down when the carrying amount is not considered fully recoverable. See [“Note 11 – Investments in Unconsolidated Affiliates”](#) for additional information.

Self-Insurance Accruals

The Company is primarily self-insured for workers’ compensation claims and benefits paid under certain employee health care programs. Accruals are primarily based on estimated undiscounted cost of claims, which includes incurred but not reported claims, and are classified as accrued wages and other employee costs.

Pension Benefit Plans

The Company sponsors several qualified and nonqualified pension benefit plans in certain foreign locations. The Company recognizes the overfunded or underfunded status of the plans as an asset or liability in the Consolidated Balance Sheets with changes in the funded status recorded through comprehensive income in the year in which those changes occur. The obligations for these plans are determined by actuaries and affected by the assumptions, including discount rates, expected long-term return on plan assets for defined benefit pension plans, and certain employee-related factors, such as retirement age and mortality. The Company evaluates its assumptions periodically and makes adjustments as necessary.

The expected return on plan assets is determined using the market value of plan assets. Differences between assumed and actual returns are amortized to the market value of assets on a straight-line basis over the average remaining service period of the plan participants using the corridor approach. The corridor approach defers all actuarial gains and losses resulting from variances between actual results and actuarial assumptions. These unrecognized gains and losses are amortized when the net gains and losses exceed 10 percent of the greater of the market value of the plan assets or the projected benefit obligation. The amount in excess of the corridor is amortized over the average remaining service period of the plan participants. For 2022, the average remaining service period for the pension plans was 11.5 years.

We determine the discount rate (which is required to be the rate at which the projected benefit obligation could be effectively settled as of the measurement date) with the assistance of actuaries, who calculate the yield available on high quality corporate bonds of a term that reflects the maturity and duration of expected benefit payments. See [“Note 13 – Benefit Plans”](#) for additional information.

Environmental Reserves and Environmental Expenses

The Company recognizes an environmental liability when it is probable the liability exists and the amount is reasonably estimable. The Company estimates the duration and extent of its remediation obligations based upon reports of outside consultants, internal and third party estimates and analyses of cleanup costs and ongoing monitoring costs, communications with regulatory agencies, and changes in environmental law. If the Company were to determine that its estimates of the duration or extent of its environmental obligations were no longer accurate, it would adjust environmental liabilities accordingly in the period that such determination is made. Estimated future expenditures for environmental remediation are not discounted to their present value.

Environmental expenses that relate to ongoing operations are included as a component of cost of goods sold. Environmental expenses related to non-operating properties are presented below operating income in the Consolidated Statements of Income. See [“Note 14 – Commitments and Contingencies”](#) for additional information.

Earnings Per Share

Basic earnings per share is computed based on the weighted average number of common shares outstanding. Diluted earnings per share reflects the increase in weighted average common shares outstanding that would result from the assumed exercise of outstanding stock options and vesting of restricted stock awards calculated using the treasury stock method.

Income Taxes

Deferred income tax assets and liabilities are recognized when differences arise between the treatment of certain items for financial statement and tax purposes. Realization of certain components of deferred tax assets is dependent upon the occurrence of future events. The Company records valuation allowances to reduce its deferred tax assets to the amount it believes is more likely than not to be realized. These valuation allowances can be impacted by changes in tax laws, changes to statutory tax rates, and future taxable income levels and are based on the Company's judgment, estimates, and assumptions regarding those future events. In the event the Company was to determine that it would not be able to realize all or a portion of the net deferred tax assets in the future, it would increase the valuation allowance through a charge to income tax expense in the period that such determination is made. Conversely, if it was to determine that it would be able to realize its deferred tax assets in the future, in excess of the net carrying amounts, the Company would decrease the recorded valuation allowance through a decrease to income tax expense in the period that such determination is made.

The Company provides for uncertain tax positions and the related interest and penalties, if any, based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. Tax benefits for uncertain tax positions that are recognized in the financial statements are measured as the largest amount of benefit, determined on a cumulative probability basis, that is more likely than not to be realized upon ultimate settlement. To the extent the Company prevails in matters for which a liability for an uncertain tax position is established or is required to pay amounts in excess of the liability, the Company's effective tax rate in a given financial statement period may be affected.

These estimates are highly subjective and could be affected by changes in business conditions and other factors. Changes in any of these factors could have a material impact on future income tax expense. See "[Note 15 – Income Taxes](#)" for additional information.

Taxes Collected from Customers and Remitted to Governmental Authorities

Taxes assessed by a governmental authority that are directly imposed on a revenue producing transaction between the Company and its customers, primarily value added taxes in foreign jurisdictions, are accounted for on a net (excluded from revenues and costs) basis.

Stock-Based Compensation

The Company has in effect stock incentive plans under which stock-based awards have been granted to certain employees and members of its Board of Directors. Stock-based compensation expense is recognized in the Consolidated Statements of Income as a component of selling, general, and administrative expense based on the grant date fair value of the awards. See "[Note 17 – Stock-Based Compensation](#)" for additional information.

Concentrations of Credit and Market Risk

Concentrations of credit risk with respect to accounts receivable are limited due to the large number of customers comprising the Company's customer base, and their dispersion across different geographic areas and different industries, including HVAC, plumbing, refrigeration, hardware, automotive, OEMs, and others.

The Company minimizes its exposure to base metal price fluctuations through various strategies. Generally, it prices an equivalent amount of copper raw material, under flexible pricing arrangements it maintains with its suppliers, at the time it determines the selling price of finished products to its customers.

Derivative Instruments and Hedging Activities

The Company's earnings and cash flows are subject to fluctuations due to changes in commodity prices, foreign currency exchange rates, and interest rates. The Company uses derivative instruments such as commodity futures contracts, foreign currency forward contracts, and interest rate swaps to manage these exposures.

All derivatives are recognized in the Consolidated Balance Sheets at their fair value. On the date the derivative contract is entered into, it is either a) designated as a hedge of (i) a forecasted transaction or the variability of cash flow to be paid (cash flow hedge) or (ii) the fair value of a recognized asset or liability (fair value hedge), or b) not designated in a hedge accounting relationship, even though the derivative contract was executed to mitigate an economic exposure (economic hedge), as the Company does not enter into derivative contracts for trading purposes. Changes in the fair value of a derivative that is qualified, designated, and highly effective as a cash flow hedge are recorded in stockholders' equity within accumulated other

comprehensive income (AOCI), to the extent effective, until they are reclassified to earnings in the same period or periods during which the hedged transaction affects earnings. Changes in the fair value of undesignated derivative instruments executed as economic hedges are reported in current earnings.

The Company documents all relationships between derivative instruments and hedged items, as well as the risk-management objective and strategy for undertaking various hedge transactions. This process includes linking all derivative instruments that are designated as fair value hedges to specific assets and liabilities in the Consolidated Balance Sheets and linking cash flow hedges to specific forecasted transactions or variability of cash flow.

The Company also assesses, both at the hedge's inception and on an ongoing basis, whether the designated derivative instruments that are used in hedging transactions are highly effective in offsetting changes in cash flow or fair values of hedged items. When a derivative instrument is determined not to be highly effective as a hedge or the underlying hedged transaction is no longer probable of occurring, hedge accounting is discontinued prospectively in accordance with the derecognition criteria for hedge accounting.

The Company primarily executes derivative contracts with major financial institutions. These counterparties expose the Company to credit risk in the event of non-performance. The amount of such exposure is limited to the fair value of the contract plus the unpaid portion of amounts due to the Company pursuant to terms of the derivative instruments, if any. If a downgrade in the credit rating of these counterparties occurs, management believes that this exposure is mitigated by provisions in the derivative arrangements which allow for the legal right of offset of any amounts due to the Company from the counterparties with any amounts payable to the counterparties by the Company. As a result, management considers the risk of loss from counterparty default to be minimal. See "[Note 7 – Derivative Instruments and Hedging Activities](#)" for additional information.

Fair Value of Financial Instruments

The carrying amounts for cash and cash equivalents, accounts receivable, and accounts payable approximate fair value due to the short-term maturity of these instruments.

The fair value of long-term debt at December 31, 2022 approximates the carrying value on that date. The estimated fair values were determined based on quoted market prices and the current rates offered for debt with similar terms and maturities. The fair value of long-term debt is classified as level 2 within the fair value hierarchy. This classification is defined as a fair value determined using market-based inputs other than quoted prices that are observable for the liability, either directly or indirectly.

Foreign Currency Translation

For foreign subsidiaries for which the functional currency is not the U.S. dollar, balance sheet accounts are translated at exchange rates in effect at the end of the year and income statement accounts are translated at average exchange rates for the year. Translation gains and losses are included in equity as a component of AOCI. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are recognized in selling, general, and administrative expense in the Consolidated Statements of Income. Included in the Consolidated Statements of Income were net transaction gains of \$1.0 million in 2022, losses of \$0.6 million in 2021, and losses of \$0.5 million in 2020.

Use of and Changes in Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States (U.S. GAAP) requires management to make estimates, assumptions, and judgments that affect the amounts reported in the financial statements and accompanying notes. Management makes its best estimate of the ultimate outcome for these items based on historical trends and other information available when the financial statements are prepared. Changes in estimates are recognized in accordance with the accounting rules for the estimate, which is typically in the period when new information becomes available to management. Areas where the nature of the estimate makes it reasonably possible that actual results could materially differ from amounts estimated include but are not limited to: pension and other postretirement benefit plan obligations, tax liabilities, loss contingencies, litigation claims, environmental reserves, and impairment assessments of long-lived assets (including goodwill).

Recently Adopted Accounting Standards

In January 2021, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2021-01, *Reference Rate Reform (Topic 848): An Amendment of the FASB Accounting Standards Codification*. The new guidance was issued in response to concerns about structural risks of interbank offered rates, and, particularly, the risk of cessation of the London Interbank Offered Rate (LIBOR). Regulators in numerous jurisdictions around the world have undertaken reference rate reform initiatives to identify alternative reference rates that are more observable or transaction based and less susceptible to manipulation. The Company adopted the ASU during the first quarter of 2022. The adoption of the ASU did not have a material impact on the Company's Consolidated Financial Statements.

In October 2020, the FASB issued ASU No. 2020-10, *Codification Improvements: An Amendment of the FASB Accounting Standards Codification*. The ASU facilitates updates to the Accounting Standards Codification for technical corrections such as conforming amendments, clarifications to guidance, simplifications to wording or structure of guidance, and other minor improvements. The Company adopted the ASU during the first quarter of 2021 using a retrospective approach. The adoption of the ASU did not have a material impact on the Company's Consolidated Financial Statements.

In January 2020, the FASB issued ASU No. 2020-01, *Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815): Clarifying the Interactions between Topic 321, Topic 323, and Topic 815*. The new guidance addresses accounting for the transition into and out of the equity method and measuring certain purchased options and forward contracts to acquire investments. The Company adopted the ASU during the first quarter of 2021 using a prospective approach. The adoption of the ASU did not have a material impact on the Company's Consolidated Financial Statements.

Recently Issued Accounting Standards

In June 2022, the FASB issued ASU No. 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. The new guidance was issued to clarify existing guidance measuring the fair value of an equity security subject to contractual restrictions that prohibit the sale of an equity security and introduce new disclosure requirements for applicable equity securities. The ASU is effective for fiscal years beginning after December 15, 2023 for public entities. The updated guidance requires prospective adoption, and early adoption is permitted. The Company does not expect the adoption of the ASU to have a material impact on its Consolidated Financial Statements.

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): An Amendment of the FASB Accounting Standards Codification*. The new guidance was issued to improve accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to the (i) recognition of an acquired contract liability and (ii) payment terms and their effect on subsequent revenue recognized by the acquirer. The ASU is effective for fiscal years beginning after December 15, 2022 for public entities. The updated guidance requires prospective adoption, and early adoption is permitted. The Company does not expect adoption of the ASU to have a material impact on its Consolidated Financial Statements.

Note 2 – Acquisitions and Dispositions

2021 Acquisitions

Mueller Middle East

On December 7, 2021, the Company entered into an agreement providing for the purchase of an additional 15 percent equity interest in Mueller Middle East for a total of 55 percent, for approximately \$20.0 million. The total purchase price consisted of \$15.8 million in cash paid at closing (net of cash acquired), a gain recognized on the settlement of preexisting relationships of \$2.6 million, a contingent consideration arrangement of \$1.0 million, and the fair value of the Company's existing investment in the joint venture of \$0.7 million. Mueller Middle East, which manufactures copper tube, is headquartered in Bahrain. This business complements the Company's existing copper tube businesses in the Piping Systems segment. Prior to entering into this agreement, the Company was the technical and marketing lead with a 40 percent ownership in a joint venture with Cayan Ventures and Bahrain Mumtalakat Holding Company and accounted for this investment under the equity method of accounting. The Company began consolidating this business for financial reporting purposes in December 2021. Mueller Middle East manufactures and sells copper coils to certain Mueller subsidiaries. Total sales to Mueller subsidiaries were approximately \$48.2 million for the period in 2021 prior to consolidation.

H&C Flex

On December 20, 2020, the Company entered into an asset purchase agreement with Hart & Cooley LLC. The transaction closed on January 29, 2021, whereby the Company purchased the Hart & Cooley flexible duct business, which included inventory, manufacturing equipment, and related assets for approximately \$15.3 million. The total purchase price consisted of \$14.0 million in cash paid at closing and a contingent consideration arrangement of \$1.3 million, which was paid in Q3 2021. The Company treated this as a business combination. The acquired business, H&C Flex, is a manufacturer and distributor of insulated HVAC flexible duct systems. It is reported within and complements the Company's existing businesses in the Climate segment.

2020 Acquisitions

Kessler

On August 3, 2020, the Company entered into an asset purchase agreement with Wieland-Kessler LLC, whereby the Company purchased the Kessler distribution business, which included inventory, manufacturing equipment, and related assets. The total purchase price was \$57.2 million in cash paid at closing. The Company treated this as a business combination. The acquired business, Kessler Sales and Distribution, LLC (Kessler), is a distributor of residential and commercial plumbing products. It is reported within and complements the Company's existing businesses in the Piping Systems segment.

Shoals

On January 17, 2020, the Company entered into a stock purchase agreement pursuant to which the Company acquired all of the outstanding stock of Shoals Tubular, Inc. (Shoals) for approximately \$15.3 million in cash at closing, net of working capital adjustments. Shoals is a manufacturer of brazed manifolds, headers, and distributor assemblies used primarily by manufacturers of residential heating and air conditioning units. The acquired business is reported within and complements the Company's existing businesses in the Climate segment. This business was sold in Q3 2021.

Purchase Price Allocations

These acquisitions were accounted for using the acquisition method of accounting whereby the total purchase price was allocated to tangible and intangible assets acquired and liabilities assumed based on respective fair values.

The following table summarizes the allocation of the purchase price to acquire these businesses, which were financed by available cash balances, as well as the assets acquired and liabilities assumed at the respective acquisition dates. During the year, adjustments were made to the Mueller Middle East provisional purchase price allocation resulting in a decrease in goodwill of \$11.2 million, a decrease in the noncontrolling interest of \$5.6 million, an increase in property, plant, and equipment of \$4.2 million, a decrease in liabilities of \$0.9 million, and an increase in intangible assets of \$0.5 million. The purchase price allocations for all acquisitions have been finalized as of December 31, 2022.

<i>(In thousands)</i>	Mueller Middle East	H&C Flex	Kessler	Shoals
Total consideration	\$ 20,017	\$ 15,279	\$ 57,233	\$ 15,321
Allocated to:				
Accounts receivable	10,652	—	—	660
Inventories	4,727	4,511	25,106	1,809
Other current assets	1,744	—	—	26
Property, plant, and equipment	26,664	10,813	2,211	3,700
Operating lease right-of-use assets	935	—	10,526	—
Goodwill	864	—	11,600 ⁽¹⁾	1,870 ⁽¹⁾
Intangible assets	452	—	16,600	7,480
Total assets acquired	46,038	15,324	66,043	15,545
Accounts payable	4,593	—	—	217
Current portion of operating lease liabilities	—	—	1,692	—
Other current liabilities	10,941	45	—	7
Noncurrent operating lease liabilities	—	—	7,118	—
Other noncurrent liabilities	692	—	—	—
Total liabilities assumed	16,226	45	8,810	224
Noncontrolling interest	9,795	—	—	—
Net assets acquired	<u>\$ 20,017</u>	<u>\$ 15,279</u>	<u>\$ 57,233</u>	<u>\$ 15,321</u>

⁽¹⁾ Tax-deductible goodwill

The following details the total intangible assets identified in the allocation of the purchase price at the respective acquisition dates:

<i>(In thousands)</i>	Estimated Useful Life	Mueller Middle East	Kessler	Shoals
Intangible asset type:				
Customer relationships	20 years	\$ 452	\$ 12,640	\$ 4,290
Non-compete agreements	3-5 years	—	—	150
Patents and technology	10-15 years	—	—	2,620
Trade names, licenses, and other	5-10 years	—	3,960	420
Total intangible assets		<u>\$ 452</u>	<u>\$ 16,600</u>	<u>\$ 7,480</u>

2021 Dispositions

Copper Bar

On October 25, 2021, the Company sold its Copper Bar business for approximately \$10.1 million. This business manufactured copper bar products used primarily by OEMs in the U.S. and was included in the Industrial Metals segment. The carrying value of the assets disposed totaled \$3.6 million, consisting primarily of inventories and long-lived assets. As a result of the transaction, the Company recognized a pre-tax gain of \$6.5 million on the sale of the business in the Consolidating Financial Statements in 2021.

Die-Mold

On September 2, 2021, the Company entered into a contribution agreement with a limited liability company in the retail distribution business, pursuant to which the Company exchanged the outstanding common stock of Die-Mold for a 17 percent equity interest in the limited liability company. Die-Mold manufactures PEX and other plumbing-related fittings and plastic injection tooling in Canada and sells these products in Canada and the U.S. and was included in the Piping Systems Segment. Die-Mold reported net sales of \$10.9 million and operating income of \$2.2 million for the year ended December 25, 2021 compared to net sales of \$13.5 million and operating income of \$2.3 million in the year ended December 26, 2020. As a result of the transaction, the Company recognized a gain of \$4.7 million based on the excess of the fair value of the consideration received (the 17 percent equity interest) over the carrying value of Die-Mold in 2021. The Company utilized a combination of income and market comparable companies approaches using an EBITDA multiple to determine the fair value of the consideration received of \$22.8 million, which is recognized within the Investments in unconsolidated affiliates line of the Consolidated Balance Sheet. The excess of the fair value of the deconsolidated subsidiary over its carrying value resulted in the gain.

Fabricated Tube Products and Shoals Tubular, Inc.

On July 28, 2021, the Company entered into a purchase agreement with J.W. Harris Co., Inc. and Lincoln Electric Holdings, Inc., pursuant to which the Company sold the assets of Fabricated Tube Products (FTP) and all of the outstanding stock of STI for approximately \$75.7 million. These businesses manufacture and fabricate valves and assemblies, brazed manifolds, headers, and distributor assemblies used primarily by manufacturers of residential heating and air conditioning units in the U.S. and were included in the Climate segment. They reported combined net sales of \$37.0 million and operating income of \$5.5 million for the year ended December 25, 2021 compared to combined net sales of \$51.5 million and operating income of \$6.4 million in the year ended December 26, 2020. The carrying value of the assets disposed totaled \$32.7 million, consisting primarily of accounts receivable, inventories, and long-lived assets. The carrying value of the liabilities disposed totaled \$3.6 million, consisting primarily of accounts payable. As a result of the transaction, the Company recognized a pre-tax gain of \$46.6 million on the sale of these businesses in the Consolidating Financial Statements in 2021.

Note 3 –Segment Information

The Company's reportable segments are Piping Systems, Industrial Metals, and Climate. Each of the reportable segments is composed of certain operating segments that are aggregated primarily by the nature of products offered as follows:

Piping Systems

Piping Systems is composed of the following operating segments: Domestic Piping Systems Group, Great Lakes Copper, Heatlink Group, European Operations, Trading Group, Jungwoo-Mueller (the Company's South Korean joint venture), and Mueller Middle East (our Bahraini joint venture). The Domestic Piping Systems Group manufactures and distributes copper tube, fittings, and line sets. These products are manufactured in the U.S., sold in the U.S., and exported to markets worldwide. Outside the U.S., Great Lakes Copper manufactures copper tube and line sets in Canada and sells the products primarily in the U.S. and Canada. Heatlink Group produces a complete line of products for PEX plumbing and radiant systems in Canada and sells these products in Canada and the U.S. European Operations manufactures copper tube in the U.K. which is sold primarily in Europe. The Trading Group manufactures pipe nipples and resells brass and plastic plumbing valves, malleable iron fittings, faucets, and plumbing specialty products in the U.S. and Mexico. Jungwoo-Mueller manufactures copper-based joining products that are sold worldwide. Mueller Middle East manufactures copper tube and serves markets in the Middle East and Northern Africa. The Piping Systems segment's products are sold primarily to plumbing, refrigeration, and air-conditioning wholesalers, hardware wholesalers and co-ops, building product retailers, and air-conditioning OEMs.

Beginning in fiscal year 2022, the results of Precision Tube are included in the Industrial Metals segment prospectively as the impact to prior periods was not material. The business was previously reported in the Piping Systems segment. This change was made to reflect the Company's internal management reporting structure.

As disclosed in "[Note 2 – Acquisitions & Dispositions](#)," during September 2021 the Company exchanged the outstanding common stock of Die-Mold for an equity interest in a limited liability company in the retail distribution business, resulting in the deconsolidation of Die-Mold and the recognition of a \$4.7 million gain. This gain is reported within Corporate and Eliminations. The results of Die-Mold, prior to deconsolidation, were included within the Piping Systems segment.

During 2020, the segment recognized fixed asset impairment charges for certain manufacturing equipment of \$3.8 million.

Industrial Metals

Industrial Metals is composed of the following operating segments: Brass Rod, Impacts & Micro Gauge, Brass Value-Added Products, and Precision Tube. These businesses manufacture brass rod, impact extrusions and forgings, specialty copper, copper alloy, and aluminum tube, as well as a wide variety of end products including plumbing brass, automotive components, valves, fittings, and gas assemblies. These products are manufactured in the U.S. and sold primarily to OEMs in the U.S., many of which are in the industrial, transportation, construction, heating, ventilation, and air-conditioning, plumbing, refrigeration, and energy markets.

During 2021, the segment recognized a gain of \$6.5 million on the sale of the Copper Bar business.

Climate

Climate is composed of the following operating segments: Refrigeration Products, Westermeyer, Turbotec, Flex Duct, and Linesets, Inc. These domestic businesses manufacture and fabricate valves, assemblies, high pressure components, coaxial heat exchangers, insulated HVAC flexible duct systems, line sets, brazed manifolds, headers, and distributor assemblies primarily for the heating, ventilation, air-conditioning, and refrigeration markets in the U.S.

As disclosed in "[Note 2 – Acquisitions & Dispositions](#)," during July 2021 the Company sold the assets of FTP and all of the outstanding stock of STI, resulting in a gain of \$46.6 million. This gain is reported within Corporate and Eliminations. The results of FTP and STI, prior to the sale, were included within the Climate segment.

During 2021, the segment recognized impairment charges on goodwill and long-lived assets of \$2.8 million.

Performance of segments is generally evaluated by their operating income. Summarized product line, geographic, and segment information is shown in the following tables. Geographic sales data indicates the location from which products are shipped. Unallocated expenses include general corporate expenses, plus certain charges or credits not included in segment activity.

During 2022, 2021, and 2020, no single customer exceeded 10 percent of worldwide sales.

The following tables represent a disaggregation of revenue from contracts with customers, along with the reportable segment for each category:

<i>(In thousands)</i>	For the Year Ended December 31, 2022			
	Piping Systems	Industrial Metals	Climate	Total
Tube and fittings	\$ 2,211,963	\$ —	\$ —	\$ 2,211,963
Brass rod and forgings	—	510,865	—	510,865
OEM components and valves	—	74,647	121,004	195,651
Valves and plumbing specialties	518,121	—	—	518,121
Flex duct and other HVAC components	—	—	529,303	529,303
Other	—	59,177	—	59,177
	\$ 2,730,084	\$ 644,689	\$ 650,307	\$ 4,025,080
Intersegment sales				(42,625)
Net sales				<u>\$ 3,982,455</u>

<i>(In thousands)</i>	For the Year Ended December 25, 2021			
	Piping Systems	Industrial Metals	Climate	Total
Tube and fittings	\$ 2,055,639	\$ —	\$ —	\$ 2,055,639
Brass rod and forgings	—	565,870	—	565,870
OEM components, tube & assemblies	32,557	48,572	137,564	218,693
Valves and plumbing specialties	511,834	—	—	511,834
Flex duct and other HVAC components	—	—	357,850	357,850
Other	—	88,921	—	88,921
	\$ 2,600,030	\$ 703,363	\$ 495,414	\$ 3,798,807
Intersegment sales				(29,462)
Net sales				<u>\$ 3,769,345</u>

Disaggregation of revenue from contracts with customers (continued):

<i>(In thousands)</i>	For the Year Ended December 26, 2020			
	Piping Systems	Industrial Metals	Climate	Total
Tube and fittings	\$ 1,232,724	\$ —	\$ —	\$ 1,232,724
Brass rod and forgings	—	356,547	—	356,547
OEM components, tube & assemblies	56,176	42,127	138,551	236,854
Valves and plumbing specialties	294,102	—	—	294,102
Flex duct and other HVAC components	—	—	231,580	231,580
Other	—	73,485	—	73,485
	<u>\$ 1,583,002</u>	<u>\$ 472,159</u>	<u>\$ 370,131</u>	<u>\$ 2,425,292</u>
Intersegment sales				(27,249)
Net sales				<u>\$ 2,398,043</u>

Summarized segment information is as follows:

<i>(In thousands)</i>	For the Year Ended December 31, 2022				
	Piping Systems	Industrial Metals	Climate	Corporate and Eliminations	Total
Net sales	\$ 2,730,084	\$ 644,689	\$ 650,307	\$ (42,625)	\$ 3,982,455
Cost of goods sold	1,943,174	543,004	416,953	(38,269)	2,864,862
Depreciation and amortization	22,193	7,647	9,174	4,717	43,731
Selling, general, and administrative expense	93,655	11,574	36,113	61,744	203,086
Gain on sale of assets	—	—	—	(6,373)	(6,373)
Operating income	671,062	82,464	188,067	(64,444)	877,149
Interest expense					(810)
Pension plan termination expense					(13,100)
Environmental expense					(1,298)
Other income, net					14,090
Income before income taxes					<u>\$ 876,031</u>

Segment information (continued):

For the Year Ended December 25, 2021					
<i>(In thousands)</i>	Piping Systems	Industrial Metals	Climate	Corporate and Eliminations	Total
Net sales	\$ 2,600,030	\$ 703,363	\$ 495,414	\$ (29,462)	\$ 3,769,345
Cost of goods sold	1,996,610	605,715	367,343	(30,679)	2,938,989
Depreciation and amortization	23,384	6,929	10,379	4,698	45,390
Selling, general, and administrative expense	93,749	11,698	29,327	49,278	184,052
Gain on sale of businesses	—	(6,454)	—	(51,306)	(57,760)
Impairment charges	—	—	2,829	—	2,829
Operating income	486,287	85,475	85,536	(1,453)	655,845
Interest expense					(7,709)
Redemption premium					(5,674)
Environmental expense					(5,053)
Other income, net					3,730
Income before income taxes					<u>\$ 641,139</u>

For the Year Ended December 26, 2020					
<i>(In thousands)</i>	Piping Systems	Industrial Metals	Climate	Corporate and Eliminations	Total
Net sales	\$ 1,583,002	\$ 472,159	\$ 370,131	\$ (27,249)	\$ 2,398,043
Cost of goods sold	1,311,697	398,000	276,274	(19,810)	1,966,161
Depreciation and amortization	23,071	7,528	10,249	3,995	44,843
Selling, general, and administrative expense	78,744	12,566	26,806	41,367	159,483
Litigation settlement, net	—	—	—	(22,053)	(22,053)
Impairment charges	3,771	—	—	—	3,771
Operating income	165,719	54,065	56,802	(30,748)	245,838
Interest expense					(19,247)
Pension plan termination expense					(17,835)
Environmental expense					(4,454)
Other income, net					4,887
Income before income taxes					<u>\$ 209,189</u>

Summarized geographic information is as follows:

<i>(In thousands)</i>	<u>2022</u>	<u>2021</u>	<u>2020</u>
Net sales:			
United States	\$ 2,965,053	\$ 2,791,571	\$ 1,765,810
United Kingdom	297,582	330,908	207,754
Canada	410,679	469,652	293,776
Asia and the Middle East	217,750	83,217	58,256
Mexico	91,391	93,997	72,447
	<u>\$ 3,982,455</u>	<u>\$ 3,769,345</u>	<u>\$ 2,398,043</u>

Long-lived assets:	<u>2022</u>	<u>2021</u>	<u>2020</u>
United States	\$ 266,571	\$ 272,903	\$ 289,508
United Kingdom	36,474	36,529	30,872
Canada	23,354	26,422	29,582
Asia and the Middle East	51,193	48,742	26,107
Mexico	2,358	966	503
	<u>\$ 379,950</u>	<u>\$ 385,562</u>	<u>\$ 376,572</u>

<i>(In thousands)</i>	<u>2022</u>	<u>2021</u>	<u>2020</u>
Expenditures for long-lived assets (including those resulting from business acquisitions):			
Piping Systems	\$ 20,694	\$ 43,429	\$ 39,209
Industrial Metals	6,905	5,744	5,968
Climate	2,611	12,428	5,521
General Corporate	7,429	3,521	448
	<u>\$ 37,639</u>	<u>\$ 65,122</u>	<u>\$ 51,146</u>

Segment assets:			
Piping Systems	\$ 1,088,940	\$ 1,160,272	\$ 977,937
Industrial Metals	160,702	173,290	152,683
Climate	279,940	250,107	258,668
General Corporate	712,817	145,267	139,280
	<u>\$ 2,242,399</u>	<u>\$ 1,728,936</u>	<u>\$ 1,528,568</u>

Note 4 – Cash, Cash Equivalents, and Restricted Cash

<i>(In thousands)</i>	2022	2021
Cash & cash equivalents	\$ 461,018	\$ 87,924
Restricted cash included within other current assets	4,176	2,349
Restricted cash included within other assets	102	103
Total cash, cash equivalents, and restricted cash	\$ 465,296	\$ 90,376

Note 5 – Inventories

<i>(In thousands)</i>	2022	2021
Raw materials and supplies	\$ 133,189	\$ 130,133
Work-in-process	64,177	64,989
Finished goods	265,842	245,226
Valuation reserves	(14,289)	(10,104)
Inventories	\$ 448,919	\$ 430,244

Inventories valued using the LIFO method totaled \$16.5 million at December 31, 2022 and \$18.5 million at December 25, 2021. At December 31, 2022 and December 25, 2021, the approximate FIFO cost of such inventories was \$117.3 million and \$140.4 million, respectively. Additionally, the Company values certain inventories on an average cost basis.

At the end of 2022 and 2021, the FIFO value of inventory consigned to others was \$14.3 million and \$11.0 million, respectively.

Note 6 – Consolidated Financial Statement Details**Other Current Liabilities**

Included in other current liabilities as of December 31, 2022 and December 25, 2021 were the following: (i) accrued discounts, allowances, and customer rebates of \$82.3 million and \$82.2 million, respectively, (ii) current taxes payable of \$24.6 million and \$35.7 million, respectively, and (iii) current environmental liabilities of \$4.2 million and \$9.7 million, respectively. Additionally, the balance at at December 31, 2022 includes a pension withdrawal liability of \$13.1 million.

Other Income, Net

<i>(In thousands)</i>	2022	2021	2020
Net periodic benefit income	\$ 3,168	\$ 1,903	\$ 3,013
Interest income	6,457	353	1,101
Gain on sale of securities	2,918	—	—
Other	1,547	1,474	773
Other income, net	\$ 14,090	\$ 3,730	\$ 4,887

Note 7 – Derivative Instruments and Hedging Activities

The Company's earnings and cash flows are subject to fluctuations due to changes in commodity prices, foreign currency exchange rates, and interest rates. The Company uses derivative instruments such as commodity futures contracts, foreign currency forward contracts, and interest rate swaps to manage these exposures.

Commodity Futures Contracts

Copper and brass represent the largest component of the Company's variable costs of production. The cost of these materials is subject to global market fluctuations caused by factors beyond the Company's control. The Company occasionally enters into forward fixed-price arrangements with certain customers; the risk of these arrangements is generally managed with commodity futures contracts. These futures contracts have been designated as cash flow hedges.

At December 31, 2022, the Company held open futures contracts to purchase approximately \$91.8 million of copper over the next nine months related to fixed price sales orders. The fair value of those futures contracts was a \$1.9 million net gain position, which was determined by obtaining quoted market prices (level 1 within the fair value hierarchy). In the next 12 months, the Company will reclassify into earnings realized gains or losses relating to cash flow hedges. At December 31, 2022, this amount was approximately \$1.3 million of deferred net gains, net of tax.

The Company may also enter into futures contracts to protect the value of inventory against market fluctuations. At December 31, 2022, the Company held open futures contracts to sell approximately \$10.7 million of copper over the next five months related to copper inventory. The fair value of those futures contracts was a \$0.4 million net gain position, which was determined by obtaining quoted market prices (level 1 within the fair value hierarchy).

The Company presents its derivative assets and liabilities in the Consolidated Balance Sheets on a net basis by counterparty. The following table summarizes the location and fair value of the derivative instruments and disaggregates the net derivative assets and liabilities into gross components on a contract-by-contract basis:

(In thousands)	Balance Sheet Location	Asset Derivatives		Liability Derivatives		
		Fair Value		Fair Value		
		2022	2021	2022	2021	
Commodity contracts - gains	Other current assets	\$ 3,746	\$ 1,150	Other current liabilities	\$ —	\$ —
Commodity contracts - losses	Other current assets	(1,483)	(46)	Other current liabilities	—	(353)
Total derivatives ⁽¹⁾		<u>\$ 2,263</u>	<u>\$ 1,104</u>		<u>\$ —</u>	<u>\$ (353)</u>

⁽¹⁾ Does not include the impact of cash collateral provided to counterparties

The following table summarizes the effects of derivative instruments on the Consolidated Statements of Income:

(In thousands)	Location	2022	2021
Undesignated derivatives:			
Gain on commodity contracts (nonqualifying)	Cost of goods sold	\$ 20,659	\$ 217

The following tables summarize amounts recognized in and reclassified from AOCI during the period:

<i>(In thousands)</i>	Year Ended December 31, 2022		
	(Loss) Gain Recognized in AOCI (Effective Portion), Net of Tax	Classification Gains (Losses)	Loss Reclassified from AOCI (Effective Portion), Net of Tax
Cash flow hedges:			
Commodity contracts	\$ (7,066)	Cost of goods sold	\$ 7,666
Other	83	Other	—
Total	<u>\$ (6,983)</u>	Total	<u>\$ 7,666</u>

<i>(In thousands)</i>	Year Ended December 25, 2021		
	Gain (Loss) Recognized in AOCI (Effective Portion), Net of Tax	Classification Gains (Losses)	Gain Reclassified from AOCI (Effective Portion), Net of Tax
Cash flow hedges:			
Commodity contracts	\$ 2,389	Cost of goods sold	\$ (2,542)
Other	(28)	Other	—
Total	<u>\$ 2,361</u>	Total	<u>\$ (2,542)</u>

The Company primarily enters into International Swaps and Derivatives Association master netting agreements with major financial institutions that permit the net settlement of amounts owed under their respective derivative contracts. Under these master netting agreements, net settlement generally permits the Company or the counterparty to determine the net amount payable for contracts due on the same date and in the same currency for similar types of derivative transactions. The master netting agreements generally also provide for net settlement of all outstanding contracts with the counterparty in the case of an event of default or a termination event. The Company does not offset fair value amounts for derivative instruments and fair value amounts recognized for the right to reclaim cash collateral. At December 31, 2022 and December 25, 2021, the Company had recorded restricted cash in other current assets of \$4.0 million and \$2.0 million, respectively, as collateral related to open derivative contracts under the master netting arrangements.

Note 8 – Leases

The Company leases certain facilities, vehicles, and equipment which expire on various dates through 2041. The following table includes supplemental information with regards to the Company's operating leases:

<i>(In thousands, except lease term and discount rate)</i>	December 31, 2022	December 25, 2021
Operating lease right-of-use assets	<u>\$ 22,892</u>	<u>\$ 23,510</u>
Current portion of operating lease liabilities	4,942	6,015
Noncurrent operating lease liabilities	16,880	17,099
Total operating lease liabilities	<u>\$ 21,822</u>	<u>\$ 23,114</u>
Weighted average discount rate	3.35 %	3.67 %
Weighted average remaining lease term (in years)	6.03	5.51

Some of the Company's leases include variable lease costs such as taxes, insurance, etc. These costs are immaterial for disclosure.

The following table presents certain information related to operating lease costs and cash paid during the period:

<i>(In thousands)</i>	For the Year Ended	
	December 31, 2022	December 25, 2021
Operating lease costs	\$ 8,220	\$ 8,365
Short term lease costs	4,086	4,607
Total lease costs	\$ 12,306	\$ 12,972
Cash paid for amounts included in the measurement of lease liabilities	\$ 7,787	\$ 7,869

Maturities of the Company's operating leases are as follows:

<i>(In thousands)</i>	Amount
2023	\$ 5,574
2024	4,130
2025	3,281
2026	3,111
2027	2,801
2028 and thereafter	5,569
Total lease payments	24,466
Less imputed interest	(2,644)
Total lease obligations	21,822
Less current obligations	(4,942)
Noncurrent lease obligations	\$ 16,880

Note 9 – Property, Plant, and Equipment, Net

<i>(In thousands)</i>	2022	2021
Land and land improvements	\$ 32,707	\$ 34,050
Buildings	234,480	238,033
Machinery and equipment	653,997	657,673
Construction in progress	54,748	34,311
	975,932	964,067
Less accumulated depreciation	(595,982)	(578,505)
Property, plant, and equipment, net	\$ 379,950	\$ 385,562

Depreciation expense for property, plant, and equipment was \$38.2 million in 2022, \$39.1 million in 2021, and \$38.7 million in 2020.

Note 10 – Goodwill and Other Intangible Assets

Goodwill

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

<i>(In thousands)</i>	Piping Systems	Industrial Metals	Climate	Total
Goodwill	\$ 184,699	\$ 8,854	\$ 23,616	\$ 217,169
Accumulated impairment charges	(40,552)	(8,853)	—	(49,405)
Balance at December 26, 2020:	144,147	1	23,616	167,764
Additions	12,098	—	—	12,098
Reductions ⁽¹⁾	(4,402)	—	(1,964)	(6,366)
Impairment charges	\$ —	\$ —	\$ (2,087)	\$ (2,087)
Currency translation	(79)	—	—	(79)
Balance at December 25, 2021:	151,764	1	19,565	171,330
Reductions ⁽²⁾	(11,216)	—	—	(11,216)
Currency translation	(2,526)	—	—	(2,526)
Balance at December 31, 2022:				
Goodwill	178,574	8,854	19,565	206,993
Accumulated impairment charges	(40,552)	(8,853)	—	(49,405)
Goodwill, net	\$ 138,022	\$ 1	\$ 19,565	\$ 157,588

⁽¹⁾ Includes disposals of Die-Mold and STI businesses.

⁽²⁾ Includes finalization of the purchase price allocation adjustment for Mueller Middle East of \$1.2 million.

Reporting units with recorded goodwill include Domestic Piping Systems Group, B&K LLC, Great Lakes, Heatlink Group, European Operations, Jungwoo-Mueller, Mueller Middle East, Westermeyer, and Flex Duct. Several factors give rise to goodwill in the Company's acquisitions, such as the expected benefit from synergies of the combination and the existing workforce of the acquired businesses. With the exception of the Turbotec reporting unit, there were no impairment charges resulting from the 2022, 2021, or 2020 annual impairment tests as the estimated fair value of each of the reporting units exceeded its carrying value. During the third quarter of 2021, the Company recognized an impairment charge of \$2.1 million related to Turbotec, reported within the Climate segment.

Other Intangible Assets

The carrying amount of intangible assets at December 31, 2022 was as follows:

<i>(In thousands)</i>	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$ 53,156	\$ (15,658)	\$ 37,498
Non-compete agreements	2,333	(2,333)	—
Patents and technology	18,032	(7,570)	10,462
Trade names and licenses	13,374	(6,697)	6,677
Other	1,676	(1,528)	148
Other intangible assets	<u>\$ 88,571</u>	<u>\$ (33,786)</u>	<u>\$ 54,785</u>

The carrying amount of intangible assets at December 25, 2021 was as follows:

<i>(In thousands)</i>	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$ 55,108	\$ (13,803)	\$ 41,305
Non-compete agreements	2,474	(2,458)	16
Patents and technology	18,396	(6,501)	11,895
Trade names and licenses	13,654	(5,598)	8,056
Other	1,676	(1,234)	442
Other intangible assets	<u>\$ 91,308</u>	<u>\$ (29,594)</u>	<u>\$ 61,714</u>

Amortization expense for intangible assets was \$5.6 million in 2022, \$6.3 million in 2021, and \$6.1 million in 2020. Future amortization expense is estimated as follows:

<i>(In thousands)</i>	Amount
2023	\$ 5,145
2024	4,930
2025	4,808
2026	4,663
2027	4,662
Thereafter	30,577
Expected amortization expense	<u>\$ 54,785</u>

Note 11 – Investments in Unconsolidated Affiliates

Tecumseh

The Company owns a 50 percent interest in an unconsolidated affiliate that acquired Tecumseh and an entity that provides financing to Tecumseh. Tecumseh is a global manufacturer of hermetically sealed compressors for residential and specialty air conditioning, household refrigerators and freezers, and commercial refrigeration applications, including air conditioning and refrigeration compressors, as well as condensing units, heat pumps, and complete refrigeration systems.

The following tables present summarized financial information derived from the Company's equity method investee's consolidated financial statements, which are prepared in accordance with U.S. GAAP.

(In thousands)

	2022	2021
Current assets	\$ 248,808	\$ 214,550
Noncurrent assets	77,395	76,406
Current liabilities	190,746	169,155
Noncurrent liabilities	43,003	46,059
Net sales	\$ 520,950	\$ 452,917
Gross profit	98,441	57,028
Net income (loss)	10,338	(3,330)

The Company's income (loss) from unconsolidated affiliates, net of foreign tax, for 2022 and 2021 included net gains of \$5.2 million and net losses of \$1.7 million, respectively, for Tecumseh.

Retail Distribution

On September 2, 2021, the Company acquired a 17 percent noncontrolling equity interest in a limited liability company in the retail distribution business by contributing the outstanding common stock of Die-Mold in exchange for the equity method interest.

The Company's income (loss) from unconsolidated affiliates, net of foreign tax, for 2022 and 2021 included net gains of \$4.9 million and \$0.8 million, respectively, for the retail distribution business.

Note 12 – Debt

Credit Agreement

On March 31, 2021, the Company entered into a Credit Agreement to replace its prior credit agreement that would have matured on December 6, 2021. The Company's total borrowing capacity under the Credit Agreement is \$500.0 million. The Credit Agreement provides for an unsecured \$400.0 million revolving credit facility, which matures on March 31, 2026, and a term loan facility of \$100.0 million, with an original maturity date of March 31, 2022. The term loan was fully repaid in 2021, reducing the total borrowing capacity under the Credit Agreement to \$400.0 million. There were no borrowings outstanding under the Credit Agreement as of December 31, 2022 or December 25, 2021. Borrowings under the Revolving Credit Facility bear interest, at the Company's option, at the Eurocurrency Rate which is determined by the underlying currency of the Credit Extension or the Base Rate as defined by the Credit Agreement, plus a variable premium. Advances may be based upon the one, three, or six-month interest period. The variable premium is based upon the Company's debt to total capitalization ratio, and can range from 112.5 to 162.5 basis points for Eurocurrency Rate loans and 12.5 to 62.5 basis points for Base Rate loans. At December 31, 2022, the premium was 112.5 basis points for Eurocurrency Rate loans and 12.5 basis points for Base Rate loans. Additionally, a commitment fee is payable quarterly on the total commitment less any outstanding loans or issued letters of credit, and varies from 15.0 to 30.0 basis points based upon the Company's debt to total capitalization ratio. Availability of funds under the Revolving Credit Facility is reduced by the amount of certain outstanding letters of credit, which are used to secure the Company's payment of insurance deductibles, certain retiree health benefits, and other corporate obligations, totaling approximately \$33.1 million at December 31, 2022. Terms of the letters of credit are generally renewable annually.

Subordinated Debentures

During the first quarter of 2021, the Company announced the redemption of its Subordinated Debentures due 2027. The full redemption of outstanding debentures occurred on April 15, 2021 for a total of \$291.4 million in principal plus accrued interest and a redemption premium of \$5.7 million that was expensed during the second quarter.

Jungwoo-Mueller

Jungwoo-Mueller has several secured revolving credit arrangements with a total borrowing capacity of KRW20.0 billion (or approximately \$15.0 million). Borrowings are secured by the real property and equipment of Jungwoo-Mueller.

Covenants contained in the Company's financing obligations require, among other things, the maintenance of minimum levels of tangible net worth and the satisfaction of certain minimum financial ratios. At December 31, 2022, the Company was in compliance with all debt covenants.

Aggregate annual maturities of the Company's debt are as follows:

<i>(In thousands)</i>	<u>Amount</u>
2023	\$ 811
2024	222
2025	204
2026	—
2027	—
Thereafter	<u>1,500</u>
Long-term debt	<u>\$ 2,737</u>

Net interest expense consisted of the following:

<i>(In thousands)</i>	<u>2022</u>	<u>2021</u>	<u>2020</u>
Interest expense	\$ 810	\$ 8,096	\$ 19,510
Capitalized interest	—	(387)	(263)
	<u>\$ 810</u>	<u>\$ 7,709</u>	<u>\$ 19,247</u>

There was no interest paid in 2022. Interest paid in 2021 and 2020 was \$13.9 million and \$19.8 million, respectively.

Note 13 – Benefit Plans

Pension and Other Postretirement Plans

The Company sponsors several qualified and nonqualified pension plans and other postretirement benefit plans for certain employees. The information disclosed below does not include the pension plan in South Korea, as it is immaterial to the Company's Consolidated Financial Statements. The following tables provide a reconciliation of the changes in the most significant plans' benefit obligations and the fair value of the plans' assets for 2022 and 2021, and a statement of the plans' aggregate funded status:

<i>(In thousands)</i>	Pension Benefits		Other Benefits	
	2022	2021	2022	2021
Change in benefit obligation:				
Obligation at beginning of year	\$ 84,283	\$ 90,809	\$ 11,825	\$ 12,782
Service cost	—	—	291	258
Interest cost	1,450	1,272	346	281
Actuarial gain	(24,154)	(4,062)	(2,604)	(812)
Benefit payments	(2,512)	(2,832)	(547)	(634)
Foreign currency translation adjustment	(8,306)	(904)	(71)	(50)
Obligation at end of year	50,761	84,283	9,240	11,825
Change in fair value of plan assets:				
Fair value of plan assets at beginning of year	79,478	78,480	—	—
Actual return on plan assets	(6,371)	4,791	—	—
Employer contributions	—	—	547	634
Benefit payments	(2,512)	(2,832)	(547)	(634)
Foreign currency translation adjustment	(8,297)	(961)	—	—
Fair value of plan assets at end of year	62,298	79,478	—	—
Funded (underfunded) status at end of year	\$ 11,537	\$ (4,805)	\$ (9,240)	\$ (11,825)

The following represents amounts recognized in AOCI (before the effect of income taxes):

<i>(In thousands)</i>	Pension Benefits		Other Benefits	
	2022	2021	2022	2021
Unrecognized net actuarial loss (gain)	\$ 2,870	\$ 19,629	\$ (4,149)	\$ (1,893)
Unrecognized prior service credit	—	—	(19)	(1,930)

As of December 31, 2022, \$0.5 million of the actuarial net loss and the remainder of the prior service credit will, through amortization, be recognized as components of net periodic benefit cost in 2023.

The aggregate status of all overfunded plans is recognized as an asset and the aggregate status of all underfunded plans is recognized as a liability in the Consolidated Balance Sheets. The amounts recognized as a liability are classified as current or long-term on a plan-by-plan basis. Liabilities are classified as current to the extent the actuarial present value of benefits payable within the next 12 months exceeds the fair value of plan assets, with all remaining amounts classified as long-term.

As of December 31, 2022 and December 25, 2021, the total funded status of the plans recognized in the Consolidated Balance Sheets was as follows:

<i>(In thousands)</i>	Pension Benefits		Other Benefits	
	2022	2021	2022	2021
Long-term asset	\$ 11,537	\$ —	\$ —	\$ —
Current liability	\$ —	\$ —	\$ (1,068)	\$ (962)
Long-term liability	—	(4,805)	(8,172)	(10,863)
Total (underfunded) funded status	\$ 11,537	\$ (4,805)	\$ (9,240)	\$ (11,825)

The components of net periodic benefit cost (income) are as follows:

<i>(In thousands)</i>	2022	2021	2020
Pension benefits:			
Interest cost	\$ 1,450	\$ 1,272	\$ 3,260
Expected return on plan assets	(3,568)	(3,671)	(5,704)
Amortization of net loss	897	1,536	2,305
Settlement charge	—	—	11,642
Net periodic benefit (income) cost	\$ (1,221)	\$ (863)	\$ 11,503
Other benefits:			
Service cost	\$ 291	\$ 258	\$ 212
Interest cost	346	281	430
Amortization of prior service credit	(198)	(470)	(519)
Amortization of net gain	(220)	(103)	(193)
Curtailment gain	(1,756)	—	(2,591)
Net periodic benefit income	\$ (1,537)	\$ (34)	\$ (2,661)

During 2022 and 2020, the Company recognized curtailment gains of \$1.8 million and \$2.6 million, respectively, related to one of its postretirement benefit plans.

The components of net periodic benefit cost (income) other than the service cost component are included in other income, net in the Consolidated Statements of Income.

The weighted average assumptions used in the measurement of the Company's benefit obligations are as follows:

	Pension Benefits		Other Benefits	
	2022	2021	2022	2021
Discount rate	4.80 %	1.90 %	6.08 %	3.73 %
Expected long-term return on plan assets	5.51 %	4.96 %	N/A	N/A
Rate of compensation increases	N/A	N/A	5.00 %	5.00 %
Rate of inflation	3.30 %	3.70 %	N/A	N/A

The weighted average assumptions used in the measurement of the Company's net periodic benefit cost are as follows:

	Pension Benefits			Other Benefits		
	2022	2021	2020	2022	2021	2020
Discount rate	1.90 %	1.40 %	1.93 %	3.73 %	2.92 %	3.70 %
Expected long-term return on plan assets	4.96 %	4.69 %	3.84 %	N/A	N/A	N/A
Rate of compensation increases	N/A	N/A	N/A	5.00 %	5.00 %	5.00 %
Rate of inflation	3.70 %	3.20 %	3.20 %	N/A	N/A	N/A

The Company's Mexican postretirement plans use the rate of compensation increase in the benefit formulas. Past service in the U.K. pension plan will be adjusted for the effects of inflation. All other pension and postretirement plans use benefit formulas based on length of service.

The annual assumed rate of increase in the per capita cost of covered benefits (i.e., health care cost trend rate) is assumed to range from 4.7 to 7.2 percent for 2023, gradually decrease to 4.1 percent through 2040, and remain at that level thereafter. The health care cost trend rate assumption does not have a significant effect on the amounts reported.

Pension Assets

The weighted average asset allocation of the Company's pension fund assets are as follows:

Asset category	Pension Plan Assets	
	2022	2021
Equity securities (includes equity mutual funds)	67 %	66 %
Multi-asset securities	22	24
Cash and equivalents (includes money market funds)	1	—
Alternative investments	10	10
Total	100 %	100 %

At December 31, 2022, the long-term target allocation, by asset category, of assets of the Company's defined benefit pension plans was: (i) equity securities and multi-asset securities, including equity index funds – not less than 70 percent; and (ii) alternative investments – not more than 10 percent.

The pension plan obligations are long-term and, accordingly, the plan assets are invested for the long-term. Plan assets are monitored periodically. Based upon results, investment managers and/or asset classes are redeployed when considered necessary. None of the plans' assets are expected to be returned to the Company during the next fiscal year. The assets of the plans do not include investments in securities issued by the Company.

The estimated rates of return on plan assets are the expected future long-term rates of earnings on plan assets and are forward-looking assumptions that materially affect pension cost. Establishing the expected future rates of return on pension assets is a judgmental matter. The Company reviews the expected long-term rates of return on an annual basis and revises as appropriate. The expected long-term rate of return on plan assets was 5.51 percent for 2022 and 4.96 percent in 2021.

The Company's investments for its pension plans are reported at fair value. The following methods and assumptions were used to estimate the fair value of the Company's plan asset investments:

Cash and money market funds – Valued at cost, which approximates fair value.

Mutual funds – Valued at the net asset value of shares held by the plans at December 31, 2022 and December 25, 2021, respectively, based upon quoted market prices.

Limited partnerships – Limited partnerships comprise a diversified portfolio of real estate investments which are classified as Level 3 due to a lack of observable inputs existing at the measurement date. Accordingly, the estimated fair values may differ significantly from the values that would have been used had a ready market existed for these investments. Limited partnership investments are recorded at estimated fair value based on financial information received from the investment manager. The investment manager determines fair value based upon, among other things, property valuations received from valuation specialists at regular intervals.

The following table sets forth by level, within the fair value hierarchy, the assets of the plans at fair value:

(In thousands)	Fair Value Measurements at December 31, 2022			
	Level 1	Level 2	Level 3	Total
Cash and money market funds	\$ 829	\$ —	\$ —	\$ 829
Mutual funds ⁽¹⁾	—	55,441	—	55,441
Limited partnerships	—	—	6,028	6,028
Total	\$ 829	\$ 55,441	\$ 6,028	\$ 62,298

(In thousands)	Fair Value Measurements at December 25, 2021			
	Level 1	Level 2	Level 3	Total
Cash and money market funds	\$ 292	\$ —	\$ —	\$ 292
Mutual funds ⁽²⁾	—	71,465	—	71,465
Limited partnerships	—	—	7,721	7,721
Total	\$ 292	\$ 71,465	\$ 7,721	\$ 79,478

⁽¹⁾ Approximately 78 percent of mutual funds are actively managed funds and approximately 22 percent of mutual funds are index funds. Additionally, 24 percent of the mutual funds' assets are invested in non-U.S. multi-asset securities and 76 percent in non-U.S. equities.

⁽²⁾ Approximately 78 percent of mutual funds are actively managed funds and approximately 22 percent of mutual funds are index funds. Additionally, 27 percent of the mutual funds' assets are invested in non-U.S. multi-asset securities and 73 percent in non-U.S. equities.

The table below reflects the changes in the assets of the plan measured at fair value on a recurring basis using significant unobservable inputs (level 3 of fair value hierarchy) during the year ended December 31, 2022:

(In thousands)	Limited Partnerships
Balance, December 25, 2021	\$ 7,721
Net depreciation in fair value	(1,693)
Balance, December 31, 2022	\$ 6,028

Contributions and Benefit Payments

The Company does not expect to contribute to the U.K. pension plan, other than to reimburse expenses, and expects to contribute \$1.1 million to its other postretirement benefit plans in 2023. The Company expects future benefits to be paid from the plans as follows:

<i>(In thousands)</i>	<u>Pension Benefits</u>	<u>Other Benefits</u>
2023	\$ 2,525	\$ 1,067
2024	2,616	862
2025	2,710	1,001
2026	2,807	1,014
2027	2,908	834
2028-2032	16,180	4,097
Total	<u>\$ 29,746</u>	<u>\$ 8,875</u>

Multiemployer Plan

The Company contributes to the IAM National Pension Fund, National Pension Plan (IAM Plan), a multiemployer defined benefit plan. Participation in the IAM Plan was negotiated under the terms of two collective bargaining agreements in Port Huron, Michigan, the Local 218 IAM and Local 44 UAW that expire on May 3, 2026 and May 4, 2025, respectively. The Employer Identification Number for this plan is 51-6031295.

The risks of participating in multiemployer plans are different from single-employer plans in the following aspects: (i) assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers; (ii) if a participating employer stops contributing to the plan, the underfunded obligations of the plan may be borne by the remaining participating employers; (iii) if the Company chooses to stop participating in the plan, the Company may be required to pay the plan an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

The Company makes contributions to the IAM Plan trusts that cover certain union employees; contributions by employees are not permitted. Contributions to the IAM Plan were approximately \$1.4 million in 2022, \$1.3 million in 2021, and \$1.2 million in 2020. The Company's contributions are less than five percent of total employer contributions made to the IAM Plan indicated in the most recently filed Form 5500.

Under the Pension Protection Act of 2006, the IAM Plan's actuary must certify the plan's zone status annually. Plans in the red zone are generally less than 65 percent funded, plans in the yellow zone are less than 80 percent funded, and plans in the green zone are at least 80 percent funded. If a plan is determined to be in endangered status, red zone or yellow zone, the plan's trustees must develop a formal plan of corrective action, a Financial Improvement Plan and/or a Rehabilitation Plan. For 2022 and 2021 the IAM Plan was well funded over 80 percent; but remained in the red zone due to the trustees' election to voluntarily place the fund in critical status in 2019 to strengthen its funding position. The fund has remained in critical status since that election and is not projected to emerge from critical status in the upcoming year. The plan seeks to strengthen its financial health by reducing and eliminating most adjustable benefits as allowed by federal law.

As of December 31, 2022, the Company withdrew from the IAM Plan and recognized \$3.1 million in related expenses, which represents the Company's best estimate of probable loss for the related withdrawal liability.

401(k) Plans

The Company sponsors voluntary employee savings plans that qualify under Section 401(k) of the Internal Revenue Code of 1986. Compensation expense for the Company's matching contribution to the 401(k) plans was \$4.9 million in 2022, \$4.5 million in 2021, and \$4.0 million in 2020. The Company match is a cash contribution. Participants direct the investment of their account balances by allocating among a range of asset classes including mutual funds (equity, fixed income, and balanced funds) and money market funds. The plans do not allow direct investment in securities issued by the Company.

Note 14 – Commitments and Contingencies

Environmental

The Company is subject to federal, state, local, and foreign environmental laws and regulations. For all properties, the Company has provided and charged to expense \$1.4 million in 2022, \$5.0 million in 2021, and \$4.2 million in 2020 for pending environmental matters. Environmental reserves totaled \$20.5 million at December 31, 2022 and \$27.4 million at December 25, 2021. As of December 31, 2022, the Company expects to spend \$4.0 million in 2023, \$2.0 million in 2024, \$0.8 million in 2025, \$0.7 million in 2026, \$0.7 million in 2027, and \$12.3 million thereafter for ongoing projects.

Non-operating Properties

Southeast Kansas Sites

The Kansas Department of Health and Environment (KDHE) has contacted the Company regarding environmental contamination at three former smelter sites in Kansas (Altoona, East La Harpe, and Lanyon). The Company is not a successor to the companies that operated these smelter sites, but has explored possible settlement with KDHE and other potentially responsible parties (PRP) in order to avoid litigation.

In February 2022, the Company reached a settlement with another PRP relating to these three sites. Under the terms of that agreement, the Company paid \$5.6 million, which was previously reserved, in exchange for the other PRP's agreement to conduct or fund any required remediation with the geographic boundaries of the three sites (namely, the parcel(s) on which the former smelters were located), plus coverage of certain off-site areas (namely, contamination that migrated by surface water runoff or air emissions from the Altoona or East La Harpe site, and smelter materials located within 50 feet of the geographic boundary of each site). The settlement does not cover certain matters, including potential liability related to the remediation of the town of Lola which is not estimable at this time. The other PRP has also provided an indemnity that would cover third-party cleanup claims for those sites, subject to a time limit and a cap.

Altoona. Another PRP conducted a site investigation of the Altoona site under a consent decree with KDHE and submitted a removal site evaluation report recommending a remedy. The remedial design plan, which covers both on-site and certain off-site cleanup costs, was approved by the KDHE in 2016. Construction of the remedy was completed in 2018. Under the terms of the settlement with the other PRP, the Company expects the operations and maintenance costs for this remedy to be paid for entirely by the other PRP.

East La Harpe. At the East La Harpe site, the Company and two other PRPs conducted a site study evaluation under KDHE supervision and prepared a site cleanup plan approved by KDHE. In December 2018, KDHE provided a draft agreement which contemplates the use of funds KDHE obtained from two other parties (Peabody Energy and Blue Tee) to fund part of the remediation, and removes Blue Tee from the PRPs' agreement with KDHE. Pursuant to the terms of the settlement with the other PRP noted above, the Company expects the remediation to be conducted and paid for entirely by the other PRP, and for that other PRP to negotiate and enter into an agreement with KDHE.

Lanyon. With respect to the Lanyon Site, in 2016, the Company received a general notice letter from the United States Environmental Protection Agency (EPA) asserting that the Company is a PRP, which the Company has denied. EPA issued an interim record of decision in 2017 and has been remediating properties at the site. According to EPA, 1,371 properties in total will be remediated, and the work will continue into 2023.

Shasta Area Mine Sites

Mining Remedial Recovery Company (MRRC), a wholly owned subsidiary, owns certain inactive mines in Shasta County, California. MRRC has continued a program, begun in the late 1980s, of implementing various remedial measures, including sealing mine portals with concrete plugs in portals that were discharging water. The sealing program achieved significant reductions in the metal load in discharges from these adits; however, additional reductions are required pursuant to an order issued by the California Regional Water Quality Control Board (QCB). In response to a 1996 QCB Order, MRRC completed a feasibility study in 1997 describing measures designed to mitigate the effects of acid rock drainage. In December 1998, the QCB modified the 1996 order extending MRRC's time to comply with water quality standards. In September 2002, the QCB adopted a new order requiring MRRC to adopt Best Management Practices (BMP) to control discharges of acid mine drainage, and again extended the time to comply with water quality standards until September 2007. During that time, implementation of BMP further reduced impacts of acid rock drainage; however, full compliance has not been achieved. The QCB is presently

renewing MRRC's discharge permit and will concurrently issue a new order. It is expected that the new 10-year permit will include an order requiring continued implementation of BMP through 2033 to address residual discharges of acid rock drainage. At this site, MRRC spent approximately \$1.3 million from 2020 through 2022 for remediation, and currently estimates that it will spend between approximately \$14.1 million and \$16.1 million over the next 30 years and has accrued a reserve at the low end of this range.

Lead Refinery Site

U.S.S. Lead Refinery, Inc. (Lead Refinery), a non-operating wholly owned subsidiary of MRRC, has conducted corrective action and interim remedial activities (collectively, Site Activities) at Lead Refinery's East Chicago, Indiana site pursuant to the Resource Conservation and Recovery Act since December 1996. Although the Site Activities have been substantially concluded, Lead Refinery is required to perform monitoring and maintenance-related activities pursuant to a post-closure permit issued by the Indiana Department of Environmental Management effective as of March 2, 2013. Lead Refinery spent approximately \$0.4 million from 2020 through 2022 with respect to this site. Approximate costs to comply with the post-closure permit, including associated general and administrative costs, are estimated at between \$1.6 million and \$2.4 million over the next 14 years. The Company has recorded a reserve at the low end of this range.

On April 9, 2009, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the U.S. Environmental Protection Agency (EPA) added the Lead Refinery site and surrounding properties to the National Priorities List (NPL). On July 17, 2009, Lead Refinery received a written notice from the EPA indicating that it may be a PRP under CERCLA due to the release or threat of release of hazardous substances including lead into properties surrounding the Lead Refinery NPL site. The EPA identified two other PRPs in connection with that matter. In November 2012, the EPA adopted a remedy for the surrounding properties and in September 2014, the EPA announced that it had entered into a settlement with the two other PRPs whereby they will pay approximately \$26.0 million to fund the cleanup of approximately 300 properties surrounding the Lead Refinery NPL site (zones 1 and 3 of operable unit 1) and perform certain remedial action tasks.

On November 8, 2016, the Company, its subsidiary Arava Natural Resources Company, Inc. (Arava), and Arava's subsidiary MRRC each received general notice letters from the EPA asserting that they may be PRPs in connection with the Lead Refinery NPL site. The Company, Arava, and MRRC have denied liability for any remedial action and response costs associated with the Lead Refinery NPL site. In June 2017, the EPA requested that Lead Refinery conduct, and the Company fund, a remedial investigation and feasibility study of operable unit 2 of the Lead Refinery NPL site pursuant to a proposed administrative settlement agreement and order on consent. The Company and Lead Refinery entered into that agreement in September 2017. The Company has made a capital contribution to Lead Refinery to conduct the remedial investigation and feasibility study with respect to operable unit 2 and has provided financial assurance in the amount of \$1.0 million. The remedial investigation and feasibility study remain ongoing. The EPA has also asserted its position that the Company is a responsible party for the Lead Refinery NPL site, and accordingly is responsible for a share of remedial action and response costs at the site and in the adjacent residential area.

In January 2018, the EPA issued two unilateral administrative orders (UAOs) directing the Company, Lead Refinery, and four other PRPs to conduct soil and interior remediation of certain residences at the Lead Refinery NPL site (zones 2 and 3 of operable unit 1). Subsequent thereto, the Company and Lead Refinery reached agreement with the four other PRPs to implement these two UAOs, with the Company agreeing to pay, on an interim basis, (i) an estimated \$4.5 million (subject to potential change through a future reallocation process) of the approximately \$25.0 million the PRPs then estimated it would cost to implement the UAOs, which estimate is subject to change, and (ii) \$2.0 million relating to past costs incurred by other PRPs for work conducted at the site, as well as the possibility of up to \$0.7 million in further payments for ongoing work by those PRPs. As of year-end, the Company has made payments of approximately \$7.6 million related to the aforementioned agreement with the other PRPs. The Company disputes that it was properly named in the UAOs. In March 2022, Lead Refinery entered into an administrative settlement agreement and order on consent with the EPA, along with the four other PRPs, which involves payment of certain past and future costs relating to operable unit 1, in exchange for certain releases and contribution protection for the Company, Lead Refinery, and their respective affiliates relating to that operable unit. The settlement became effective in September 2022. The Company reserved \$3.3 million for this settlement at the end of 2021. In March 2018, a group of private plaintiffs sued the Company, Arava, MRRC, and Lead Refinery, along with other defendants, in civil tort action relating to the site. The Company, Arava, and MRRC have been voluntarily dismissed from that litigation without prejudice. Lead Refinery's motion to dismiss the matter was granted without prejudice, but plaintiffs in that case have repled certain of their claims. At this juncture, the Company is unable to determine the likelihood of a material adverse outcome or the amount or range of a potential loss in excess of the current reserve with respect to any remedial action or litigation relating to the Lead Refinery NPL site, either at Lead Refinery's former operating site (operable unit 2) or the adjacent

residential area (operable unit 1), including, but not limited to, EPA oversight costs for which the EPA may attempt to seek reimbursement from the Company, and past costs for which other PRPs may attempt to seek contribution from the Company.

Bonita Peak Mining District

Following an August 2015 spill from the Gold King Mine into the Animas River near Silverton, Colorado, the EPA listed the Bonita Peak Mining District on the NPL. Said listing was finalized in September 2016. The Bonita Peak Mining District encompasses 48 mining sites within the Animas River watershed, including the Sunnyside Mine, the American Tunnel, and the Sunbank Group. On or about July 25, 2017, Washington Mining Company (Washington Mining) (a wholly-owned subsidiary of the Company's wholly-owned subsidiary, Arava), received a general notice letter from the EPA stating that Washington Mining may be a PRP under CERCLA in connection with the Bonita Peak Mining District site and therefore responsible for the remediation of certain portions of the site, along with related costs incurred by the EPA. Shortly thereafter, the Company received a substantively identical letter asserting that it may be a PRP at the site and similarly responsible for the cleanup of certain portions of the site. The general notice letters identify one other PRP at the site, and do not require specific action by Washington Mining or the Company at this time. At this juncture, the Company is unable to determine the likelihood of a materially adverse outcome or the amount or range of a potential loss with respect to any remedial action related to the Bonita Peak Mining District NPL site.

Operating Properties

Mueller Copper Tube Products, Inc.

In 1999, Mueller Copper Tube Products, Inc. (MCTP), a wholly owned subsidiary, commenced a cleanup and remediation of soil and groundwater at its Wynne, Arkansas plant to remove trichloroethylene, a cleaning solvent formerly used by MCTP. On August 30, 2000, MCTP received approval of its Final Comprehensive Investigation Report and Storm Water Drainage Investigation Report addressing the treatment of soils and groundwater from the Arkansas Department of Environmental Quality (ADEQ). The Company established a reserve for this project in connection with the acquisition of MCTP in 1998. Effective November 17, 2008, MCTP entered into a Settlement Agreement and Administrative Order by Consent to submit a Supplemental Investigation Work Plan (SIWP) and subsequent Final Remediation Work Plan (RWP) for the site. By letter dated January 20, 2010, ADEQ approved the SIWP as submitted, with changes acceptable to the Company. On December 16, 2011, MCTP entered into an amended Administrative Order by Consent to prepare and implement a revised RWP regarding final remediation for the Site. The remediation system was activated in February 2014. Costs to implement the work plans, including associated general and administrative costs, are estimated to approximate \$0.5 million to \$0.7 million over the next three years. The Company has recorded a reserve at the low end of this range.

United States Department of Commerce Antidumping Review

On December 24, 2008, the Department of Commerce (DOC) initiated an antidumping administrative review of the antidumping duty order covering circular welded non-alloy steel pipe and tube from Mexico for the November 1, 2007 through October 31, 2008 period of review. The DOC selected Mueller Comercial as a respondent in the review. On April 19, 2010, the DOC published the final results of the review and assigned Mueller Comercial an antidumping duty rate of 48.33 percent. On May 25, 2010, the Company appealed the final results to the U.S. Court of International Trade (CIT). On December 16, 2011, the CIT issued a decision remanding the Department's final results. While the matter was still pending, the Company and the United States reached an agreement to settle the appeal. Subject to the conditions of the agreement, the Company anticipated that certain of its subsidiaries would incur antidumping duties on subject imports made during the period of review and, as such, established a reserve for this matter. After the lapse of the statutory period of time during which U.S. Customs and Border Protection (CBP) was required, but failed, to liquidate the entries at the settled rate, the Company released the reserve. Between October 30, 2015 and November 27, 2015, CBP sent a series of invoices to Southland Pipe Nipples Co., Inc. (Southland), requesting payment of approximately \$3.0 million in duties and interest in connection with 795 import entries made during the November 1, 2007 through October 31, 2008 period. On January 26, 2016 and January 27, 2016, Southland filed protests with CBP in connection with these invoices, noting that CBP's asserted claims were not made in accordance with applicable law, including statutory provisions governing deemed liquidation. The Company believes in the merits of the legal objections raised in Southland's protests, and CBP's response to Southland's protests is currently pending. Given the procedural posture and issues raised by this legal dispute, the Company cannot estimate the amount of potential duty liability, if any, that may result from CBP's asserted claims.

Deepwater Horizon Economic and Property Damage Claim

During 2020, Mueller Copper Tube Company, a wholly owned subsidiary of the Company, collected approximately \$22.1 million related to its claim under the Deepwater Horizon Economic and Property Damage Settlement Program. The collected amount represent settlement proceeds received after the payment of fees and expenses.

Guarantees

Guarantees, in the form of letters of credit, are issued by the Company generally to assure the payment of insurance deductibles, certain retiree health benefits, and debt at certain unconsolidated affiliates. The terms of the guarantees are generally one year but are renewable annually as required. These letters are primarily backed by the Company's revolving credit facility. The maximum payments that the Company could be required to make under its guarantees at December 31, 2022 were \$33.1 million.

Other

The Company is involved in certain litigation as a result of claims that arose in the ordinary course of business, which management believes will not have a material adverse effect on the Company's financial position, results of operations, or cash flows. It may also realize the benefit of certain legal claims and litigation in the future; these gain contingencies are not recognized in the Consolidated Financial Statements.

Note 15 – Income Taxes

The components of income before income taxes were taxed under the following jurisdictions:

<i>(In thousands)</i>	2022	2021	2020
Domestic	\$ 737,538	\$ 518,080	\$ 144,770
Foreign	138,493	123,059	64,419
Income before income taxes	<u>\$ 876,031</u>	<u>\$ 641,139</u>	<u>\$ 209,189</u>

Income tax expense consists of the following:

<i>(In thousands)</i>	2022	2021	2020
Current tax expense:			
Federal	\$ 149,269	\$ 107,804	\$ 37,964
Foreign	36,719	34,455	16,221
State and local	41,214	16,186	5,182
Current tax expense	<u>227,202</u>	<u>158,445</u>	<u>59,367</u>
Deferred tax (benefit) expense:			
Federal	(3,312)	(3,504)	(5,991)
Foreign	(192)	2,572	90
State and local	<u>(376)</u>	<u>8,345</u>	<u>1,855</u>
Deferred tax (benefit) expense	<u>(3,880)</u>	<u>7,413</u>	<u>(4,046)</u>
Income tax expense	<u>\$ 223,322</u>	<u>\$ 165,858</u>	<u>\$ 55,321</u>

The difference between the reported income tax expense and a tax determined by applying the applicable U.S. federal statutory income tax rate to income before income taxes is reconciled as follows:

<i>(In thousands)</i>	2022	2021	2020
Expected income tax expense	\$ 183,967	\$ 134,639	\$ 43,930
State and local income tax, net of federal benefit	32,184	21,132	5,949
Effect of foreign statutory rates different from U.S. and other foreign adjustments	7,443	11,185	2,783
Investment in unconsolidated affiliates	206	(679)	(387)
Other, net	(478)	(419)	3,046
Income tax expense	\$ 223,322	\$ 165,858	\$ 55,321

The Company continues to assert that the undistributed earnings of most of its foreign subsidiaries are permanently reinvested. No taxes have been accrued with respect to these undistributed earnings or any outside basis differences. The Company has elected to provide for the tax expense related to global intangible low-taxed income (GILTI) in the year the tax is incurred.

The Company includes interest and penalties related to income tax matters as a component of income tax expense, none of which was material in 2022, 2021, and 2020.

During 2021, the Internal Revenue Service completed its audit of the Company's 2015 and 2017 tax returns, the results of which were immaterial to the Consolidated Financial Statements. The statute of limitations is open for the Company's federal tax return for 2019 and all subsequent years, and some state and foreign returns are also open for some earlier tax years due to differing statute periods. While the Company believes that it is adequately reserved for possible audit adjustments, the final resolution of these examinations cannot be determined with certainty and could result in final settlements that differ from current estimates.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

<i>(In thousands)</i>	2022	2021
Deferred tax assets:		
Inventories	\$ 16,829	\$ 15,153
Other postretirement benefits and accrued items	7,260	8,382
Other reserves	8,046	9,962
Foreign tax attributes	5,750	6,410
State tax attributes, net of federal benefit	8,063	12,043
Stock-based compensation	5,249	3,608
Lease liability	4,540	4,988
Basis difference in unconsolidated affiliates	6,881	7,690
	62,618	68,236
Total deferred tax assets	62,618	68,236
Less valuation allowance	(21,505)	(26,624)
	41,113	41,612
Deferred tax assets, net of valuation allowance	41,113	41,612
Deferred tax liabilities:		
Property, plant, and equipment	44,001	45,804
Lease asset	4,970	5,099
Other liabilities	2,918	1,765
	51,889	52,668
Total deferred tax liabilities	51,889	52,668
Net deferred tax liabilities	\$ (10,776)	\$ (11,056)

As of December 31, 2022, after consideration of the federal impact, the Company had state income tax credit carryforwards of \$1.0 million, all of which expire by 2024, and state net operating loss (NOL) carryforwards with potential tax benefits of \$7.1 million, after consideration of the federal impact, expiring between 2023 and 2041. The state tax credit and NOL carryforwards were fully offset by valuation allowances.

As of December 31, 2022, the Company had other foreign tax attributes with potential tax benefits of \$4.0 million, which have an unlimited life, and attributes with potential benefits of \$1.1 million that expire between 2034 and 2042; all of these foreign attributes were fully offset by a valuation allowance. The Company also had other foreign tax attributes of \$0.7 million, which have limited lives expiring between 2031 and 2036, which are offset by a valuation allowance of \$0.4 million. The Company has also recorded a valuation allowance against deferred tax assets related to the book-tax differences in investments in unconsolidated affiliates.

Income taxes paid were approximately \$238.3 million in 2022, \$132.9 million in 2021, and \$49.3 million in 2020.

Note 16 – Equity

The Company's Board of Directors has extended, until July 2023, its authorization to repurchase up to 20 million shares of the Company's common stock through open market transactions or through privately negotiated transactions. The Company has no obligation to purchase any shares and may cancel, suspend, or extend the time period for the purchase of shares at any time. Any purchases will be funded primarily through existing cash and cash from operations. The Company may hold any shares purchased in treasury or use a portion of the repurchased shares for its stock-based compensation plans, as well as for other corporate purposes. From its initial authorization in 1999 through December 31, 2022, the Company has repurchased approximately 7.2 million shares under this authorization.

Note 17 – Stock-Based Compensation

The Company has in effect stock incentive plans under which stock-based awards have been granted to certain employees and members of its Board of Directors. Under these existing plans, the Company may grant stock options, restricted stock awards, and performance stock awards. Approximately 1.2 million shares were available for future stock incentive awards at December 31, 2022.

During the years ended December 31, 2022, December 25, 2021, and December 26, 2020, the Company recognized stock-based compensation, as a component of selling, general, and administrative expense, in its Consolidated Statements of Income of \$17.8 million, \$9.8 million, and \$8.6 million, respectively.

The total compensation expense not yet recognized related to stock incentive awards at December 31, 2022 was \$2.4 million, with an average expense recognition period of 3.2 years.

The Company generally issues treasury shares when stock options are exercised, or when restricted stock awards or performance stock awards are granted. A summary of the activity and related information follows:

<i>(Shares in thousands)</i>	Stock Options		Restricted Stock Awards		Performance Stock Awards	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Beginning of period	615	\$ 28.42	577	\$ 32.40	624	\$ 33.46
Granted	—	N/A	66	63.80	287	65.48
Exercised/Released	(170)	26.31	(150)	32.49	(49)	34.26
Forfeited	(3)	32.28	(2)	38.07	(1)	29.61
End of period	<u>442</u>	\$ 29.20	<u>491</u>	\$ 36.56	<u>861</u>	\$ 44.07

Restricted Stock Awards

The fair value of each restricted stock award equals the fair value of the Company's stock on the grant date and is amortized into compensation expense on a straight-line or accrual basis over its vesting period based on its vesting schedule. The weighted average grant-date fair value of awards granted during 2022, 2021, and 2020 was \$63.80, \$44.08, and \$29.00, respectively.

The aggregate intrinsic value of outstanding and unvested awards was \$29.0 million at December 31, 2022. The total fair value of awards that vested was \$4.9 million, \$7.0 million, and \$5.6 million in 2022, 2021, and 2020, respectively.

Performance Stock Awards

Performance stock awards require achievement of certain performance criteria which are predefined by the Compensation Committee of the Board of Directors at the time of grant. The fair value of each performance stock award equals the fair value of the Company's stock on the grant date. Performance stock awards are vested and released at the end of the performance period if the predefined performance criteria are achieved.

For all performance stock awards, in the event the certified results equal the predefined performance criteria, the Company will grant the number of shares equal to the target award. In the event the certified results exceed the predefined performance criteria, additional shares up to the maximum award will be granted. In the event the certified results fall below the predefined performance criteria but above the minimum threshold, a reduced number of shares will be granted. If the certified results fall below the minimum threshold, no shares will be granted.

In the period it becomes probable that the minimum threshold specified in the award will be achieved, the Company recognizes expense for the proportionate share of the total fair value of the performance stock awards related to the vesting period that has

already lapsed for the shares expected to vest and be released. The remaining fair value of the shares expected to vest and be released is expensed on a straight-line basis over the balance of the vesting period. In the event the Company determines it is no longer probable that it will achieve the minimum threshold specified in the award, all of the previously recognized compensation expense is reversed in the period such a determination is made.

The weighted average grant-date fair value of awards granted during 2022, 2021, and 2020 was \$65.48, \$43.46, and \$29.61, respectively.

The aggregate intrinsic value of outstanding and unvested awards was \$50.8 million at December 31, 2022. The total fair value of awards that vested was \$1.7 million in 2022.

Stock Options

Stock options are generally granted to purchase shares of common stock at an exercise price equal to the average of the high and low market price of the Company's stock on the grant date. Generally, the awards vest within five years from the grant date. Any unexercised options expire after not more than ten years. The fair value of each option is estimated as a single award and amortized into compensation expense on a straight-line or accrual basis over its vesting period based on its vesting schedule.

The Company estimates the fair value of all stock option awards as of the grant date by applying the Black-Scholes-Merton option pricing model. The use of this valuation model in the determination of compensation expense involves certain assumptions that are judgmental and/or highly sensitive including the expected life of the option, stock price volatility, risk-free interest rate, and dividend yield. Additionally, forfeitures are not estimated at the time of valuation; they are recognized as they occur. The weighted average of key assumptions used in determining the fair value of options granted and a discussion of the methodology used to develop each assumption are as follows:

	2022	2021	2020
Fair value of stock options on grant date	N/A \$	15.6 \$	6.81 \$
Expected term	N/A	7.9 years	7.9 years
Expected price volatility	N/A	33.6 %	31.9 %
Risk-free interest rate	N/A	1.3 %	0.6 %
Dividend yield	N/A	1.1 %	1.7 %

Expected term – This is the period of time estimated based on historical experience over which the options granted are expected to remain outstanding. An increase in the expected term will increase compensation expense.

Expected price volatility – This is a measure of the amount by which a price has fluctuated or is expected to fluctuate. The Company uses actual historical changes in the market value of its stock to calculate the volatility assumption. Daily market value changes from the grant date over a past period representative of the expected term of the options are used. An increase in the expected price volatility rate will increase compensation expense.

Risk-free interest rate – This is the U.S. Treasury rate for the week of the grant, having a term representative of the expected term of the options. An increase in the risk-free rate will increase compensation expense.

Dividend yield – This rate is the annual dividends per share as a percentage of the Company's stock price. An increase in the dividend yield will decrease compensation expense.

The total intrinsic value of options exercised was \$5.9 million, \$3.8 million, and \$2.4 million in 2022, 2021, and 2020, respectively. The total fair value of options that vested was \$1.1 million, \$0.4 million, and \$0.7 million in 2022, 2021, and 2020.

At December 31, 2022, the aggregate intrinsic value of all outstanding options was \$13.2 million with a weighted average remaining contractual term of 4.3 years. Of the outstanding options, 349 thousand are currently exercisable with an aggregate intrinsic value of \$10.7 million, a weighted average exercise price of \$28.37, and a weighted average remaining contractual term of 3.9 years.

Note 18 – Accumulated Other Comprehensive Income (Loss)

AOCI includes certain foreign currency translation adjustments from those subsidiaries not using the U.S. dollar as their functional currency, net deferred gains and losses on certain derivative instruments accounted for as cash flow hedges, adjustments to pension and other post-employment benefit liabilities, and other comprehensive income attributable to unconsolidated affiliates.

The following table provides changes in AOCI by component, net of taxes and noncontrolling interest (amounts in parentheses indicate debits to AOCI):

<i>(In thousands)</i>	Cumulative Translation Adjustment	Unrealized Gain (Loss) on Derivatives	Pension/ OPEB Liability Adjustment	Attributable to Unconsol. Affiliates	Total
Balance at December 26, 2020	\$ (37,339)	\$ 984	\$ (17,203)	\$ (1,325)	\$ (54,883)
Other comprehensive (loss) income before reclassifications	(4,964)	2,361	4,899	978	3,274
Amounts reclassified from AOCI	—	(2,542)	804	—	(1,738)
Balance at December 25, 2021	(42,303)	803	(11,500)	(347)	(53,347)
Other comprehensive (loss) income before reclassifications	(26,935)	(6,983)	13,667	2,702	(17,549)
Amounts reclassified from AOCI	—	7,666	(945)	—	6,721
Balance at December 31, 2022	<u>\$ (69,238)</u>	<u>\$ 1,486</u>	<u>\$ 1,222</u>	<u>\$ 2,355</u>	<u>\$ (64,175)</u>

Reclassification adjustments out of AOCI were as follows:

<i>(In thousands)</i>	Amount reclassified from AOCI			Affected Line Item
	2022	2021	2020	
Unrealized losses (gains) on derivatives:				
Commodity contracts	\$ 9,891	\$ (3,848)	\$ 6,337	Cost of goods sold
	(2,225)	1,306	(1,246)	Income tax (benefit) expense
	<u>\$ 7,666</u>	<u>\$ (2,542)</u>	<u>\$ 5,091</u>	Net of tax and noncontrolling interests
Amortization of net loss (gain) and prior service cost on employee benefit plans	\$ —	\$ —	\$ 11,642	Pension plan termination expense
	(1,277)	963	(998)	Other income, net
	332	(159)	(2,353)	Income tax expense (benefit)
	<u>\$ (945)</u>	<u>\$ 804</u>	<u>\$ 8,291</u>	Net of tax and noncontrolling interests

Note 19 – Quarterly Financial Information (Unaudited) ⁽¹⁾*(In thousands, except per share data)*

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2022				
Net sales	\$ 1,010,002	\$ 1,150,042	\$ 944,830	\$ 877,581
Gross profit ⁽²⁾	265,491	329,128	266,193	256,781
Consolidated net income	159,248	207,524	155,813	140,235
Net income attributable to Mueller Industries, Inc.	158,316	206,552	154,542	138,906
Basic earnings per share	2.82	3.70	2.78	2.50
Diluted earnings per share	2.78	3.65	2.74	2.46
Dividends per share	0.25	0.25	0.25	0.25
2021				
Net sales	\$ 818,148	\$ 1,012,592	\$ 982,248	\$ 956,357
Gross profit ⁽²⁾	149,730	212,880	237,983	229,763
Consolidated net income ⁽³⁾	65,238	110,932	172,256	126,698
Net income attributable to Mueller Industries, Inc.	63,107	108,832	170,980	125,601
Basic earnings per share	1.13	1.95	3.05	2.24
Diluted earnings per share	1.11	1.92	3.01	2.21
Dividends per share	0.13	0.13	0.13	0.13

⁽¹⁾ The sum of quarterly amounts may not equal the annual amounts reported due to rounding. In addition, the earnings per share amounts are computed independently for each quarter, while the full year is based on the weighted average shares outstanding.

⁽²⁾ Gross profit is net sales less cost of goods sold, which excludes depreciation and amortization.

⁽³⁾ Includes income earned by H&C Flex, acquired during Q1 2021, and Mueller Middle East, acquired during Q4 2021.

Note 20 – Related Party Transactions

The non-controlling interest in the Company's South Korean joint venture owns 100 percent of a copper tube mill which supplies Mueller affiliates. These affiliates purchased \$22.2 million of product from the supplier in 2022. There were no payables related to these sales as of December 31, 2022.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Mueller Industries, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Mueller Industries, Inc. (the Company) as of December 31, 2022 and December 25, 2021, the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and December 25, 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 28, 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 Matter

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 account or disclosures to which it relates.

Description of the Matter

Defined Benefit Pension Obligation

At December 31, 2022 the aggregate defined pension obligation was \$50.8 million and the fair value of pension plan assets was \$62.3 million, resulting in an overfunded pension obligation of \$11.5 million. As disclosed in Notes 1 and 13 to the consolidated financial statements, the Company recognizes the overfunded or underfunded status of the plans as an asset or liability in the consolidated balance sheets with changes in the funded status recorded through comprehensive income in the year in which those changes occur. The obligations for these plans are actuarially determined and affected by assumptions, including discount rates, expected long-term return on plan assets, and certain employee-related factors such as mortality.

Auditing the defined benefit pension obligation is complex and required the involvement of our actuarial specialists due to the highly judgmental nature of actuarial assumptions (e.g., discount rate, mortality rate, and expected return on plan assets) used in the measurement process. These assumptions have a significant effect on the projected benefit obligation.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls that address the measurement and valuation of the defined benefit pension obligation. For example, we tested controls over management's review of the defined benefit pension obligation, including the significant actuarial assumptions used by management and the related data inputs.

To test the defined benefit pension obligation, our audit procedures included, among others, evaluating the methodology used, the significant actuarial assumptions discussed above and testing the completeness and accuracy of the underlying data, including the participant data used by management.

We involved our actuarial specialist to assist with our procedures. For example, we compared the actuarial assumptions used by management to historical trends and evaluated the change in the defined benefit pension obligation from prior year due to the change in service cost, interest cost, actuarial gains and losses, benefit payments, and contributions. In addition, we evaluated management's methodology for determining the discount rate that reflects the maturity and duration of the benefit payments that is used to measure the defined benefit pension obligation. As part of this assessment, we compared management's selected discount rate to an independently developed range of reasonable discount rates. To evaluate the mortality rate assumption, we assessed whether the information is consistent with publicly available information, and whether any market data adjusted for entity-specific factors were applied. Lastly, to evaluate the expected return on plan assets, we assessed whether management's assumption was consistent with a range of returns for a portfolio of comparative investments.

Ernst & Young LLP

We have served as the Company's auditor since 1991.

Memphis, Tennessee
February 28, 2023

MUELLER INDUSTRIES, INC.
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS
Years Ended December 31, 2022, December 25, 2021, and December 26, 2020

<i>(In thousands)</i>	Balance at beginning of year	Additions		Deductions	Balance at end of year
		Charged to costs and expenses	Other additions		
2022					
Allowance for doubtful accounts	\$ 2,590	\$ 323	\$ —	\$ 226	\$ 2,687
Environmental reserves	\$ 27,426	\$ 1,367	\$ —	\$ 8,259	\$ 20,534
Valuation allowance for deferred tax assets	\$ 26,624	\$ (1,648)	\$ 509	\$ 3,981	\$ 21,504
2021					
Allowance for doubtful accounts	\$ 1,538	\$ 1,216	\$ —	\$ 164	\$ 2,590
Environmental reserves	\$ 24,001	\$ 4,964	\$ —	\$ 1,539	\$ 27,426
Valuation allowance for deferred tax assets	\$ 27,199	\$ 108	\$ 642	\$ 1,325	\$ 26,624
2020					
Allowance for doubtful accounts	\$ 770	\$ 1,208	\$ —	\$ 440	\$ 1,538
Environmental reserves	\$ 20,866	\$ 4,242	\$ —	\$ 1,107	\$ 24,001
Valuation allowance for deferred tax assets	\$ 23,130	\$ 2,317	\$ 1,898	\$ 146	\$ 27,199

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934**

As of February 23, 2023, Mueller Industries, Inc. had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: Common Stock, \$0.01 par value per share (the "Common Stock").

The following summary describes our Common Stock and the material provisions of our Restated Certificate of Incorporation, dated February 8, 2007 (the "Certificate of Incorporation"), and our Amended and Restated By-laws, effective as of January 15, 2016 (the "Bylaws"). Because the following is only a summary, it does not contain all of the information that may be important to you, and is qualified in its entirety by the full text of our Certificate of Incorporation and our Bylaws, copies of which are on file with the SEC and included as exhibits to our Annual Report on Form 10-K for the year ended December 31, 2019. You should refer to the text of these documents for a complete description. Unless the context requires otherwise, references in this exhibit to "Mueller," the "Company," "we," "us," and "our" refer to Mueller Industries, Inc. together with its consolidated subsidiaries.

We are authorized to issue 105,000,000 shares of capital stock, of which:

- 100,000,000 shares, par value \$0.01 per share, are designated as Common Stock; and
- 5,000,000 shares, par value \$1.00 per share, are designated as Preferred Stock

As of February 23, 2023, we had outstanding 57,024,726 shares of Common Stock, excluding 23,158,278 treasury shares, and no shares of Preferred Stock.

Common Stock

Voting Rights

Except as otherwise provided for in our Certificate of Incorporation, holders of our Common Stock are entitled to one (1) vote per share on all matters submitted to our stockholders for a vote. Our Common Stock does not have cumulative voting rights.

Dividends

Subject to the rights of holders of outstanding shares of Preferred Stock, the holders of Common Stock are entitled to receive dividends, if any, as may be declared from time to time by the Board of Directors in its discretion out of funds legally available for the payment of dividends.

Liquidation

Upon our liquidation, dissolution or winding-up, the holders of Common Stock shall be entitled to share ratably in all assets remaining after the payment of any liabilities and the liquidation preferences of any outstanding shares of Preferred Stock.

No Preemptive, Redemption or Conversion Rights

Our Common Stock is not subject to redemption or sinking fund provisions and does not have any conversion rights. Our Common Stock does not have preemptive or other rights to subscribe for additional shares of any class of our capital stock.

Voting Rights for the Election of Directors

Our Board of Directors is not classified. Our Bylaws provide that our Board of Directors may consist of one (1) or more members, and that, until such time as our Board of Directors determines otherwise, the number of directors shall be nine (9).

Our Bylaws provide that directors are elected at the annual meeting of the stockholders at which a quorum is present, and the persons receiving a plurality of the votes cast shall be so elected. Our Certificate of Incorporation does not provide for cumulative voting in the election of directors.

Our Board of Directors has the ability to fill vacancies on our Board of Directors.

Special Stockholder Meetings

Our Bylaws provide that special meetings of the stockholders may be called only by our Chairman or our Chief Executive Officer. Special meetings may be called by the Chairman only upon written request of a majority of the Entire Board of Directors (as defined below).

“Entire Board of Directors” means the total number of directors which the Company would have if there were no vacancies.

2023 INCENTIVE PLAN FOR CERTAIN KEY EMPLOYEES

The Company has a discretionary annual incentive program under which exempt salaried employees may earn cash payments based on a percentage of base annual salary. The actual percent is based on a variety of guidelines including performance levels of the respective business units primarily measured by operating income subject to certain adjustments.

The payment to an employee is based upon (i) their assigned grade level, (ii) actual company earnings achieved relative to a pre-determined target, which is adjusted upward if company performance exceeds target and reduced if company performance is less than target, and (iii) base salary paid during the fiscal year.

MUELLER INDUSTRIES, INC.
List of Subsidiaries

Subsidiary*	State or Country of Incorporation
ATCO Rubber Products, Inc.	Michigan
Mueller Brass Holding Company, Inc.	Delaware
Mueller Brass Co. (Assumed name: Mueller Brass Products)	Michigan
Extruded Metals, Inc.	Delaware
Mueller Industrial Realty Co.	Michigan
Itawamba Industrial Gas Company, Inc.	Mississippi
Mueller Plastics Holding Company, Inc.	Ohio
Mueller Brass Forging Company, Inc.	Delaware
Mueller East, Inc.	Delaware
Mueller Formed Tube Company, Inc.	Delaware
Mueller Impacts Company, Inc.	Delaware
Mueller Press Company, Inc.	Mississippi
Mueller Refrigeration Products Company, Inc.	Delaware
Mueller LBHC, Inc.	Delaware
Lincoln Brass Works, Inc. (Assumed name: Mueller Gas Products)	Michigan
Overstreet-Hughes, Co., Inc.	Tennessee
Mueller Refrigeration LLC	Delaware
Mueller Refrigeration Holding Company, Inc.	Delaware
Mueller Streamline Co.	Delaware
Mueller Copper Tube Company LLC	Delaware
Mueller Fittings, LLC	Mississippi
Mueller Fittings Company, Inc.	Michigan
Kessler Sales & Distribution LLC	Delaware
B&K, LLC (d/b/a BK Products)	Delaware
Heatlink Group USA, LLC	Tennessee
Precision Tube Company, LLC	Pennsylvania
Mueller Southeast, Inc.	Pennsylvania
Southland Pipe Nipples Company, Inc.	Texas
Mueller Tool and Machine, Inc.	Delaware
Mueller Castings Company, Inc.	Delaware
Mueller Packaging, LLC	Mississippi
Micro Gauge, Inc.	Michigan
Microgauge Machining, Inc.	Michigan
Propipe Technologies, Inc. (Assumed name: Mueller Gas Products)	Ohio
WTC Holding Company	Michigan
DENO Investment Company II, Inc.	Michigan
Tecumseh Products Holdings LLC ⁽⁷⁾	Delaware
Tecumseh Products LLC	Michigan
MA Industrial Secured Lending LLC ⁽⁵⁾	Delaware
Muellux Holding Company I SARL	Luxembourg
Muellux Holding Company II SARL	Luxembourg
Mueller Middle East B.S.C. ⁽⁸⁾	Bahrain
Mueller Europe Investment Company Ltd.	United Kingdom

Subsidiary*	State or Country of Incorporation
Jungwoo Metal Ind. Co., Ltd. ⁽⁶⁾	South Korea
Mueller Europe, Limited	United Kingdom
Westermeyer Industries, Inc.	Illinois
Sherwood Valve Products, Inc.	Ohio
Sherwood Valve LLC	Delaware
DENO Investment Company, Inc.	Michigan
Mueller de Mexico, S.A. de C.V. ⁽¹⁾	Mexico
The Mosack Group, LLC ⁽²⁾	Delaware
DENO Holding Company, Inc.	Michigan
B & K Industries, Inc.	Illinois
Mueller Copper Tube Products, Inc.	Delaware
Howell Metal Company (d/b/a Precision Tube)	Virginia
Turbotec Products, Inc.	Connecticut
Mueller Canada Holding Co. Ltd.	Yukon Territory
Heatlink Group, Inc.	Alberta
Great Lakes Copper Ltd.	Nova Scotia
Linesets, Inc.	Delaware
Climate Components, LLC	Delaware
Arava Natural Resources Company, Inc.	Delaware
United States Fuel Company	Nevada
King Coal Company	Utah
Canco Oil & Gas Ltd.	Alberta
Aegis Oil & Gas Leasing, Ltd.	Alberta
Bayard Mining Corp.	Delaware
Washington Mining Company	Maine
Amwest Exploration Company	Delaware
USSRAM Exploration Company	Maine
White Knob Mining Company	Idaho
Arava Exploration Company	Colorado
Summit Systems, Inc.	Delaware
Mining Remedial Recovery Company	Delaware
Carpentertown Coal & Coke Company	Pennsylvania
U.S.S. Lead Refinery, Inc.	Maine
Leon Water Enterprises, Inc. ⁽⁹⁾	Texas
Macomber Construction Company	Ohio
Macomber, Incorporated	Ohio
Macomber Building and Land Corporation	Delaware
Mueller Copper Tube West Company, Inc.	Utah
MII Financial Corporation	Michigan
Mueller Streamline Holding S.L.U.	Spain
WTC Holding Co. I, LLC	Delaware
WTC Holding Co. II, LLC	Delaware
Mueller Comercial de Mexico S. de R.L. de C.V. ⁽³⁾	Mexico
NICNA Mexico Servicios, S. de R.L. de C.V. ⁽⁴⁾	Mexico
Mueller Streamline II, LLC	Delaware
Changzhou Mueller Refrigerant Valve Manufacturing Co., Ltd.	China
Mueller Industries Trading (Shanghai) Co., Ltd.	China

Subsidiary*	State or Country of Incorporation
Mueller Streamline Trading, LLC	Delaware
Mueller Streamline China, LLC	Delaware

**All subsidiaries are 100% owned, except as shown.*

(1) Owned by DENO Investment Company, Inc. (99.94%) and Mueller Streamline Co. (.06%)

(2) Owned by DENO Investment Company, Inc. (17%)

(3) Owned by Mueller Streamline Holding S.L.U. (99.983%), WTC HoldCo I, LLC (0.016%), and WTC HoldCo II, LLC (0.001%)

(4) Less than 1% of the outstanding common stock is owned by WTC HoldCo I, LLC

(5) Owned by DENO Investment Company II, Inc. (50%)

(6) Owned by Mueller Europe Investment Company Ltd. (60%)

(7) Owned by DENO Investment Company II, Inc. (50%)

(8) Owned by Muellux Holding Company II SARL (55%)

(9) Owned by OWL Petroleum Company (50%)

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- 1) Form S-3 No. 333-182906 pertaining to the registration of 20,845,718 shares of Mueller Industries, Inc. common stock,
- 2) Form S-8 No. 333-232882 pertaining to the Mueller Industries, Inc. 2019 Incentive Plan,
- 3) Form S-8 No. 333-197609 pertaining to the Mueller Industries, Inc. 2014 Incentive Plan,
- 4) Form S-8 No. 333-160718 pertaining to the Mueller Industries, Inc. 2009 Stock Incentive Plan,
- 5) Form S-8 No. 333-138413 pertaining to the Mueller Industries, Inc. 2002 Stock Option Plan, and
- 6) Form S-8 No. 333-91238 pertaining to the Mueller Industries, Inc. 2002 Stock Option Plan;

of our reports dated February 28, 2023, with respect to the consolidated financial statements of Mueller Industries, Inc. and the effectiveness of internal control over financial reporting of Mueller Industries, Inc., included in this Annual Report (Form 10-K) of Mueller Industries, Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP
Ernst & Young LLP

Memphis, Tennessee
February 28, 2023

CERTIFICATION

I, Gregory L. Christopher, certify that:

1 I have reviewed this annual report on Form 10-K of Mueller Industries, Inc.;

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

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

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

- a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ Gregory L. Christopher
Gregory L. Christopher
Chief Executive Officer

CERTIFICATION

I, Jeffrey A. Martin, certify that:

1 I have reviewed this annual report on Form 10-K of Mueller Industries, Inc.;

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

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

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

- a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ Jeffrey A. Martin
 Jeffrey A. Martin
 Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Mueller Industries, Inc. (the "Company") on Form 10-K for the period ending December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gregory L. Christopher, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gregory L. Christopher
Gregory L. Christopher
Chief Executive Officer
Date: February 28, 2023

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Mueller Industries, Inc. (the "Company") on Form 10-K for the period ending December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jeffrey A. Martin, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Jeffrey A. Martin
Jeffrey A. Martin
Chief Financial Officer
Date: February 28, 2023

MUELLER INDUSTRIES, INC.
INSIDER TRADING POLICY

THIS POLICY HAS BEEN APPROVED BY THE AUDIT COMMITTEE
OF THE BOARD OF DIRECTORS OF MUELLER INDUSTRIES, INC. (“the Company”)
ON FEBRUARY 6, 2023
AND IS APPLICABLE TO ALL DIRECTORS, OFFICERS, EMPLOYEES,
ADVISORS, AND CONSULTANTS OF THE COMPANY

Policy Statement

The purchase or sale of securities while possessing material nonpublic information or the selective disclosure of such information to others who may trade is prohibited by federal and state laws.

Mueller Industries, Inc. (the “Company”) has adopted the following policy with respect to purchases and sales of the Company’s securities by directors, officers, employees, advisors and consultants of the Company and its subsidiaries who have material nonpublic information about the Company and about other firms with which it works closely. For purposes of this policy, outside directors, advisors and consultants are included within the term “employee.” Each employee is responsible for ensuring that he or she does not violate federal or state securities laws or the Company’s policy concerning securities trading. This policy is designed to promote compliance with federal securities laws and to protect the Company, as well as those persons, from the very serious liabilities and penalties that can result from violations of these laws.

Potential penalties for insider trading violations include civil fines for up to three times the profit gained or loss avoided by the trading, criminal fines of up to \$5,000,000, or jail sentences of up to 20 years. In addition, a company whose employee violates the insider prohibitions may be liable for civil fines of up to the greater of \$1,000,000 or three times the profit gained or loss avoided as a result of the employee’s insider trading violations.

The Company’s Policy

Company employees may not trade in the stock or other securities of any firm when they know “material nonpublic information” about the firm. This restriction on “insider trading” is not limited to trading in the Company’s securities. It includes trading in the securities of other firms such as customers, suppliers or vendors of the Company and those with which the Company may be negotiating major transactions, such as an acquisition, investment or sale. Information that is not material to the Company may nevertheless be material to one of those other firms.

“Trading” includes purchases and sales of stock, bonds, debentures, options, puts, calls and other similar securities. This policy includes trades made pursuant to any investment direction under employee benefit plans as well as trades in the open market. This policy also applies to the exercise of options with an immediate sale of some or all of the shares through a broker (a “cashless exercise”).

Employees must not pass material nonpublic information on to others or recommend to anyone the purchase or sale of any securities on the basis of such information. This practice, known as “tipping,” also violates the securities laws and can result in the same civil and criminal penalties that apply to insider trading, whether or not the employee derives any benefit from another’s actions.

The same restrictions apply to family members and other persons living in an employee’s household. Employees are expected to be responsible for the compliance of the members of their immediate family and personal household.

Because of the unique potential for abuse of material nonpublic information, it is also the Company’s policy that directors, officers and employees may not engage in short-term speculative transactions involving “trading” in the Company’s securities. This would include short sales and buying or selling puts or calls. The Company’s Anti Hedging and Pledging Policy is included in the Company’s Corporate Governance Guidelines.

Policies 2023 Insider Trading

Definition of Material Nonpublic Information

Material information. Information is material if there is a substantial likelihood that a reasonable investor would consider it important in deciding whether to buy, hold or sell a security. Therefore, any information that could reasonably be expected to affect the price of the security is material. While it is not possible to create an exhaustive list, the following items are some types of information or events that the Securities and Exchange Commission has indicated may be material:

- Earnings information
- A pending or prospective merger, acquisition, tender offer or joint venture
- A significant sale of assets or disposition of a significant subsidiary
- A gain or loss of a material contract, customer or supplier
- The development or release of a new product or service
- Changes in senior management
- The offering of additional securities

Both positive and negative information can be material. Because any trading that receives scrutiny will be evaluated after the fact (with the benefit of hindsight), questions concerning the materiality of particular information should be reviewed in consultation with the Company's General Counsel.

Nonpublic Information. Nonpublic information is information that is not generally known or available to the public. Information is considered to be available to the public only when it has been released to the public through appropriate channels, e.g., by means of a press release or a statement from one of the Company's senior officers, and enough time has elapsed to permit the investment market to absorb and evaluate the information. As a general rule, information is considered nonpublic until the second business day after the date of public disclosure.

Unauthorized Disclosure

Maintaining the confidentiality of Company information is essential for competitive, security and other business reasons, as well as to comply with securities laws. Information an employee learns about the Company or its business plans in connection with his or her employment is potentially "inside" information until publicly disclosed or made available by the Company. The employee should treat all such information as confidential and proprietary to the Company. The employee may not disclose it to others, such as family members, other relatives, or business or social acquaintances, who do not need to know it for legitimate business reasons.

Also, the timing and nature of the Company's disclosure of material information to outsiders is subject to legal rules, the breach of which could result in substantial liability to the employee, the Company and its management. Accordingly, it is important that only specifically designated representatives of the Company discuss the business of the Company and its affiliates and subsidiaries with the news media, securities analysts and investors. There are also very strict regulations governing such communications. If you receive any inquiry of this nature, you should, without comment, refer the inquiry to the Company's Chief Financial Officer, Chief Executive Officer (CEO) or General Counsel.

Trading Windows

Employees with access to the Company's quarterly earnings information (regardless of whether such access is to the quarterly earnings information of the Company as a whole or only one or more of the Company's operating segments) prior to the release of such information to the public are permitted to trade in the Company's securities only during four yearly "window periods." The General Counsel will notify those employees who are subject to this restriction. The four window periods are those periods commencing on the second trading day following the date of release to the public of the Company's earnings for the prior fiscal quarter and ending on the last day of the second month of the

fiscal quarter. Generally, the earnings release will occur between 25 and 45 days after the end of each fiscal quarter. For example, if the earnings for the fiscal quarter ended on March 31st are released on May 8th, trades may be made only during the period commencing on May 10th (assuming May 8, 9 and 10 are trading days that year) and ending on May 31st.

In addition to the foregoing, from time to time, an event may occur that is material to the Company and is known by only a few directors, officers and/or employees, such as a cybersecurity incident. So long as the event remains material and nonpublic, those persons designated by the General Counsel may not trade in the Company's securities, even during a window period. The General Counsel will communicate any event-specific trading restriction to the relevant personnel. The existence of an event-specific trading restriction may not be announced to the Company as a whole, and should not be communicated to any person.

All employees required to trade during window periods are required to contact the Company's General Counsel prior to initiating any trade in the Company's securities, or making a gift or charitable donation of Company securities (including transfers to family trusts, GRATs or similar estate planning vehicles), at any time of the year, whether during a window period or not. Such employees wishing to trade other than during a window period may make application for an exception to this Policy based on good cause. Applications for an exception must be made for each transaction, prior to the transaction, and will be reviewed and decided in management's sole discretion.

Please note that the restrictions outlined above do not apply to or affect the ability of employees to exercise stock options, or exercise a tax withholding right pursuant to which a person has elected to have the Company withhold shares subject to a stock option to satisfy tax withholding requirements; however, they do apply to the sale of the shares issued upon exercise of such stock options, including any sale of stock as part of a broker-assisted cashless exercise of any option. These restrictions also do not apply to the vesting of restricted stock or restricted stock units, or the exercise of a tax withholding right pursuant to which an employee elects to have the Company withhold shares of stock to satisfy tax withholding requirements upon the vesting of restricted stock or restricted stock units. Further, bona fide gifts are not transactions subject to this Policy, unless (i) the person making the gift has reason to believe that the recipient intends to sell the Company securities while the person making the gift is aware of material nonpublic information (or the person making the gift is subject to the "window period" restrictions specified above and such person has reason to believe that the recipient intends to sell the Company securities outside of a window period) or (ii) the person making the gift will receive value related to the gift or donation (e.g., a tax deduction related to a charitable donation).

In addition, purchases or sales of the Company's securities made pursuant to, and in compliance with, a written plan that meets the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934 (a "Trading Plan") may be made by an employee without restriction to any particular period and without pre-clearance by the Company's General Counsel provided that (i) the Trading Plan was established in good faith, in compliance with the requirements of Rule 10b5-1, at a time when such employee was not in possession of material nonpublic information about the Company and the Company had not imposed any trading blackout period and (ii) such employee notifies the Company's General Counsel prior to the adoption of such Trading Plan. Any employee maintaining a Trading Plan is required to notify the Company's General Counsel prior to adopting any amendments to the Trading Plan or terminating the Trading Plan prior to the expiration of its term.

Personal Responsibility; Assistance

Each employee should remember that the ultimate responsibility for adhering to this policy and avoiding improper trading rests with the employee. In this regard, it is important that each employee use his or her best judgment. If an employee violates this policy, the Company may take disciplinary action, up to and including termination.

Compliance with this policy by all employees is of the utmost importance both for the employee and for the Company. Any person who has any questions about the application of this policy to any particular case may obtain additional guidance from the General Counsel.