A WINNING STRATEGY

2022 ANNUAL REPORT

H.B. Fuller

Connecting what matters.™

Financial Summary*

ORGANIC SALES GROWTH	ADJUSTED EPS (YEAR OVER YEAR)	ADJUSTED EBITDA MARGIN	DIVIDENDS PER SHARE INCREASE
+16.6%	+15%	14.1%	+11%

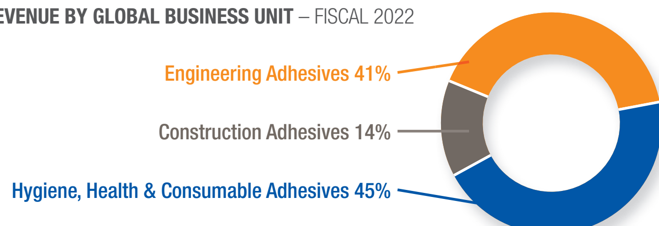
REGULATION G RECONCILIATION

Selected Income Statement Data[1]

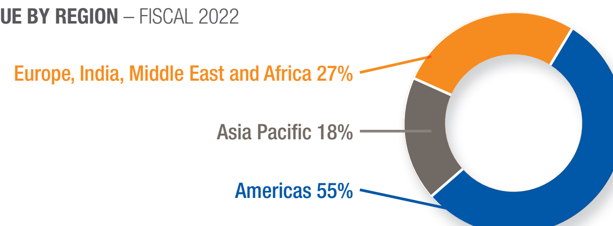
Dollar amounts in U.S. millions, except per share amounts and percentage data.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	**2022**
Revenue	$2,047.0	$2,104.5	$2,083.7	$2,094.6	$2,306.0	$3,041.0	$2,897.0	$2,790.3	$3,278.0	**$3,749.2**
Net income attributable to H.B. Fuller	$95.6	$50.7	$83.9	$121.7	$59.4	$171.2	$130.8	$123.7	$161.4	**$180.3**
ADJUSTMENTS:										
Acquisition project costs	-	1.7	7.0	2.0	5.3	2.8	2.2	(0.2)	5.6	**10.8**
Tonsan call option agreement	-	-	-	(5.4)	(3.9)	1.5	-	-	-	**-**
Organizational realignment	-	6.2	8.4	3.5	15.6	2.8	7.6	11.4	12.7	**6.4**
Restructuring and integration	-	-	-	-	47.4	20.4	0.8	7.4	4.2	**2.5**
Tax reform	-	-	-	-	-	(43.2)	0.1	-	-	**-**
Special charges	35.3	45.2	4.7	-	-	-	-	-	-	**-**
Project One	0.8	12.7	2.3	0.9	4.6	4.8	4.1	4.3	9.4	**9.9**
Other	-	4.0	1.0	1.8	(1.8)	(4.3)	8.0	2.3	(4.7)	**11.4**
Adjusted net income attributable to H.B. Fuller[2]	$131.7	$120.5	$107.3	$124.5	$126.6	$156.0	$153.7	$148.9	$188.6	**$221.3**
ADD:										
Interest expense	19.1	19.7	24.7	27.1	42.4	110.6	103.3	84.6	78.2	**91.5**
Interest income	(0.5)	(0.3)	(0.5)	(2.0)	(2.9)	(11.8)	(12.2)	(11.4)	(9.5)	**(7.8)**
Income taxes	50.0	50.8	59.8	52.1	46.2	49.6	47.5	46.5	67.6	**78.6**
Depreciation and amortization expense	61.7	70.5	75.3	77.7	86.7	144.4	140.1	138.2	142.0	**146.4**
Adjusted EBITDA[2]	$262.0	$261.2	$266.6	$279.4	$299.0	$448.8	$432.3	$406.8	$466.9	**$530.0**
Adjusted EBITDA margin[2]	12.8%	12.4%	12.8%	13.3%	13.0%	14.8%	14.9%	14.6%	14.2%	**14.1%**
Diluted shares	51.1	51.3	51.4	51.3	51.6	52.0	52.0	52.5	54.3	**55.3**
Adjusted diluted income per common share attributable to H.B. Fuller (EPS)[2]	$2.58	$2.35	$2.09	$2.43	$2.45	$3.00	$2.96	$2.84	$3.47	**$4.00**
	2013	2014	2015	2016	2017	2018	2019	2020	2021	**2022**
Gross profit	$570.2	$534.8	$561.4	$605.8	$599.0	$828.2	$806.9	$756.6	$845.3	**$963.7**
Gross profit margin	27.9%	25.4%	26.9%	28.9%	26.0%	27.2%	27.9%	27.1%	25.8%	**25.7%**
ADJUSTMENTS:										
Acquisition project costs	-	-	3.7	1.3	4.3	2.5	-	0.1	0.2	**1.1**
Organizational realignment	-	6.2	6.5	3.2	11.4	1.5	0.4	0.2	3.9	**3.2**
Restructuring and integration	-	-	-	-	10.8	5.0	6.3	3.7	2.1	**0.7**
Other	$1.1	$9.3	-	-	$(1.9)	$2.4	$0.2	$0.4	$1.8	**1.8**
Adjusted gross profit[3]	$571.3	$550.3	$571.6	$610.3	$623.6	$839.6	$813.8	$761.0	$853.3	**$970.5**
Adjusted gross profit margin[3]	27.9%	26.2%	27.4%	29.1%	27.0%	27.6%	28.1%	27.3%	26.0%	**25.9%**

REVENUE BY GLOBAL BUSINESS UNIT – FISCAL 2022



REVENUE BY REGION – FISCAL 2022



*Please see inside back cover for additional financial highlights and Regulation G disclosure and footnotes.

Letter to Shareholders

Dear Shareholder,

I am proud to be the CEO of H.B. Fuller, the largest pure-play adhesives company in the world. Since joining H.B. Fuller last year, I've visited nearly all 24 countries where we make products, engaged with customers, evaluated our broad global technology portfolio, and immersed myself in this fantastic, entrepreneurial culture. I had the benefit of objectivity and industry knowledge, and I was deeply impressed with our company and the team propelling it forward. I am more excited than ever to lead this strong, storied company into its next era of growth.

H.B. Fuller's winning strategy is focused on continuously innovating and upgrading our product line through strong customer collaboration, applications expertise, and technology development that solves some of the world's greatest challenges. Our technology is truly enabling; we are a small portion of the cost of our customers' end products, but extremely critical to achieving product quality and performance for our customers.

Here at H.B. Fuller, the right strategy is paired with excellent execution. In fiscal year 2022, we delivered exceptional financial results, driven by market share gains, responsible pricing actions, and diligent execution of our strategy. We produced strong double-digit growth in organic revenue, adjusted EBITDA, and adjusted EPS. This is particularly impressive given the significant headwinds we faced from continued raw material cost inflation, supply chain disruptions, a strengthening U.S. dollar, and substantially higher interest rates. Our strong performance is a testament to the strength of our strategy and our proven ability to adapt to new challenges and successfully execute our business plan.

2022 was also a year of celebration and new beginnings. We celebrated our 135th anniversary as a company; increased shareholder dividends for the 53rd consecutive year since going public; and bid a fond farewell to former President and CEO Jim Owens, who retired in December. I want to thank Jim for his outstanding leadership. I am fortunate to lead a thriving company that is well positioned for continued growth and margin expansion, thanks to Jim's efforts and those of our talented team.

Celeste Mastin
President and Chief Executive Officer

H.B. Fuller's winning strategy is focused on continuously innovating and upgrading our product line through strong customer collaboration, applications expertise, and technology development that solves some of the world's greatest challenges.

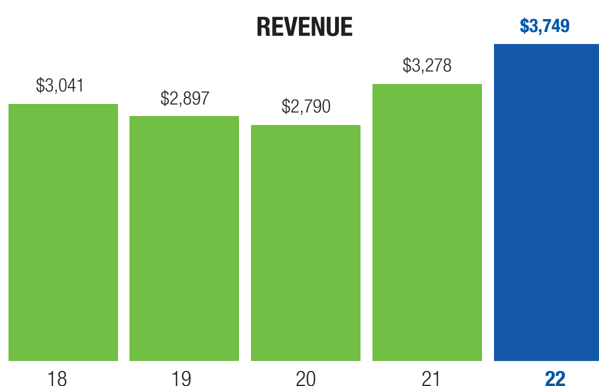
Delivering for Our Customers

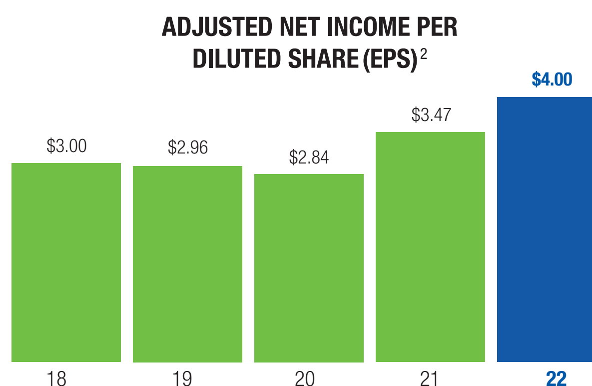
Inflationary pressures and unpredictable supply chain events continued to pose challenges in 2022, but our team overcame them with unwavering commitment to our customers. Our global footprint — coupled with our extensive scale, broad technology base, supplier relationships and vast formulating knowledge — is an advantage, giving us the ability to source alternate materials, and ensuring we have solutions for our customers' needs.

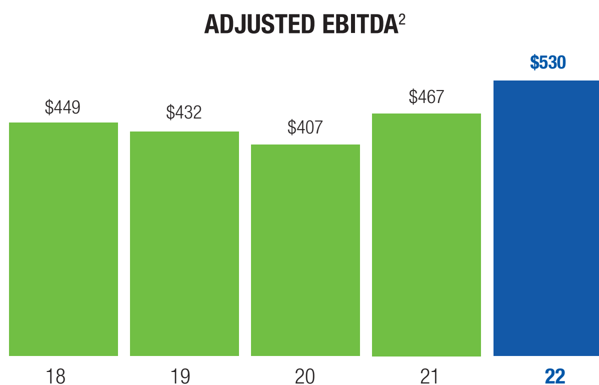
We are beginning to see improvements in raw material availability, and the rate of aggregate raw material cost inflation begin to slow. However, raw material cost is still significantly higher than pre-pandemic levels across most of our technologies and regions. Slowing global demand should correct inflationary trends, as our raw materials tend to be specialty chemicals subject to the unique supply and demand balance of each. Where inflation remains high, we are bringing upgraded products that offer performance unique to our customers' needs. While we see some healing within the supply chain, we remain vigilant and dedicated to adapting should conditions change.

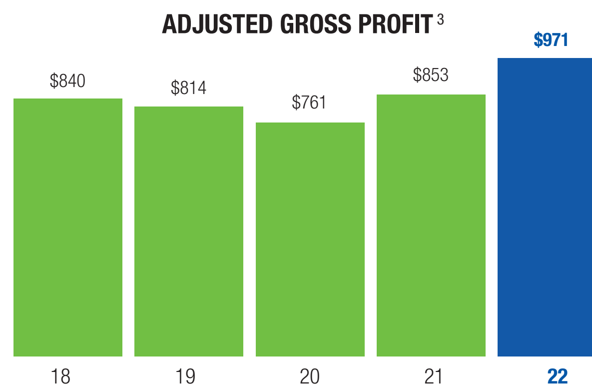
KEY FINANCIAL MEASURES*

Dollar amounts in U.S. millions, except per share amounts and percentage data.









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Operating Segment Results

Our commercial organization is structured strategically under three Global Business Units (GBUs). These GBUs are a key driver of our winning strategy, serving 30 distinct market segments with dedicated teams. Our market segment leaders possess extensive knowledge of their end markets and have established longstanding, collaborative relationships with their customers. They continually monitor and identify the megatrends that will affect their customer base and leverage this knowledge and their customer connections to create new, innovative, value-added solutions that proactively respond to the megatrends of the future, while continuing their endless mission to address specific customer needs. These entrepreneurial general managers represent an important pipeline of future business leaders at H.B. Fuller.

In 2022, all three GBUs delivered improved financial results, achieving double-digit growth in both revenue and adjusted EBITDA. They expanded market share positions, brought new products and technologies to their markets, and proactively addressed the challenging supply chain circumstances they faced to serve their customers.

Engineering Adhesives (EA)

As we drive higher EBITDA margins company-wide, predominantly by shifting our portfolio to more highly specified applications, our EA segment is leading the way. EA delivered another exceptional year of performance, with increases in organic revenue, adjusted EBITDA, and adjusted EBITDA margin. Appropriate pricing actions and exciting new product development drove EA's improved financial performance. EA's continued success was also driven by share-expanding opportunities across several of its end markets, and particularly in automotive, solar, electronics, and insulating glass.

Energy efficiency and clean air are two megatrends that figure prominently into EA's evolving portfolio. EA is investing significantly in bringing inventive new solutions to the market that address these megatrends, and these innovations will drive a substantial portion of EA's growth over the next five years. EA's electric vehicle product (EV) portfolio, for example, features a wide variety of forward-looking product offerings, and we continue to work closely with OEMs around the world to expand our position in this space.

At H.B. Fuller, we are constantly monitoring the intersection of trends and technology. In 2022, EA acquired a company with unique technology for the automotive industry, expanding our capacity in the Asia Pacific region. This acquisition is an example of our focus on identifying and acquiring small, tuck-in companies that fill a high-value opportunity in our portfolio.

Our EA business has demonstrated above-market growth over the last decade and is still in the early stage of its growth trajectory. We expect EBITDA margin expansion within the EA portfolio as we continue to successfully grow share and win new business in these end markets in the years ahead.

Health, Hygiene and Consumable Adhesives (HHC)

Our HHC business is the foundation of our portfolio, featuring steady growth and a strong global position, providing stability across all market cycles. In 2022, HHC drove strong double-digit growth in both revenue and adjusted EBITDA, with particular strength in the beverage labeling, hygiene, packaging, and health and beauty markets.

A worldwide focus on sustainability is creating a renaissance for this business, bringing new opportunities to advance our product offering in this segment, in ways that help address our customers' biggest needs around recyclability, compostability and enabling the circular economy. In HHC, over half of our new product innovation projects are related to sustainability.

During the year, HHC expanded its capabilities by acquiring a small company in Europe focused on innovative tapes and adhesives for the packaging and plywood industries. This acquisition is expected to accelerate growth in Europe within a specialty end market in HHC that is already thriving in the U.S. The acquisition also broadened our capacity in the U.S. and Europe, and furthered our strategy to continually add more highly specified applications to every part of our portfolio.

Construction Adhesives (CA)

CA achieved double-digit growth in both revenue and adjusted EBITDA in 2022. This success was driven by its unique technology offerings, strong position in highly specified applications, and deep, collaborative customer relationships.

In keeping with our strategy to drive higher EBITDA margins across the company, we are expanding the CA business by selectively adding highly specified applications in markets around the world. CA completed three strategic acquisitions in 2022 that did just that — diversifying our revenue stream, expanding our reach and production capabilities outside the U.S., and bringing several new, highly specified product ranges to our portfolio.

The CA business is an extension of our existing core technology expertise, leverages our current production processes, and is an integral part of our strategic plan to expand our mix to a more highly specified, higher growth, higher margin portfolio.

Looking Forward

We are well-positioned for continued strong, profitable growth and margin expansion in 2023 and beyond. I am confident in our strategy and ability to achieve H.B. Fuller's long-term financial goals, and I appreciate the support of our exceptional board of directors, my executive leadership team, and 7,000 employees who make our collective effort something very special. Thank you for embracing me as your new CEO. People and passion make the difference, and we have a great team driving our success.

As always, we are committed to providing a great investment opportunity for our shareholders, a world-class experience for our customers, and a great place to work for our team members, while driving positive change in the communities where we live and work. Thank you for your continued trust and support. There is a bright future ahead for H.B. Fuller, and our winning strategy will serve as our compass, guiding the way.

Celeste Mastin
President and CEO

PRIORITIES

- Grow market share in highly specified applications
- Manage raw material cost movement and pricing actions to expand margins
- Reduce net debt-to-adjusted EBITDA leverage below 3.0X
- Selectively invest in highest returning spaces to augment organic growth
- Emphasize sustainability, keeping it at the forefront of our product innovation pipeline

Corporate Governance*

EXECUTIVE OFFICERS

Celeste B. Mastin
President and Chief Executive Officer

Zhiwei Cai
Executive Vice President,
Engineering Adhesives

Heather Campe
Senior Vice President, International Growth

John Corkrean
Executive Vice President and
Chief Financial Officer

Jim East
Executive Vice President, Hygiene,
Health and Consumable Adhesives

Traci Jensen
Executive Vice President and
Chief Administrative Officer

Timothy Keenan
Senior Vice President, General Counsel
and Corporate Secretary

Boz Malik
Senior Vice President, Global
Construction Adhesives

Robert Martsching
Vice President, Corporate Controller

Chris Tukua
Corporate Treasurer

Nathan Weaver
Senior Vice President, Human Resources
and Communications

Heidi Weiler
Vice President, Corporate Financial Strategy

BOARD OF DIRECTORS

Lee R. Mitau
Chairman of the Board
H.B. Fuller Company and Graco Inc.

Daniel L. Florness
President and Chief Executive Officer
Fastenal Company

Thomas W. Handley
Chief Operating Officer for Investment Operations
of the William H. Gates III, Melinda F. Gates and the
Bill and Melinda Gates Foundation Trust

Michael J. Happe
President and Chief Executive Officer
Winnebago Industries

Charles T. Lauber
(effective Jan. 23, 2023)
Executive Vice President and Chief Financial Officer
A. O. Smith

Ruth S. Kimmelshue
Corporate Senior Vice President,
Animal Nutrition and Health
Cargill

Celeste B. Mastin
(effective Dec. 4, 2022)
President and Chief Executive Officer
H.B. Fuller Company

Teresa J. Rasmussen
President and Chief Executive Officer
Thrivent

Srilata A. Zaheer
Dean, Carlson School of Management
University of Minnesota

COMMITTEES

Audit
Florness
Handley (Chair)
Kimmelshue
Lauber
Rasmussen
Zaheer

Compensation
Happe
Kimmelshue (Chair)
Lauber
Mitau
Zaheer

Corporate Governance and Nominating Committee
Florness
Handley
Happe
Mitau (Chair)
Rasmussen

*As of February 1, 2023

About H.B. Fuller

Since 1887, H.B. Fuller has been a leading global adhesives provider focusing on perfecting adhesives, sealants, and other specialty chemical products to improve products and lives. With fiscal 2022 net revenue of $3.7 billion, H.B. Fuller's commitment to innovation brings together people, products, and processes that answer and solve some of the world's biggest challenges. Our reliable, responsive service creates lasting, rewarding connections with customers in electronics, disposable hygiene, medical, transportation, aerospace, clean energy, packaging, construction, woodworking, general industries, and other consumer businesses. And, our promise to our people connects them with opportunities to innovate and thrive.

To learn more, go to **www.hbfuller.com.**

World Headquarters
St. Paul, MN, USA
H.B. Fuller (NYSE: FUL)

7,000+ employees

135+ years of history

$3.7 billion in revenue

71 manufacturing facilities

35+ technology centers

34 countries with facilities or offices

3 global business units serving **30+** markets

125 countries with sales

10,000 adhesive solutions

560 patents

134,000+ social media

OUR COMMITMENT TO REDUCE OUR ENVIRONMENTAL IMPACT

Sustainability is foundational to who we are as a company and a source of innovation and competitive advantage. Our sustainability efforts have not gone unnoticed; we have consistently received third-party recognition for our ESG programs.

H.B. Fuller's technology is truly enabling. Our adhesives represent a small portion of the cost of our customers' end products but are critical to achieving product quality and performance for our customers. H.B. Fuller's technologies also play a key role in helping address our customers' biggest needs around sustainability, from recycling and compostability to enabling the circular economy. As we move forward, our team remains committed to working closely with customers around the globe to create a safer, healthier, and better world for generations to come.

For more information, visit the corporate sustainability section of our website at **hbfuller.com/sustainability.**

Learn More

STOCK INFORMATION

Our stock trading symbol is FUL. H.B. Fuller common stock is listed and traded on the New York Stock Exchange (NYSE). The closing stock price on the NYSE on December 30, 2022, was $71.62 per share. As of February 8, 2023, H.B. Fuller had 1,348 shareholders of record.

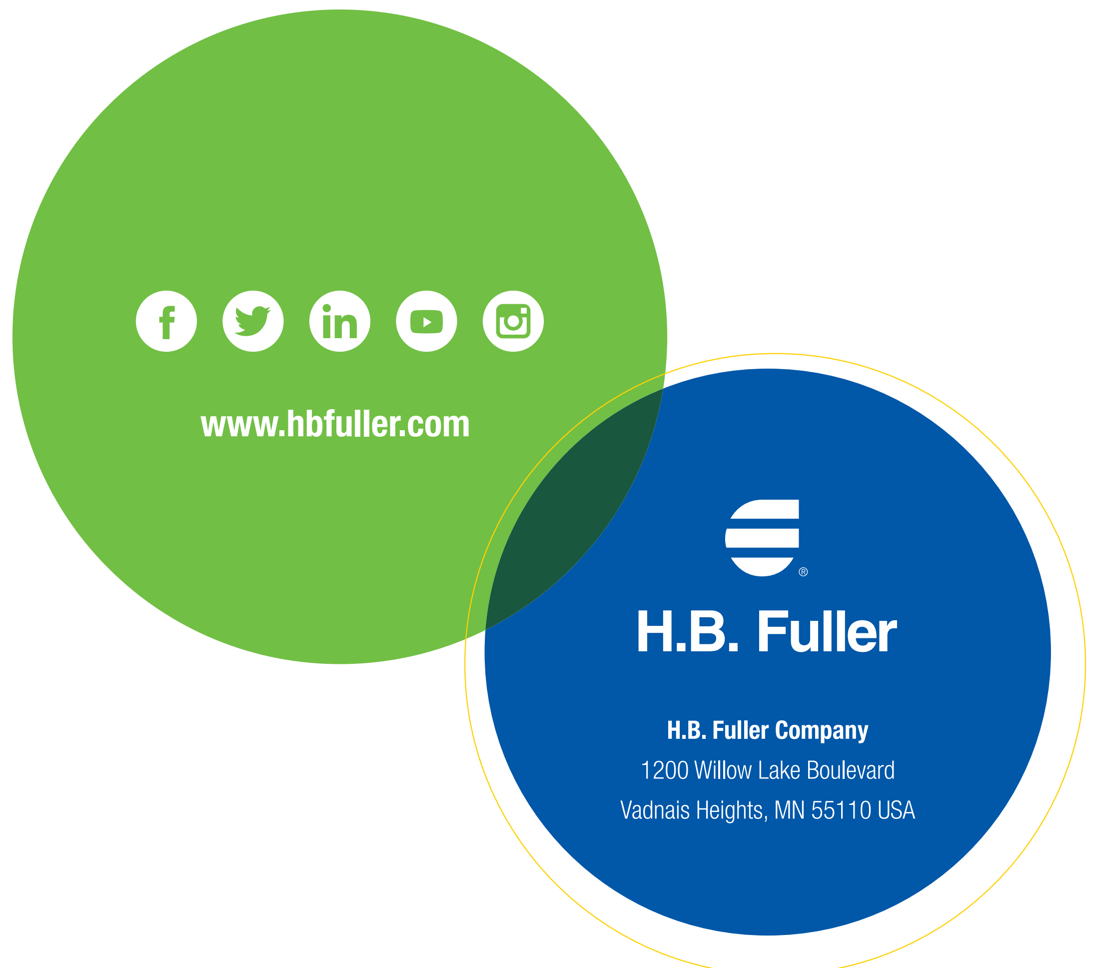
INVESTOR INQUIRIES

Security analysts, portfolio managers, and representatives of financial institutions should contact:

H.B. Fuller Investor Relations
1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Phone: 651-236-5060
investors@hbfuller.com

INVESTOR RESOURCES

Copies of H.B. Fuller's quarterly results, annual reports, SEC filings, and other investment-related information are available on our Investor Relations website at **investors.hbfuller.com.**



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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 3, 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: 001-09225

H.B. FULLER COMPANY

(Exact name of registrant as specified in its charter)

Minnesota	**41-0268370**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1200 Willow Lake Boulevard, St. Paul, Minnesota	**55110-5101**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(651) 236-5900**

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $1.00	FUL	New York Stock Exchange

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☒ Yes ☐ No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☒ No
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post 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" or "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐
Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☒ No
The aggregate market value of the Common Stock, par value $1.00 per share, held by non-affiliates of the registrant as of May 28, 2022 was approximately $3,754,704,477 (based on the closing price of such stock as quoted on the New York Stock Exchange of $71.13 on such date).
The number of shares outstanding of the Registrant's Common Stock, par value $1.00 per share, was 53,707,768 as of January 18, 2023.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference to portions of the registrant's Proxy Statement for the Annual Meeting of Shareholders to be held on April 6, 2023.

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H.B. FULLER COMPANY

2022 Annual Report on Form 10-K

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PART III

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PART I

Item 1. Business

H.B. Fuller Company was founded in 1887 and incorporated as a Minnesota corporation in 1915. Our stock is traded on the New York Stock Exchange ("NYSE") under the ticker symbol FUL. As used herein, "H.B. Fuller", "we", "us", "our", "management" or "company" includes H.B. Fuller and its subsidiaries unless otherwise indicated. Where we refer to 2022, 2021 and 2020 herein, the reference is to our fiscal years ended December 3, 2022, November 27, 2021, and November 28, 2020, respectively.

We are a leading worldwide formulator, manufacturer and marketer of adhesives, sealants and other specialty chemical products. Sales operations span 34 countries in North America, Europe, Latin America, the Asia Pacific region, India, the Middle East and Africa. Industrial adhesives represent our core product offering, which help improve the performance of our customers' products or improve their manufacturing processes. Customers use our adhesives products in manufacturing common consumer and industrial goods, including food and beverage containers, disposable diapers, medical products, windows, doors, appliances, sportswear, footwear, multi-wall bags, water filtration products, insulation, textiles, automobiles, recreational vehicles, buses, trucks and trailers, marine products, solar energy systems, electronics and products for the aerospace and defense industries. In addition, we have established a variety of product offerings for residential, commercial and industrial construction markets, including sealing and waterproofing solutions for airports, roads, highways, bridges, and utilities; pressure-sensitive adhesives, tapes and sealants for the commercial roofing industry; and level-setting products, ready-to-use grouts, mortars, and pressure sensitive adhesives that enable contractors and do-it-yourself consumers to quickly install flooring and tiling applications more reliably and efficiently. We also provide our customers with technical support and unique solutions designed to address their specific needs.

We have three reportable segments: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives. See Management's Discussion and Analysis of Financial Condition and Results of Operations (the "MD&A") in Item 7 of this Annual Report for a description of our segment operating results.

Non-U.S. Operations

The principal markets, products and methods of distribution outside the United States vary with each of our regional operations generally maintaining integrated business units that contain dedicated supplier networks, manufacturing, logistics and sales organizations. The vast majority of the products sold within any region are produced within the region, and the respective regions do not import significant amounts of product from other regions. As of December 3, 2022, we had sales offices and manufacturing plants in 23 countries outside the United States and satellite sales offices in another 10 countries.

We have a Code of Business Conduct and detailed Core Policies that we apply across all of our operations around the world. These policies represent a set of common values that apply to all employees and all of our business dealings. We have adopted policies and processes, and conduct employee training, intended to ensure compliance with various economic sanctions and export controls, including the regulations of the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC"). We do not conduct any business in the following countries that are subject to U.S. economic sanctions: Cuba; Iran; North Korea; Syria and the Crimea region of the Ukraine.

Competition

Many of our markets are highly competitive. However, we compete effectively due to the quality and breadth of our adhesives, sealants and specialty chemical portfolio and the experience and expertise of our commercial organizations. Within the adhesives and other specialty chemical markets, we believe few suppliers have comparable global reach and corresponding ability to deliver quality and consistency to multinational customers. Our competition is made up generally of two types of companies: (1) similar multinational suppliers and (2) regional or specialty suppliers that typically compete in only one region or within a narrow geographic area within a region. The multinational competitors typically maintain a broad product offering and range of technology, while regional or specialty companies tend to have limited or more focused product ranges and technology.

Principal competitive factors in the sale of adhesives and other specialty chemicals are product performance, supply assurance, technical service, quality, price and customer service.

Customers

We have cultivated strong, integrated relationships with a diverse set of customers worldwide. Our customers are among the technology and market leaders in consumer goods, construction and industrial markets. We pride ourselves on long-term, collaborative customer relationships and a diverse portfolio of customers in which no single customer accounted for more than 10 percent of consolidated net revenue.

Our leading customers include manufacturers of food and beverages, hygiene products, clothing, major appliances, electronics, automobiles, aerospace and defense products, solar energy systems, filters, construction materials, wood flooring, furniture, cabinetry, windows, doors, tissue and towel, corrugation, tube winding, packaging, and tapes and labels.

Our products are delivered directly to customers primarily from our manufacturing and distribution facilities, with additional deliveries made through distributors and retailers.

Human Capital Resources and Management

Employees and Labor Relations

As of December 3, 2022, we have approximately 7,000 employees in 45 countries, including approximately 2,500 employees based in the U.S. Approximately 450 U.S. employees are subject to collective bargaining agreements with various unions. Approximately 750 employees in foreign countries are subject to collective bargaining agreements. Overall, we consider our employee relations to be good.

Health and Safety

The health and safety of our employees and anyone who enters our workplace is important, and we believe that nothing we do is worth getting hurt for. We have a strong environmental, health and safety program that focuses on implementing policies and training programs, as well as performing self-audits to enhance workplace safety.

Competitive Pay and Benefits

Our primary compensation strategy is “Pay for Performance”, which supports a culture of accountability and performance. Our compensation guiding principles are to structure compensation that is simple, aligned and balanced. We believe that these principles are strongly aligned with the strategic priorities of our business and our objective to deliver value for our shareholders.

We are committed to fair pay and strive to be externally competitive while ensuring internal equity across our organization. We conduct global pay equity assessments and compensation reviews, and when necessary, we take action to address areas of concern.

Quality, affordable health care is the foundation of the comprehensive benefits package we offer our employees. It is one of the tools we use to recruit and retain, and it is seen as the preferred benefit by most employees. Employees in the United States earning below $52,000 each year have 100% of their individual medical premiums covered by the Company in the form of a medical premium reimbursement.

Results-Driven, Collaborative Culture

Our purpose is connecting what matters for all stakeholders and we go about this by winning the right way through our core values. We expect employees to act with integrity and hold each other accountable for our actions. We value our global team’s diverse perspectives, backgrounds and experiences. We make daily, conscious choices to excel, by always bringing passion and creativity to our work, and by striving for innovation ethically and fairly. Our worldwide network of culture champions supports our focus on being At Our Best. Our communication on goals, targets and performance is frequent and transparent. We continue to leverage flexible work options available to employees who don't need our facilities to perform their jobs and this continues to enhance connections across the company, as well as with customers and external partners. This supports our desire to be first and fastest in finding solutions for customers and improving our overall effectiveness. Finally, we continue to take great pride in our focus on giving back to the communities in which we operate through the giving efforts of the H.B. Fuller Foundation and the thousands of employee volunteer hours each year.

Inclusion and Diversity

As a global company, we currently have employees present in 45 countries around the world. We place strong value on collaboration and we believe that working together leads to better outcomes for our customers. This extends to the way we treat each other as team members. We strive to create an environment where innovative ideas can flourish by demonstrating respect for each other and valuing the diverse opinions, background and viewpoints of employees. We believe that diversity in our teams leads to new ideas, helps us solve problems and allows us to better connect with our global customer base.

We are taking specific actions to foster inclusion and diversity into our culture. Learning resources have been implemented to support greater awareness and understanding of the behaviors expected from employees. We have introduced employee networking groups, an expanded and enhanced mentoring program and focused development programs with the goal of creating meaningful opportunities for employees. We have adjusted our recruiting practices to ensure we are getting the right level of exposure to diverse candidates.

Talent Development

We recognize how important it is for our colleagues to develop and progress in their careers. We provide a variety of resources to help our colleagues grow in their current roles and build new skills, including online development resources focused on specific business imperatives with access to hundreds of online courses in our learning management system. We have implemented an innovative delivery method for leadership training to drive experiential learning and to increase access to leaders around the world. Individual development planning is a part of our annual goal setting process and people managers are expected to have regular discussions with employees to measure progress and make needed adjustments. We focus on getting employees into roles with greater responsibility and opportunities for advancement that are also aligned with their career path to facilitate development and maximize potential. Finally, we provide ambitious employees with short-term opportunities in unique assignments in addition to their current roles. These assignments support the employees' development while also supporting company initiatives that are required to be resourced with talented employees.

Raw Materials

We use several principal raw materials in our manufacturing processes, including tackifying resins, polymers, synthetic rubbers, vinyl acetate monomer and plasticizers. We generally avoid sole source supplier arrangements for raw materials.

The majority of our raw materials are petroleum/natural gas based derivatives. Under normal conditions, raw materials are available on the open market. Prices and availability are subject to supply and demand market mechanisms. Raw material costs are primarily determined by the balance of supply against the aggregate demand from the adhesives industry and other industries that use the same raw material streams. The cost of crude oil and natural gas, the primary feedstocks for our raw materials, can also impact the cost of our raw materials.

See Item 1A. Risk Factors for a discussion of the effects of the COVID-19 pandemic on raw material cost and availability.

Patents, Trademarks and Licenses

Much of the technology we use in our products and manufacturing processes is available in the public domain. For technology not available in the public domain, we rely on trade secrets and patents when appropriate to protect our competitive position. We also license some patented technology from other sources. Our business is not materially dependent upon licenses or similar rights or on any single patent or group of related patents.

We enter into agreements with many employees to protect rights to technology and intellectual property. Confidentiality commitments also are routinely obtained from customers, suppliers and others to safeguard proprietary information.

We own numerous trademarks and service marks in various countries. Trademarks, such as H.B. Fuller®, Swift®, Advantra®, Clarity®, Earthic™, Sesame®, TEC®, Foster®, Rakoll®, Rapidex®, Full-Care®, Thermonex®, Silaprene®, Eternabond®, Cilbond®, Hydroarmor®, Ködispace®, Weld Mount® and TONSAN® are important in marketing products. Many of our trademarks and service marks are registered. U.S. trademark registrations are for a term of ten years and are renewable every ten years as long as the trademarks are used in the regular course of trade.

Research and Development

Our investment in research and development creates new and innovative adhesive technology platforms, enhances product performance, ensures a competitive cost structure and leverages available raw materials. New product development is a key research and development outcome, providing higher-value solutions to existing customers or meeting new customers' needs. Projects are developed in local laboratories in each region, where we understand our customer base the best. Platform developments are coordinated globally through our network of laboratories.

Through designing and developing new polymers and new formulations, we expect to continue to grow in our current markets. We also develop new applications for existing products and technologies, and improve manufacturing processes to enhance productivity and product quality. Research and development efforts are closely aligned to customer needs. We foster open innovation, seek supplier-driven new technology and use relationships with academic and other institutions to enhance our capabilities.

As climate change and other sustainability concerns become more prevalent, governmental and non-governmental organizations, customers and investors are increasingly focusing on these issues. We continue to monitor our markets to ensure we are developing the adhesives and sealants to support our customers' responses to changing consumer demand, new product designs and upcoming regulatory and sustainability efforts. We invest significantly in innovation, research and expertise, which are crucial for the continuous extraction of value from our business strategy. This also facilitates the creation of new high-performance solutions that enable customers to improve their products and processes to better achieve their sustainability programs.

Regulatory Compliance

We comply with applicable federal, state, local and foreign laws and regulations relating to environmental protection and workers' safety, including those required by the U.S. Environmental Protection Agency (the "EPA") and the EU's Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH") regulation. This includes regular review of and upgrades to environmental, health and safety policies, practices and procedures as well as improved production methods to minimize our facilities' outgoing waste, based on evolving societal standards and increased environmental understanding. Expenditures to comply with environmental regulations over the next two years are estimated to be approximately $15.4 million, including approximately $2.8 million of capital expenditures. See additional disclosure under Item 3. Legal Proceedings.

Various legislation, regulations and international accords pertaining to climate change have been implemented or are being considered for implementation, particularly as they relate to the reduction of greenhouse gas emissions. These laws may directly impact the Company, however we have not determined the extent of potential disclosures or other reporting requirements. We continue to monitor the development and implementation of such legislation and regulations. We also continue to regularly report our sustainability efforts and metrics under the Global Reporting Initiative ("GRI") framework and report our goals and progress in our annual Sustainability Report.

The Foreign Corrupt Practices Act (the "FCPA") prohibits bribery of government officials to benefit business interests. We operate and sell our products in countries that are rated as high-risk for corruption, which creates the risk of unauthorized conduct by our employees, customs brokers, distributors or other third party intermediaries that could be in violation of the FCPA or similar local regulations. We comply with the FCPA's requirements to make and keep accurate books and records that accurately and fairly reflect our transactions and to devise and maintain an adequate system of internal accounting controls.

We are also subject to and comply with increasingly complex privacy and data protection laws and regulations in the United States and other jurisdictions. This includes the European Union's General Data Protection Regulation ("GDPR"), which enforces rules relating to the protection of processing and movement of personal data. The interpretation and enforcement of such regulations are continuously evolving and there may be uncertainty with respect to how to comply with them. Noncompliance with GDPR and other data protection laws could result in damage to our reputation and payment of monetary penalties.

Seasonality

Our operating segments have historically had lower net revenue in winter months, which is primarily our first fiscal quarter, mainly due to international holidays and the seasonal decline in construction and consumer spending activities.

Information About Our Executive Officers

The following table shows the name, age and business experience for the past five years of the executive officers as of January 6, 2023. Unless otherwise noted, the positions described are positions with the company or its subsidiaries.

Name	Age	Positions	Period Served
Celeste B. Mastin........	54	President and Chief Executive Officer	December 2022 - Present
		Executive Vice President and Chief Operating Officer	March - December 2022
		Chief Executive Officer, PetroChoice Lubrication Solutions	2018 - 2022
		Chief Executive Officer, Distribution International	2013 - 2017
Zhiwei Cai	60	Executive Vice President, Engineering Adhesives	August 2019 - Present
		Senior Vice President, Engineering Adhesives	February 2016 - August 2019
Heather A. Campe	49	Senior Vice President, International Growth	December 2021 - Present
		Senior Vice President, Global Hygiene, Health and Consumable Adhesives	August 2019 - November 2021
		Senior Vice President, Americas Adhesives	October 2016 - August 2019
John J. Corkrean	57	Executive Vice President and Chief Financial Officer	May 2016 - Present
James J. East	58	Executive Vice President, Hygiene, Health and Consumable Adhesives	December 2022 - Present
		Senior Vice President, Hygiene, Health and Consumable Adhesives	October 2021 - December 2022
		Vice President, Engineering Adhesives Americas and Global Director Automotive	April 2018 - October 2021
		Global Business Director, General Industries and Business Director, Cyberbond LLC	June 2016 - March 2018

Name	Age	Position	Period
Traci L. Jensen...........	56	Executive Vice President and Chief Administrative Officer	December 2022 - Present
		Vice President, Global Business Process Improvement	December 2019 - December 2022
		Senior Vice President, Global Construction Products	July 2016 - December 2019
Timothy J. Keenan.....	65	Senior Vice President, General Counsel and Corporate Secretary	December 2022 - Present
		Vice President, General Counsel and Corporate Secretary	December 2006 - December 2022
M. Shahbaz Malik	55	Senior Vice President, Construction Adhesives	December 2019 - Present
		Vice President and Business Leader, North America Distribution, Masonite International Corporation (global residential doors business)	2018 - 2019
		Senior Vice President, Sales, Marketing and Supply Chain, Continental Building Products, Inc. (North America manufacturer of wallboard and joint compound materials)	2014 - 2018
Nathanial D. Weaver .	47	Senior Vice President, Human Resources	December 2022 - Present
		Vice President, Human Resources	March 2020 - December 2022
		Director, Human Resources	2017 - March 2020

The Board of Directors elects the executive officers annually.

Available Information

For more information about us, visit our website at: www.hbfuller.com.

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (“SEC”) via EDGAR. Our SEC filings are available free of charge to the public on the SEC website at www.sec.gov and on our website as soon as reasonably practicable after they have been filed with or furnished to the SEC.

Item 1A. Risk Factors

As a global manufacturer of adhesives, sealants and other specialty chemical products, we operate in a business environment that is subject to various risks and uncertainties. Below are the most significant factors that could adversely affect our business, financial condition and results of operations.

Strategic and Operational Risks

Our business and operations have been, and may in the future, be adversely affected by epidemics, pandemics, outbreaks of disease and other adverse public health developments, including COVID-19.

Epidemics, pandemics, outbreaks of novel diseases and other adverse public health developments in countries and states where we operate may arise at any time. Such developments, including the COVID-19 pandemic, have had, and in the future may have, an adverse effect on our business, financial condition and results of operations. These effects include a potentially negative impact on the availability of our key personnel, labor shortages and increased turnover, temporary closures of our facilities or facilities of our business partners, customers, suppliers, third-party service providers or other vendors, and interruption of domestic and global supply chains, distribution channels and liquidity and capital or financial markets. In particular, restrictions on or disruptions of transportation, port closures or increased border controls or closures, or other impacts on domestic and global supply chains or distribution channels, could increase our costs for raw materials and commodity costs, increase demand for raw materials and commodities from competing purchasers, limit our ability to meet customer demand or otherwise have a material adverse effect on our business, financial condition and results of operations or cash flows. Precautionary measures that we may take in the future intended to limit the impact of any epidemic, pandemic, disease outbreak or other public health development, may result in additional costs. In addition, such epidemics, pandemics, disease outbreaks or other public health developments may adversely affect economies and financial markets throughout the world, such as the effect that COVID-19 has had on world economies and financial markets, which may affect our ability to obtain additional financing for our businesses and demand for our products and services. The extent to which COVID-19 or other pandemics will impact our business and our financial results in the future will depend on future developments, which are highly uncertain and cannot be predicted. Such developments may include ongoing spread of the virus, disease severity, outbreak duration, extent of any reoccurrence of the coronavirus or any evolutions or mutations of the virus, and availability, administration and effectiveness of vaccines and development of therapeutic treatments that can restore consumer and business economic confidence. As a result, it is not possible to predict the overall future impact of COVID-19 on our business, liquidity, capital resources and financial results.

Increases in prices and declines in the availability of raw materials have adversely affected, and could continue to erode, our profit margins, and could negatively impact our operating results.

In 2022, raw material costs made up approximately 75 percent of our cost of sales. Based on 2022 financial results, a hypothetical one percent change in our raw material costs would have resulted in a change in net income of approximately $15.7 million or $0.28 per diluted share. Accordingly, changes in the cost of raw materials, due to scarcity, supplier disruptions, inflation and for other reasons, can significantly impact our earnings. Raw materials needed to manufacture products are obtained from a number of suppliers and many of the raw materials are petroleum and natural gas based derivatives. Under normal market conditions, these raw materials are generally available on the open market from a variety of producers. While alternate supplies of most key raw materials are available, supplier production outages may lead to strained supply-demand situations for certain raw materials. The substitution of key raw materials requires us to identify new supply sources, reformulate and re-test and may require seeking re-approval from our customers using those products. From time to time, the prices and availability of these raw materials may fluctuate, which could impair our ability to procure necessary materials, or increase the cost of manufacturing products. If the prices of raw materials increase in a short period of time, we may be unable to pass these increases on to our customers in a timely manner and could experience reductions to our profit margins.

The COVID-19 pandemic has had a significant impact on raw material prices, which could continue in the future. Further, the COVID-19 pandemic and responses to it have significantly limited or prevented the movement of goods and services worldwide, which has resulted in and could continue to result in disruptions in our supply chain and our difficulty in procuring or inability to procure raw materials necessary for the manufacturing of our products. The impact of the COVID-19 pandemic and responses to it has increased and could continue to increase the costs of making and distributing our products or result in delays in delivering, or an inability to deliver, them to our customers.

We experience substantial competition in each of the operating segments and geographic areas in which we operate.

Our wide variety of products are sold in numerous markets, each of which is highly competitive. Our competitive position in markets is, in part, subject to external factors. For example, supply and demand for certain of our products is driven by end-use markets and worldwide capacities which, in turn, impact demand for and pricing of our products. Many of our direct competitors are part of large multinational companies and may have more resources than we do. Any increase in competition may result in lost market share or reduced prices, which could result in reduced profit margins. This may impair the ability to grow or even to maintain current levels of revenues and earnings. While we have an extensive customer base, loss of certain top customers could adversely affect our financial condition and results of operations until such business is replaced, and no assurances can be made that we would be able to regain or replace any lost customers.

Failure to develop new products and protect our intellectual property could negatively impact our future performance and growth.

Ongoing innovation and product development are important factors in our competitiveness. Failure to create new products and generate new ideas could negatively impact our ability to grow and deliver strong financial results. We continually apply for and obtain U.S. and foreign patents to protect the results of our research for use in our operations and licensing. We are party to a number of patent licenses and other technology agreements. We rely on patents, confidentiality agreements and internal security measures to protect our intellectual property. Failure to protect this intellectual property could negatively affect our future performance and growth.

Our operations may present health and safety risks.

Notwithstanding our emphasis on the safety of our employees and contractors and the precautions we take related to health and safety, we may be unable to avoid safety incidents relating to our operations that result in injuries or deaths. Certain safety incidents may result in legal or regulatory action that could result in increased expenses or reputational damage. We maintain workers' compensation insurance to address the risk of incurring material liabilities for injuries or deaths, but there can be no assurance that the insurance coverage will be adequate or will continue to be available on terms acceptable to us, or at all, which could result in material liabilities to us for any injuries or deaths. Changes to federal, state and local employee health and safety regulations, and legislative, regulatory or societal responses to safety incidents may result in heightened regulations or public scrutiny that may increase our compliance costs or result in reputational damage.

A failure in our information technology systems could negatively impact our business.

We rely on information technology to record and process transactions, manage our business and maintain the financial accuracy of our records. Our computer systems are subject to damage or interruption from various sources, including power outages, computer and telecommunications failures, computer viruses, security breaches, vandalism, catastrophic events and human error. Interruptions of our computer systems could disrupt our business, for example by leading to plant downtime and/or power outages, and could result in the loss of business and cause us to incur additional expense.

We are in the process of implementing a global Enterprise Resource Planning ("ERP") system that we refer to as Project ONE, which will upgrade and standardize our information system. Implementation of Project ONE began in our North America adhesives business in 2014 and, through 2022, we completed implementation of this system in various parts of our business including Latin America (except Brazil), Australia and various other businesses in North America and EIMEA. During 2023 and beyond, we will continue implementation in North America, EIMEA and Asia Pacific.

Any delays or other failure to achieve our implementation goals may adversely impact our financial results. In addition, the failure to either deliver the application on time or anticipate the necessary readiness and training needs could lead to business disruption and loss of business. Failure or abandonment of any part of the ERP system could result in a write-off of part or all of the costs that have been capitalized on the project.

We are at risk of cyber-attacks or other security breaches that could compromise sensitive business information, undermine our ability to operate effectively and expose us to liability, which could cause our business and reputation to suffer.

Increasingly, companies are subject to a wide variety of attacks on their networks on an ongoing basis. In addition to traditional computer "hackers," malicious code (such as viruses and worms), phishing attempts, employee theft or misuse, and denial of service attacks, sophisticated nation-state and nation-state supported actors engage in intrusions and attacks (including advanced persistent threat intrusions) and add to the risks to internal networks, cloud deployed enterprise and customer-facing environments and the information they store and process. Despite significant efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks. We, and our third-party software and service providers, may face security threats and attacks from a variety of sources.

As part of our business, we store our data, including intellectual property, and certain data about our employees, customers and vendors in our information technology systems. Our security measures may be breached as a result of third-party action, including intentional misconduct by computer hackers, employee error, malfeasance or otherwise. Third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as usernames, passwords, or other information to gain access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. In addition, given their size and complexity, our information systems could be vulnerable to service interruptions or to security breaches from inadvertent or intentional actions by our employees, third-party vendors and/or business partners, or from cyber-attacks by malicious third parties attempting to gain unauthorized access to our products, systems or confidential information.

If a third party gained unauthorized access to our data, including any data regarding our employees, customers or vendors, the security breach could expose us to risks. Such unauthorized access and a failure to effectively recover from breaches could compromise confidential information, disrupt our business, harm our reputation, result in the loss of customer confidence, business and assets (including trade secrets and other intellectual property), result in regulatory proceedings and legal claims, and have a negative impact on our financial results.

Risks associated with acquisitions could have an adverse effect on us and the inability to execute organizational restructuring may affect our results.

As part of our growth strategy, from time to time, we have made acquisitions of complementary businesses or products. The ability to grow through acquisitions depends upon our ability to identify, negotiate, complete and integrate suitable acquisitions. If we fail to successfully integrate acquisitions into our existing business, our results of operations and our cash flows could be adversely affected. Our acquisition strategy also involves other risks and uncertainties, including distraction of management from current operations, greater than expected liabilities and expenses, inadequate return on capital, unidentified issues not discovered in our investigations and evaluations of those strategies and acquisitions, and difficulties implementing and maintaining consistent standards, controls, procedures, policies and systems. Future acquisitions could result in additional debt and other liabilities, and increased interest expense, restructuring charges and amortization expense related to intangible assets.

Our growth strategy depends in part on our ability to further penetrate markets outside the United States, where there is the potential for significant economic and political disruptions. Our operations in these markets may be subject to greater risks than those faced by our operations in the United States, including political and economic instability, project delay or abandonment due to unanticipated government actions, inadequate investment in infrastructure, undeveloped property rights and legal systems, unfamiliar regulatory environments, relationships with local partners, language and cultural differences and increased difficulty recruiting, training and retaining qualified employees.

In addition, our profitability is dependent on our ability to drive sustainable productivity improvements such as cost savings through organizational restructuring. Delays or unexpected costs may prevent us from realizing the full operational and financial benefits of such restructuring initiatives and may potentially disrupt our operations.

Legal and Regulatory Risks

The impact of changing laws or regulations or the manner of interpretation or enforcement of existing laws or regulations could adversely impact our financial performance and restrict our ability to operate our business or execute our strategies.

New laws or regulations, or changes in existing laws or regulations or the manner of their interpretation or enforcement, could increase our cost of doing business and restrict our ability to operate our business or execute our strategies. In addition, compliance with laws and regulations is complicated by our substantial global footprint, which will require significant and additional resources to ensure compliance with applicable laws and regulations in the various countries where we conduct business.

Our global operations expose us to trade and economic sanctions and other restrictions imposed by the U.S., the EU and other governments and organizations. The U.S. Departments of Justice, Commerce, State, Homeland Security, and Treasury and other federal agencies and authorities have a broad range of civil and criminal penalties they may seek to impose against corporations and individuals for violations of economic sanctions laws, export control laws, the FCPA and other federal statutes and regulations, including those established by the OFAC. Under these laws and regulations, as well as other anti-corruption laws, anti-money-laundering laws, export control laws, customs laws, sanctions laws and other laws governing our operations, various government agencies may require export licenses, may seek to impose modifications to business practices, including cessation of business activities in sanctioned countries or with sanctioned persons or entities and modifications to compliance programs, including import restrictions, which may increase compliance costs, and may subject us to fines, penalties and other sanctions. A violation of these laws, regulations, policies or procedures could adversely impact our business, results of operations and financial condition.

Although we have implemented policies and procedures in these areas, we cannot assure that our policies and procedures are sufficient or that directors, officers, employees, representatives, manufacturers, suppliers and agents have not engaged and will not engage in conduct in violation of such policies and procedures.

Costs and expenses resulting from compliance with environmental laws and regulations may negatively impact our operations and financial results.

We are subject to numerous environmental laws and regulations that impose various environmental controls on us or otherwise relate to environmental protection, the sale and export of certain chemicals or hazardous materials, and various health and safety matters. The costs of complying with these laws and regulations can be significant and may increase as applicable requirements and their enforcement become more stringent and new rules are implemented. Adverse developments and/or periodic settlements could negatively impact our results of operations and cash flows. See Item 3. Legal Proceedings for a discussion of current environmental matters.

Climate change, or legal, regulatory or market measures to address climate change, may materially adversely affect our financial condition and business operations.

Climate change resulting from increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere could present risks to our future operations from natural disasters and extreme weather conditions, such as hurricanes, tornadoes, earthquakes, wildfires or flooding. Such extreme weather conditions could pose physical risks to our facilities and disrupt operation of our supply chain and may increase operational costs. The impacts of climate change on global water resources may result in water scarcity, which could in the future impact our ability to access sufficient quantities of water in certain locations and result in increased costs. Concern over climate change could result in new legal or regulatory requirements designed to mitigate the effects of climate change on the environment. If such laws or regulations are more stringent than current legal or regulatory requirements, we may experience increased compliance burdens and costs to meet the regulatory obligations and may adversely affect raw material sourcing, manufacturing operations and the distribution of our products.

We have lawsuits and claims against us with uncertain outcomes.

Our operations from time to time are parties to or targets of lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, patent and intellectual property, commercial, contract, environmental, antitrust, health and safety, and employment matters, which are handled and defended in the ordinary course of business. The results of any future litigation or settlement of such lawsuits and claims are inherently unpredictable, but such outcomes could be adverse and material in amount. See Item 3. Legal Proceedings for a discussion of current litigation.

The Company's effective tax rate could be volatile and materially change as a result of the adoption of new tax legislation and other factors.

A change in tax laws is one of many factors that impact the Company's effective tax rate. The U.S. Congress and other government agencies in jurisdictions where the Company does business have had an extended focus on issues related to the taxation of multinational corporations. As a result, the tax laws in the U.S. and other countries in which the Company does business could change, and any such changes could adversely impact our effective tax rate, financial condition and results of operations.

The Organization for Economic Co-operation and Development ("OECD"), an international association of 38 countries including the United States, has proposed changes to numerous long-standing tax principles. These proposals, if finalized and adopted by the associated countries, will likely increase tax uncertainty and may adversely affect our provision for income taxes.

The current U.S. presidential administration could enact changes in tax laws that could negatively impact the Company's effective tax rate. Prior to the U.S. presidential election, President Biden proposed an increase in the U.S. corporate income tax rate from 21% to 28%, doubling the rate of tax on certain earnings of foreign subsidiaries, the creation of a 10% penalty on certain imports and a 15% minimum tax on worldwide book income. Additionally, the proposed changes include significant provisions related to the deductibility of interest. If any or all of these (or similar) proposals are ultimately enacted into law, in whole or in part, they could have a negative impact to the Company's effective tax rate.

Additional income tax expense or exposure to additional income tax liabilities could have a negative impact on our financial results.

We are subject to income tax laws and regulations in the United States and various foreign jurisdictions. Significant judgment is required in evaluating and estimating our provision and accruals for these taxes. Our income tax liabilities are dependent upon the location of earnings among these different jurisdictions. Our income tax provision and income tax liabilities could be adversely affected by the jurisdictional mix of earnings, changes in valuation of deferred tax assets and liabilities and changes in tax laws and regulations. In the ordinary course of our business, we are also subject to continuous examinations of our income tax returns by tax authorities. Although we believe our tax estimates are reasonable, the final results of any tax examination or related litigation could be materially different from our related historical income tax provisions and accruals. Adverse developments in an audit, examination or litigation related to previously filed tax returns, or in the relevant jurisdiction's tax laws, regulations, administrative practices, principles and interpretations could have a material effect on our results of operations and cash flows in the period or periods for which that development occurs, as well as for prior and subsequent periods.

Financial Risks

We may be required to record impairment charges on our goodwill or long-lived assets.

Weak demand may cause underutilization of our manufacturing capacity or elimination of product lines; contract terminations or customer shutdowns may force sale or abandonment of facilities and equipment; or other events associated with weak economic conditions or specific product or customer events may require us to record an impairment on tangible assets, such as facilities and equipment, as well as intangible assets, such as intellectual property or goodwill, which would have a negative impact on our financial results.

Our current indebtedness could have a negative impact on our liquidity or restrict our activities.

Our current indebtedness contains various covenants that limit our ability to engage in specified types of transactions. Our overall leverage and the terms of our financing arrangements could:

- limit our ability to obtain additional financing in the future for working capital, capital expenditures and acquisitions;
- make it more difficult to satisfy our obligations under the terms of our indebtedness;
- limit our ability to refinance our indebtedness on terms acceptable to us or at all;
- limit our flexibility to plan for and adjust to changing business and market conditions in the industries in which we operate and increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow to make interest and principal payments on our debt, thereby limiting the availability of our cash flow to fund future acquisitions, working capital, business activities and other general corporate requirements;
- limit our ability to obtain additional financing for working capital, to fund growth or for general corporate purposes, even when necessary to maintain adequate liquidity, particularly if any ratings assigned to our debt securities by rating organizations were revised downward; and
- subject us to higher levels of indebtedness than our competitors, which may cause a competitive disadvantage and may reduce our flexibility in responding to increased competition.

In addition, the restrictive covenants require us to maintain specified financial ratios and satisfy other financial condition tests. Our ability to meet those financial ratios and tests will depend on our ongoing financial and operating performance, which, in turn, will be subject to economic conditions and to financial, market and competitive factors, many of which are beyond our control. A breach of any of these covenants could result in a default under the instruments governing our indebtedness.

The interest rates of our term loans are priced using a spread over LIBOR.

LIBOR, the London Interbank Offered Rate, is the basic rate of interest used in lending between banks on the London interbank market and is widely used as a reference for setting the interest rate on loans globally. We typically use LIBOR as a reference rate or index in our term loans such that the interest due to our creditors pursuant to a term loan extended to us is calculated using LIBOR. Most of our term loan agreements contain a stated minimum value for LIBOR.

On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates the entity that calculates LIBOR, announced that LIBOR was to be phased out by the end of 2021. Subsequently, on March 5, 2021, LIBOR's administrator announced that publication of overnight, one-month, three-month, six-month and 12-month U.S. dollar LIBOR would cease immediately following publication of such interest rates on June 30, 2023, and that publication of all other currency and tenor variants would cease immediately following publication on December 31, 2021. In December 2022, the FASB released an exposure draft that proposes deferring the sunset date of Financial Accounting Standards Board ("FASB") Accounting Standard Codification ("ASC") Topic 848, *Reference Rate Reform*, which provides optional relief for contract modifications that are related to reference rate reform, from December 31, 2022 to December 31, 2024.

The U.S. Federal Reserve has selected the Secured Overnight Funding Rate ("SOFR") as the preferred alternate rate to LIBOR. We are planning for this transition and will amend any agreements to accommodate the SOFR rate where required. While our term loan is calculated using LIBOR as its underlying rate, our revolver has transitioned to now using SOFR as its underlying rate. We continue to evaluate the potential impact of the transition to the SOFR rate, which remains subject to uncertainty.

Macroeconomic Risks

Uncertainties in foreign economic, political, regulatory and social conditions and fluctuations in foreign currency may adversely affect our results.

Approximately 55 percent, or $2.1 billion, of our net revenue was generated outside the United States in 2022. International operations could be adversely affected by changes in economic, political, regulatory, and social conditions, especially in Brazil, Russia, China, the Middle East, including Turkey and Egypt, and other developing or emerging markets where we do business. An economic downturn in the businesses or geographic areas in which we sell our products could reduce demand for these products and result in a decrease in sales volume that could have a negative impact on our results of operations. Product demand often depends on end-use markets. Economic conditions that reduce consumer confidence or discretionary spending may reduce product demand. Challenging economic conditions may also impair the ability of our customers to pay for products they have purchased, and as a result, our reserves for doubtful accounts and write-offs of accounts receivable may increase. In addition, trade protection measures, anti-bribery and anti-corruption regulations, restrictions on repatriation of earnings, differing intellectual property rights and changes in legal and regulatory requirements that restrict the sales of products or increase costs could adversely affect our results of operations.

Fluctuations in exchange rates between the U.S. dollar and other currencies could potentially result in increases or decreases in net revenue, cost of raw materials and earnings and may adversely affect the value of our assets outside the United States. In 2022, the change in foreign currencies negatively impacted our net revenue by approximately $191.7 million. In 2022, we spent approximately $2.2 billion for raw materials worldwide of which approximately $1.2 billion was purchased outside the United States. Based on 2022 financial results, a hypothetical one percent change in our cost of sales due to foreign currency rate changes would have resulted in a change in net income of approximately $10.5 million or $0.19 per diluted share. Although we utilize risk management tools, including hedging, as appropriate, to mitigate market fluctuations in foreign currencies, any changes in strategy in regard to risk management tools can also affect revenue, expenses and results of operations and there can be no assurance that such measures will result in cost savings or that all market fluctuation exposure will be eliminated.

Distressed financial markets may result in dramatic deflation of financial asset valuations and a general disruption in capital markets.

Adverse equity market conditions and volatility in the credit markets could have a negative impact on the value of our pension trust assets, our future estimated pension liabilities and other postretirement benefit plans. In addition, we could be required to provide increased pension plan funding. As a result, our financial results could be negatively impacted. Reduced access to capital markets may affect our ability to invest in strategic growth initiatives such as acquisitions. In addition, the reduced credit availability could limit our customers' ability to invest in their businesses, refinance maturing debt obligations, or meet their ongoing working capital needs. If these customers do not have sufficient access to the financial markets, demand for our products may decline.

The military conflict between Russia and Ukraine, and the global response to it, could adversely impact our revenues, gross margins and financial results.

The U.S. government and other nations have imposed significant restrictions on most companies' ability to do business in Russia as a result of the military conflict between Russia and Ukraine. Increases in energy demand and supply disruptions caused by the Russia and Ukraine conflict have resulted in significantly higher energy prices, particularly in Europe. It is not possible to predict the broader or longer-term consequences of this conflict, which could include further sanctions, embargoes, regional instability, energy shortages, geopolitical shifts and adverse effects on macroeconomic conditions, security conditions, currency exchange rates and financial markets. Such geo-political instability and uncertainty could have a negative impact on our ability to sell to, ship products to, collect payments from, and support customers in certain regions based on trade restrictions, embargoes and export control law restrictions, and logistics restrictions including closures of air space, and could increase the costs, risks and adverse impacts from these new challenges. We may also be the subject of increased cyber-attacks. While Russia does not constitute a material portion of our business, a significant escalation or expansion of economic disruption or the conflict's current scope could have a material adverse effect on our results of operations.

Catastrophic events could disrupt our operations or the operations of our suppliers or customers, having a negative impact on our financial results.

Unexpected events, including global pandemics, natural disasters and severe weather events, fires or explosions at our facilities or those of our suppliers, acts of war or terrorism, supply disruptions or breaches of security of our information technology systems could increase the cost of doing business or otherwise harm our operations, our customers and our suppliers. Such events could reduce demand for our products or make it difficult or impossible for us to receive raw materials from suppliers and deliver products to our customers.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Principal executive offices and central research facilities are located in the St. Paul, Minnesota area. These facilities are company-owned. Manufacturing operations are carried out at 33 plants located throughout the United States and at 38 plants located in 23 other countries. In addition, numerous sales and service offices are located throughout the world. We believe that the properties owned or leased are suitable and adequate for our business. Operating capacity varies by product line, but additional production capacity is available for most product lines by increasing the number of shifts worked. The following is a list of our manufacturing plants as of December 3, 2022 (each of the listed properties are owned by us, unless otherwise specified):

Segment	
Hygiene, Health and Consumable Adhesives	
Argentina	Buenos Aires
Australia	Dandenong South
Australia	Sydney[1]
Brazil	Sorocaba[2]
Brazil	Curitiba[1]
Brazil	Guarulhos
Chile	Maipu, Santiago
Colombia	Rionegro
Egypt	6th of October City
France	Blois
Germany	Luneburg
Greece	Lamia
India	Pune
Indonesia	Mojokerto
Kenya	Nairobi[1]
Malaysia	Selangor
New Zealand	Auckland[1]
People's Republic of China	Guangzhou
Philippines	Manila
United Kingdom	Dukinfield
United States	Georgia - Covington
United States	Georgia - Tucker
United States	Illinois - Seneca
United States	Kentucky - Paducah
United States	Ohio - Blue Ash
United States	Minnesota - Vadnais Heights
United States	New York - Syracuse[1]
United States	South Carolina - Simpsonville
United States	Texas - Mesquite
United States	California - Roseville
United States	Washington - Vancouver
Vietnam	Binh Duong[1]

Segment	
Engineering Adhesives	
France	Surbourg
Germany	Wunstorf
Germany	Nienburg
Germany	Langelsheim[1]
Germany	Pirmasens
Italy	Pianezze
People's Republic of China	Beijing
People's Republic of China	Chongqing[1]
People's Republic of China	Nanjing - ShanXu Road
People's Republic of China	Nanjing - Xinjinhu Road[1]
People's Republic of China	Suzhou
People's Republic of China	Yantai
Portugal	Mindelo
United Kingdom	Preston[1]
United States	California - Irvine[1]
United States	California - Wilmington[1]
United States	Connecticut - Enfield[1]
United States	Georgia - Norcross[1]
United States	Georgia - Ball Ground[1]
United States	Illinois - Frankfort - Corsair
United States	Illinois - Frankfort - West Drive
United States	Indiana - South Bend
United States	Massachusetts - Peabody[1]
United States	Michigan - Grand Rapids
United States	Minnesota - Fridley
United States	New Hampshire - Raymond[1]
United States	Ohio - Bellevue[1]

Construction Adhesives	
Belgium	Antwerp
Canada	Ontario[1]
Mexico	Coahuila[1]
United Kingdom	Staffordshire
United States	California - La Mirada
United States	Florida - Gainesville
United States	Georgia - Dalton
United States	Illinois - Aurora
United States	Michigan - Michigan Center
United States	New Jersey - Edison
United States	Ohio - Chagrin Falls
United States	Texas - Houston
United States	Texas - Mansfield

1 Leased Property
2 Idle Property

Item 3. Legal Proceedings

Environmental Matters

From time to time, we become aware of compliance matters relating to, or receive notices from, federal, state or local entities regarding possible or alleged violations of environmental, health or safety laws and regulations. Also, from time to time, we are identified as a potentially responsible party ("PRP") under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") and/or similar state laws that impose liability for costs relating to the clean up of contamination resulting from past spills, disposal or other release of hazardous substances. We are also subject to similar laws in some of the countries where current and former facilities are located. Our environmental, health and safety department monitors compliance with applicable laws on a global basis.

Currently, we are involved in various environmental investigations, clean up activities and administrative proceedings and lawsuits. In particular, we are currently deemed a PRP in conjunction with numerous other parties, in a number of government enforcement actions associated with landfills and/or hazardous waste sites. As a PRP, we may be required to pay a share of the costs of investigation and clean up of these sites.

We are also engaged in environmental remediation and monitoring efforts at a number of current and former operating facilities. To the extent we can reasonably estimate the amount of our probable liabilities for environmental matters, we establish a financial provision. It is reasonably possible that we may have additional liabilities related to these known environmental matters. However, the full extent of our future liability for environmental matters is difficult to predict because of uncertainty as to the cost of investigation and clean up of the sites, our responsibility for such hazardous substances and the number of and financial condition of other potentially responsible parties.

While uncertainties exist with respect to the amounts and timing of the ultimate environmental liabilities, based on currently available information, we have concluded that these matters, individually or in the aggregate, will not have a material adverse effect on our results of operations, financial condition or cash flow. However, adverse developments and/or periodic settlements could negatively impact the results of operations or cash flows in one or more future periods.

Other Legal Proceedings

From time to time and in the ordinary course of business, we are a party to, or a target of, lawsuits, claims, investigations and proceedings, including product liability, personal injury, asbestos, contract, patent and intellectual property, environmental, health and safety, tax and employment matters. While we are unable to predict the outcome of these matters, we have concluded, based upon currently available information, that the ultimate resolution of any pending matter, individually or in the aggregate, will not have a material adverse effect on our results of operations, financial condition or cash flow. However, adverse developments and/or periodic settlements could negatively impact the results of operations or cash flows in one or more future periods.

For additional information regarding environmental matters and other legal proceedings, see Note 14 to our Consolidated Financial Statements.

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 traded on the New York Stock Exchange under the symbol FUL. As of January 18, 2023, there were 1,348 common shareholders of record for our common stock.

Issuer Purchases of Equity Securities

Information on our purchases of equity securities during the fourth quarter of 2022 is as follows:

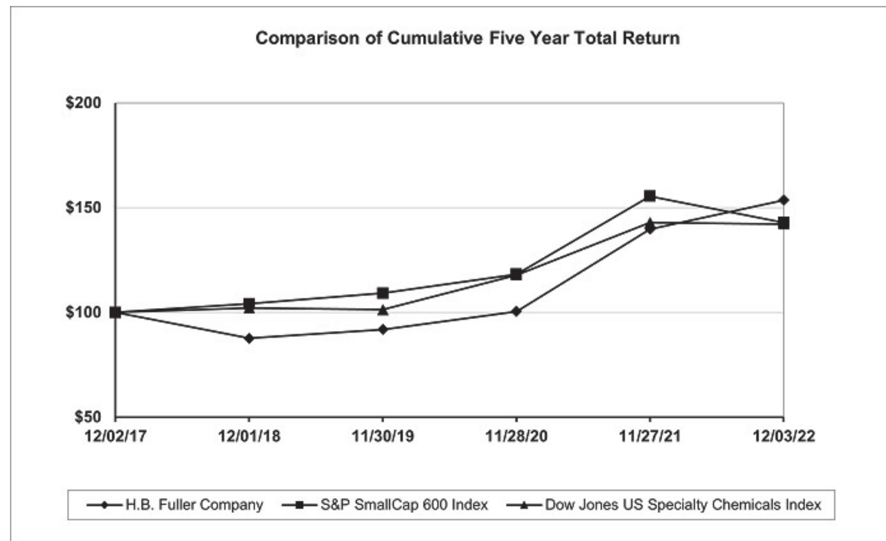
Period	Total Number of Shares Purchased[1]	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Plan or Program	Approximate Dollar Value of Shares that may yet be Purchased Under the Plan or Program (thousands)
August 28, 2022 - October 1, 2022	10	$ 59.78	-	$ 300,000
October 2, 2022 - October 29, 2022	48	$ 60.10	-	$ 300,000
October 30, 2022 - December 3, 2022	892	$ 69.08	-	$ 300,000

[1] The total number of shares purchased are shares withheld to satisfy the employees' withholding taxes upon vesting of restricted stock. Repurchases of common stock are made to support our stock-based employee compensation plans and for other corporate purposes. Upon vesting of restricted stock awarded to employees, shares are withheld to cover the employees' minimum withholding taxes.

On April 7, 2022, the Board of Directors authorized a new share repurchase program of up to $300.0 million of our outstanding common shares for a period of up to five years. Under the program, we are authorized to repurchase shares for cash on the open market, from time to time, in privately negotiated transactions or block transactions, or through an accelerated repurchase agreement. The timing of such repurchases is dependent on price, market conditions and applicable regulatory requirements. Upon repurchase of the shares, we reduce our common stock for the par value of the shares with the excess being applied against additional paid in capital. This authorization replaces the April 6, 2017 authorization to repurchase shares.

Total Shareholder Return Graph

The line graph below compares the cumulative total shareholder return on our common stock for the last five fiscal years with cumulative total return on the S&P Small Cap 600 Index and Dow Jones U.S. Specialty Chemicals Index. This graph assumes a $100 investment in each of H.B. Fuller, the S&P Small Cap 600 Index and the Dow Jones U.S. Specialty Chemicals Index at the close of trading on December 2, 2017, and also assumes the reinvestment of all dividends.



Item 6. Selected Financial Data

Reserved.

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

Overview

H.B. Fuller Company is a global formulator, manufacturer and marketer of adhesives and other specialty chemical products. We have three reportable segments: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives.

The Hygiene, Health and Consumable Adhesives operating segment manufactures and supplies adhesives products in the assembly, packaging, converting, nonwoven and hygiene, health and beauty, flexible packaging, graphic arts and envelope markets. The Engineering Adhesives operating segment provides high-performance adhesives to the transportation, electronics, medical, clean energy, aerospace and defense, performance wood, insulating glass, textile, appliance and heavy machinery markets. The Construction Adhesives operating segment manufactures and provides specialty adhesives, sealants, tapes, mortars, grouts, and application devices for commercial building roofing systems, heavy infrastructure projects, road/highway/airport transportation applications, telecom/5G utilities, industrial LNG plants, building envelope applications, HVAC insulation systems, and for both residential and commercial flooring underlayment solutions.

Total Company

When reviewing our financial statements, it is important to understand how certain external factors impact us. These factors include:

- Changes in the prices of our raw materials that are primarily derived from refining crude oil and natural gas,
- Global supply of and demand for raw materials,
- Economic growth rates, and
- Currency exchange rates compared to the U.S. dollar.

While we encountered inflationary pressures in fiscal year 2022, which factored into higher raw material and operating costs, these inflationary pressures were offset by higher net revenue. We expect inflationary pressures to continue into fiscal year 2023.

We purchase thousands of raw materials, the majority of which are petroleum/natural gas derivatives. The price of these derivatives impacts the cost of our raw materials. However, the supply of and demand for key raw materials has a greater impact on our costs. As demand increases in high-growth areas, the supply of key raw materials may tighten, resulting in certain materials being put on allocation. Natural disasters, such as hurricanes, also can have an impact as key raw material producers are shut down for extended periods of time. We continually monitor capacity utilization figures, market supply and demand conditions, feedstock costs and inventory levels, as well as derivative and intermediate prices, which affect our raw materials. With approximately 75 percent of our cost of sales accounted for by raw materials, our financial results are extremely sensitive to changing costs in this area.

The pace of economic growth directly impacts certain industries to which we supply products. For example, adhesives-related revenues from durable goods customers in areas such as appliances, furniture and other woodworking applications tend to fluctuate with the overall economic activity. In business components such as Construction Adhesives and insulating glass in Engineering Adhesives, revenues tend to move with more specific economic indicators such as housing starts and other construction-related activity.

The movement of foreign currency exchange rates as compared to the U.S. dollar impacts the translation of the foreign entities' financial statements into U.S. dollars. As foreign currencies weaken against the U.S. dollar, our revenues and costs decrease as the foreign currency-denominated financial statements translate into fewer U.S. dollars. The fluctuations of the Euro, the Turkish lira and the Chinese renminbi against the U.S. dollar have the largest impact on our financial results as compared to all other currencies. In 2022, currency fluctuations had a negative impact on net revenue of approximately $191.7 million as compared to 2021.

Key financial results and transactions for 2022 included the following:

- Net revenue increased 14.4 percent from 2021 primarily driven by a 15.4 percent increase in product pricing, a 1.6 percent increase due to acquisitions and a 1.2 percent increase in sales volume, partially offset by a 5.8 percent decrease due to currency fluctuations. Additionally, every five or six years, we have a 53rd week in our fiscal year. 2022 was a 53-week year which increased our revenue by approximately 2.0 percent.

- Gross profit margin was relatively consistent year over year. Gross profit margins were 25.7 percent in 2022 and 25.8 percent in 2021.

- Cash flow generated by operating activities was $256.5 million in 2022 as compared to $213.3 million in 2021.

Our total year organic sales growth, which we define as the combined variances from sales volume and product pricing, increased 16.6 percent for 2022 compared to 2021.

In 2022, our diluted earnings per share was $3.26 compared to $2.97 in 2021. The higher earnings per share in 2022 compared to 2021 was primarily due to higher net revenue, partially offset by higher raw material, operating costs, interest expense, other income, net, and higher income tax expense.

Information pertaining to fiscal year 2020 was included in the Company's Annual Report on Form 10-K for the year ended November 27, 2021, under Part II, Item 7 "Management's Discussion and Analysis of Financial Position and Results of Operations," which was filed with the SEC on January 25, 2022.

Changes in Accounting Principles

In the first quarter of 2021, we adopted new accounting standards related to the measurement of credit losses on financial statements requiring financial assets measured at amortized cost basis be presented at the net amount expected to be collected. Prior periods were not restated for this adoption. See Note 1 to our Consolidated Financial Statements for further information.

Project ONE

In December 2012, our Board of Directors approved a multi-year project to replace and enhance our existing core information technology platforms. The scope for this project includes most of the basic transaction processing for the company including customer orders, procurement, manufacturing and financial reporting. The project envisions harmonized business processes for all of our operating segments supported with one standard software configuration. The execution of this project, which we refer to as Project ONE, is being supported by internal resources and consulting services. Implementation of Project ONE began in our North America adhesives business in 2014 and, through 2022, we completed implementation of this system in various parts of our business including Latin America (except Brazil), Australia, and various other businesses in North America and EIMEA. During 2023 and beyond, we will continue implementation in North America, EIMEA and Asia Pacific.

Total expenditures for Project ONE are estimated to be $200 to $210 million, of which 55-60% is expected to be capital expenditures. Our total project-to-date expenditures are approximately $163 million, of which approximately $94 million are capital expenditures. Given the complexity of the implementation, the total investment to complete the project may exceed our estimate.

Restructuring Plan

During the fourth quarter of 2019, we approved a restructuring plan related to organizational changes and other actions to optimize operations in connection with the realignment of the Company into three global business units ("2020 Restructuring Plan"). We have incurred costs of $20.3 million under this plan as of December 3, 2022, which is substantially complete.

Critical Accounting Policies and Significant Estimates

Management’s discussion and analysis of our results of operations and financial condition are based upon the Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. We believe the critical accounting policies and areas that require the most significant judgments and estimates to be used in the preparation of the Consolidated Financial Statements relate to goodwill impairment; pension and other postretirement assumptions; long-lived assets recoverability; valuation of product, environmental and other litigation liabilities; valuation of deferred tax assets and accuracy of tax contingencies; and valuation of acquired assets and liabilities.

Goodwill

Goodwill is the excess of cost of an acquired entity over the amounts assigned to assets acquired and liabilities assumed in a purchase business combination. Goodwill is allocated to our reporting units, which are our operating segments or one level below our operating segments (the component level). Reporting units are determined by the discrete financial information available for the component and whether it is regularly reviewed by segment management. Components are aggregated into a single reporting unit if they share similar economic characteristics. Our reporting units are as follows: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives.

We evaluate our goodwill for impairment annually at the beginning of the fourth quarter or earlier upon the occurrence of substantive unfavorable changes in economic conditions, industry trends, costs, cash flows, or ongoing declines in market capitalization. The quantitative impairment test requires judgment, including the identification of reporting units, the assignment of assets, liabilities and goodwill to reporting units, and the determination of fair value of each reporting unit. The impairment test requires the comparison of the fair value of each reporting unit with its carrying amount, including goodwill. In performing the impairment test, we determined the fair value of our reporting units through the income approach by using discounted cash flow (“DCF”) analyses. Determining fair value requires the Company to make judgments about appropriate forecasted revenue and related revenue growth rate, the earnings before interest, taxes, depreciation and amortization ("EBITDA") margins rate and the weighted average cost of capital. The cash flows employed in the DCF analysis for each reporting unit are based on the reporting unit's budget, long-term business plan and recent operating performance. Discount rate assumptions are based on an assessment of the risk inherent in the future cash flows of the respective reporting unit and market conditions. Given the inherent uncertainty in determining the assumptions underlying a DCF analysis, actual results may differ from those used in our valuations. In assessing the reasonableness of the determined fair values, we also reconciled the aggregate determined fair value of the Company to the Company's market capitalization, which, at the date of our 2022 impairment test, included a 6 percent control premium.

For the 2022 impairment test, the fair value of the reporting units exceeded the respective carrying values by 10 percent to 84 percent ("headroom"). Significant assumptions used in the DCF analysis included discount rates that ranged from 9.4 percent to 10.9 percent and long-term revenue growth rates. The Construction Adhesives reporting unit, with $425.8 million of goodwill assigned to it as of December 3, 2022, had headroom of 10 percent. An increase in the discount rate of 70 basis points or a decrease in the long-term growth rates of 25 percent would result in the fair value of the Construction Adhesives reporting unit falling below its carrying value. The Engineering Adhesives and Hygiene, Health and Consumable Adhesives reporting units had significant fair value in excess of carrying value.

Management will continue to monitor these reporting units for changes in the business environment that could impact recoverability. The recoverability of goodwill is dependent upon the continued growth of cash flows from our business activities. If the economy or business environment falter and we are unable to achieve our assumed revenue growth rates or profit margin percentages, our projections used would need to be remeasured, which could impact the carrying value of our goodwill in one or more of our reporting units. Most significantly, for our Construction Adhesives reporting unit, a decrease in the planned volume revenue growth would negatively impact the fair value of the reporting unit and the calculation of excess carrying value.

See Note 5 to the Consolidated Financial Statements for further information regarding goodwill.

Pension and Other Postretirement Plan Assumptions

We sponsor defined-benefit pension plans in both the U.S. and non-U.S. entities. Also in the U.S., we sponsor other postretirement plans for health care and life insurance benefits. Expenses and liabilities for the pension plans and other postretirement plans are actuarially calculated. These calculations are based on our assumptions related to the discount rate, expected return on assets, projected salary increases and health care cost trend rates. Note 10 to the Consolidated Financial Statements includes disclosure of assumptions employed in these measurements for both the non-U.S. and U.S. plans.

The discount rate assumption is determined using an actuarial yield curve approach, which results in a discount rate that reflects the characteristics of the plan. The approach identifies a broad population of corporate bonds that meet the quality and size criteria for the particular plan. We use this approach rather than a specific index that has a certain set of bonds that may or may not be representative of the characteristics of our particular plan. A higher discount rate reduces the present value of the pension obligations. The discount rate for the U.S. pension plan was 5.36 percent at December 3, 2022, 2.76 percent at November 27, 2021 and 2.53 percent at November 28, 2020. Net periodic pension cost for a given fiscal year is based on assumptions developed at the end of the previous fiscal year. A discount rate change of 0.5 percentage points at December 3, 2022 would impact U.S. pension and other postretirement plan (income) expense by less than $0.1 million (pre-tax) in fiscal 2023. Discount rates for non-U.S. plans are determined in a manner consistent with the U.S. plans.

The expected long-term rate of return on plan assets assumption for the U.S. pension plan was 7.00 percent in 2022, 7.25 percent in 2021 and 7.50 percent in 2020. Our expected long-term rate of return on U.S. plan assets was based on our target asset allocation assumption of 55 percent equities and 45 percent fixed-income. Management, in conjunction with our external financial advisors, determines the expected long-term rate of return on plan assets by considering the expected future returns and volatility levels for each asset class that are based on historical returns and forward looking observations. For 2022, the expected long-term rate of return on the target equities allocation was 8.50 percent and the expected long-term rate of return on the target fixed-income allocation was 5.60 percent. The total plan rate of return assumption included an estimate of the effect of diversification and the plan expense. A change of 0.5 percentage points for the expected return on assets assumption would impact U.S. net pension and other postretirement plan expense by approximately $2.2 million (pre-tax).

Management, in conjunction with our external financial advisors, uses the actual historical rates of return of the asset categories to assess the reasonableness of the expected long-term rate of return on plan assets. The most recent 10-year and 20-year historical equity returns are shown in the table below. Our expected rate of return on our total portfolio is consistent with the historical patterns observed over longer time frames.

U.S. Pension Plan Historical Actual Rates of Return	Total Portfolio	Equities	Fixed Income
10-year period	6.3 %	8.4 %	2.6 %
20-year period	7.2 %	7.5 %	5.9 %*

* Beginning in 2022, our target allocation migrated from 60 percent equities and 40 percent fixed-income to 55 percent equities and 45 percent fixed income. The historical actual rate of return for the fixed income of 5.9 percent is since inception (16 years, 11 months).

The expected long-term rate of return on plan assets assumption for non-U.S. pension plans was a weighted-average of 3.49 percent in 2022 compared to 6.15 percent in 2021 and 6.23 percent in 2020. The expected long-term rate of return on plan assets assumption used in each non-U.S. plan is determined on a plan-by-plan basis for each local jurisdiction and is based on expected future returns for the investment mix of assets currently in the portfolio for that plan. Management, in conjunction with our external financial advisors, develops expected rates of return for each plan, considers expected long-term returns for each asset category in the plan, reviews expectations for inflation for each local jurisdiction, and estimates the effect of active management of the plan's assets. Our largest non-U.S. pension plans are in the United Kingdom and Germany. The expected long-term rate of return on plan assets for the United Kingdom was 2.50 percent and the expected long-term rate of return on plan assets for Germany was 4.50 percent. Management, in conjunction with our external financial advisors, uses actual historical returns of the asset portfolio to assess the reasonableness of the expected rate of return for each plan.

The projected salary increase assumption is based on historic trends and comparisons to the external market. Higher rates of increase result in higher pension expenses. As this rate is also a long-term expected rate, it is less likely to change on an annual basis. Under the U.S. pension plan, the compensation amount was locked-in as of May 31, 2011 and thus the benefit no longer includes compensation increases. The 4.50 percent rate for 2020 is for the supplemental executive retirement plan only; for 2022 and 2021, there is no compensation increase as subsequent to November 27, 2021, there were no active employees in the supplemental executive retirement plan. Projected salary increase assumptions for non-U.S. plans are determined in a manner consistent with the U.S. plans.

Recoverability of Long-Lived Assets

The assessment of the recoverability of long-lived assets reflects our assumptions and estimates. Factors that we must estimate when performing impairment tests include sales volume, prices, inflation, currency exchange rates, tax rates and capital spending. Significant judgment is involved in estimating these factors, and they include inherent uncertainties. The measurement of the recoverability of these assets is dependent upon the accuracy of the assumptions used in making these estimates and how the estimates compare to the eventual future operating performance of the specific businesses to which the assets are attributed.

Judgments made by us include the expected useful lives of long-lived assets. The ability to realize undiscounted cash flows in excess of the carrying amounts of such assets is affected by factors such as the ongoing maintenance and improvement of the assets, changes in economic conditions and changes in operating performance.

Product, Environmental and Other Litigation Liabilities

As disclosed in Item 3. Legal Proceedings and in Note 1 and Note 14 to the Consolidated Financial Statements, we are subject to various claims, lawsuits and other legal proceedings. Reserves for loss contingencies associated with these matters are established when it is determined that a liability is probable and the amount can be reasonably estimated. The assessment of the probable liabilities is based on the facts and circumstances known at the time that the financial statements are being prepared. For cases in which it is determined that a liability is probable but only a range for the potential loss exists, the minimum amount of the range is recorded and subsequently adjusted as better information becomes available.

For cases in which insurance coverage is available, the gross amount of the estimated liabilities is accrued, and a receivable is recorded for any probable estimated insurance recoveries. A discussion of environmental, product and other litigation liabilities is disclosed in Item 3. Legal Proceedings and Note 14 to the Consolidated Financial Statements.

Based upon currently available facts, we do not believe that the ultimate resolution of any pending legal proceeding, individually or in the aggregate, will have a material adverse effect on our long-term financial condition. However, adverse developments and/or periodic settlements could negatively affect our results of operations or cash flows in one or more future quarters.

Income Tax Accounting

As part of the process of preparing the Consolidated Financial Statements, we are required to estimate income taxes in each of the jurisdictions in which we operate. The process involves estimating actual current tax expense along with assessing temporary differences resulting from differing treatment of items for book and tax purposes. These temporary differences result in deferred tax assets and liabilities, which are included in the Consolidated Balance Sheets. We record a valuation allowance to reduce our deferred tax assets to the amount that is more-likely-than-not to be realized. We have considered future taxable income and ongoing tax planning strategies in assessing the need for the valuation allowance. Increases in the valuation allowance result in additional expense to be reflected within the tax provision in the Consolidated Statements of Income. As of December 3, 2022, the valuation allowance to reduce deferred tax assets totaled $14.4 million.

We recognize tax benefits for tax positions for which it is more-likely-than-not that the tax position will be sustained by the applicable tax authority at the largest amount of tax benefit that is greater than fifty percent likely of being realized upon ultimate settlement. We do not recognize a financial statement benefit for a tax position that does not meet the more-likely-than-not threshold. We believe that our liabilities for income taxes reflect the most likely outcome. It is difficult to predict the final outcome or the timing of the resolution of any particular tax position. Future changes in judgment related to the resolution of tax positions will impact earnings in the quarter of such change. We adjust our income tax liabilities related to tax positions in light of changing facts and circumstances. Settlement with respect to a tax position would usually require cash. Based upon our analysis of tax positions taken on prior year returns and expected tax positions to be taken for the current year tax returns, we have identified gross uncertain tax positions of $17.6 million as of December 3, 2022 and $13.3 million as of November 27, 2021.

We have not recorded U.S. deferred income taxes for certain of our non-U.S. subsidiaries undistributed earnings as such amounts are intended to be indefinitely reinvested outside of the U.S. Should we change our business strategies related to these non-U.S. subsidiaries, additional U.S. tax liabilities could be incurred. It is not practical to estimate the amount of these additional tax liabilities. See Note 11 to the Consolidated Financial Statements for further information on income tax accounting.

Acquisition Accounting

As we enter into business combinations, we perform acquisition accounting requirements including the following:

- Identifying the acquirer,
- Determining the acquisition date,
- Recognizing and measuring the identifiable assets acquired and the liabilities assumed, and
- Recognizing and measuring goodwill or a gain from a bargain purchase.

We complete valuation procedures and record the resulting fair value of the acquired assets and assumed liabilities based upon the valuation of the business enterprise and the tangible and intangible assets acquired. Enterprise value allocation methodology requires management to make assumptions and apply judgment to estimate the fair value of assets acquired and liabilities assumed. If estimates or assumptions used to complete the enterprise valuation and estimates of the fair value of the acquired assets and assumed liabilities significantly differed from assumptions made, the resulting difference could materially affect the fair value of net assets.

The calculation of the fair value of the tangible assets, including property, plant and equipment, utilizes the cost approach, which computes the cost to replace the asset, less accrued depreciation resulting from physical deterioration, functional obsolescence and external obsolescence. The calculation of the fair value of the identified intangible assets are determined using cash flow models following the income approach or a discounted market-based methodology approach. Significant inputs include estimated revenue growth rates, gross margins, operating expenses, and estimated attrition, royalty and discount rates. Goodwill is recorded as the difference in the fair value of the acquired assets and assumed liabilities and the purchase price.

Results of Operations

Net revenue

($ in millions)	2022	2021	2022 vs 2021
Net revenue	$ 3,749.2	$ 3,278.0	14.4%

We review variances in net revenue in terms of changes related to sales volume and product pricing (referred to as organic revenue growth), business acquisitions and divestitures (M&A) and changes in foreign currency exchange rates. The following table shows the net revenue variance analysis for fiscal 2022 compared to fiscal 2021:

	2022 vs 2021
Organic revenue growth	16.6%
Extra week (53 week year)	2.0%
M&A	1.6%
Currency	(5.8)%
Net revenue growth	14.4%

Organic revenue growth was 16.6 percent in 2022 compared to 2021 driven by a 20.0 percent increase in Hygiene, Health and Consumable Adhesives, a 15.9 percent increase in Engineering Adhesives and a 7.0 percent increase in Construction Adhesives. The increase was driven by a 15.4 percent increase in product pricing and a 1.2 percent increase in sales volume. The 1.6 percent from M&A is due to the acquisitions of Fourny and Apollo. The negative 5.8 percent currency impact was primarily driven by a weaker Euro, Turkish lira, Chinese renminbi, British pound and Argentinian peso compared to the U.S. dollar. Additionally, net revenue in 2022 was higher than 2021 by 2.0 percent from an additional week of revenue in 2022 as it was a 53 week fiscal year compared to a 52 week fiscal year in 2021.

Cost of sales

($ in millions)	2022	2021	2022 vs 2021
Raw materials	$ 2,154.1	$ 1,810.0	19.0%
Other manufacturing costs	631.4	622.7	1.4%
Cost of sales	$ 2,785.5	$ 2,432.7	14.5%
Percent of net revenue	74.3%	74.2%	

Cost of sales in 2022 compared to 2021 increased 10 basis points as a percentage of net revenue. Raw material cost as a percentage of net revenue increased 230 basis points in 2022 compared to 2021 due to higher raw material costs. Other manufacturing costs as a percentage of net revenue decreased 220 basis points in 2022 compared to 2021 due to higher net revenue.

Gross profit

($ in millions)	2022	2021	2022 vs 2021
Gross profit	$ 963.7	$ 845.3	14.0%
Percent of net revenue	25.7%	25.8%	

Gross profit in 2022 increased 14.0 percent and gross profit margin decreased 10 basis points compared to 2021.

Selling, general and administrative (SG&A) expenses

($ in millions)	2022	2021	2022 vs 2021
SG&A	$ 641.0	$ 592.7	8.1%
Percent of net revenue	17.1%	18.1%	

SG&A expenses for 2022 increased $48.3 million, or 8.1 percent, compared to 2021. The increase is primarily due to higher compensation and acquisition project costs and the impact of acquisitions. SG&A expenses as a percent of revenue decreased by 100 basis points compared with the prior year due to higher net revenue.

Other income, net

($ in millions)	2022	2021
Other income, net	$ 12.9	$ 32.9

Other income, net includes foreign transaction losses of $12.9 million and $6.0 million in 2022 and 2021, respectively. There was a $1.4 million gain on disposal of assets in 2022 and a $0.6 million loss in 2021. Defined benefit pension benefit was $26.8 million and $32.1 million in 2022 and 2021, respectively. The $26.8 million of defined benefit pension benefit in 2022 includes a $3.3 million settlement loss related to the termination of our Canadian defined benefit pension plan. Other income, net also includes a $2.4 million loss and $7.4 million of income in 2022 and 2021, respectively. Other income in 2021 includes gains related to legal entity mergers and a transactional tax legal settlement in Brazil.

Interest expense

($ in millions)	2022	2021
Interest expense	$ 91.5	$ 78.1

Interest expense was $91.5 million and $78.1 million in 2022 and 2021, respectively. The increase in interest expense is due to higher interest rates and higher debt balances. We capitalized $1.5 million and $0.9 million of interest expense in 2022 and 2021, respectively.

Interest income

($ in millions)	2022	2021
Interest income	$ 7.8	$ 9.5

Interest income in 2022 and 2021 was $7.8 million and $9.5 million, respectively, consisting primarily of interest on cross-currency swap activity and other miscellaneous interest income.

Income tax expense:

($ in millions)	2022	2021
Income tax expense	$ 77.2	$ 63.0
Effective tax rate	30.6%	29.1%

Income tax expense of $77.2 million in 2022 includes $9.3 million of discrete tax expense, primarily related to the revaluation of cross-currency swap agreements due to depreciation of the Euro versus the U.S. dollar and several foreign discrete items, offset in part by U.S. tax benefit for state deferred tax rate change and excess tax benefit for stock compensation. Excluding the discrete tax expense of $9.3 million, the overall effective tax rate was 26.9 percent.

Income tax expense of $63.0 million in 2021 includes $4.3 million of discrete tax expense, primarily related to the revaluation of cross-currency swap agreements due to depreciation of the Euro versus U.S. dollar, changes in valuation allowances and several foreign discrete items. Excluding the discrete tax expense of $4.3 million, the overall effective tax rate was 27.1 percent.

The decrease in the overall effective tax rate for 2022 compared to 2021, excluding the impact of discrete items, is primarily due to the change in the foreign rate differential resulting from a change in mix of earnings across jurisdictions.

Income from equity method investments

($ in millions)	2022	2021
Income from equity method investments	$ 5.7	$ 7.7

The income from equity method investments relates to our 50 percent ownership of the Sekisui-Fuller joint venture in Japan. The lower income for 2022 compared to 2021 is due to the unfavorable impact of the weakening of the Japanese yen against the U.S. dollar partially offset by higher net income in our joint venture.

Net income attributable to H.B. Fuller

($ in millions)	2022	2021	2022 vs 2021
Net income attributable to H.B. Fuller	$ 180.3	$ 161.4	11.7%
Percent of net revenue	4.8%	4.9%	

Net income attributable to H.B. Fuller was $180.3 million in 2022 compared to $161.4 million in 2021. Diluted earnings per share were $3.26 per share in 2022 and $2.97 per share in 2021.

Operating Segment Results

We are required to report segment information in the same way that we internally organize our business for assessing performance and making decisions regarding allocation of resources. For segment evaluation by the chief operating decision maker, segment operating income is defined as gross profit less SG&A expenses. Inter-segment revenues are recorded at cost plus a markup for administrative costs. Corporate expenses, other than those included in Corporate Unallocated, are allocated to each operating segment.

We have three reportable segments: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives. The tables below provide certain information regarding the net revenue and segment operating income of each of our operating segments. Corporate Unallocated includes business acquisition and integration-related charges, organizational restructuring-related charges, the results of business divestitures and costs related to the implementation of Project ONE.

Net Revenue by Segment

	2022		2021	
($ in millions)	Net Revenue	% of Total	Net Revenue	% of Total
Hygiene, Health and Consumable Adhesives	$ 1,695.9	45%	$ 1,472.7	45%
Engineering Adhesives	1,532.7	41%	1,371.8	42%
Construction Adhesives	520.6	14%	433.5	13%
Total	$ 3,749.2	100%	$ 3,278.0	100%

Segment Operating Income (Loss)

	2022		2021	
($ in millions)	Operating Income (Loss)	% of Total	Operating Income (Loss)	% of Total
Hygiene, Health and Consumable Adhesives	$ 165.8	51%	$ 138.4	55%
Engineering Adhesives	168.8	52%	135.9	54%
Construction Adhesives	23.0	8%	14.1	5%
Segment total	357.6	111%	288.4	114%
Corporate Unallocated	(34.9)	(11)%	(35.8)	(14)%
Total	$ 322.7	100%	$ 252.6	100%

The following table provides a reconciliation of segment operating income to income before income taxes and income from equity method investments, as reported in the Consolidated Statements of Income.

($ in millions)	2022	2021
Segment operating income	$ 322.7	$ 252.6
Other income, net	12.9	32.9
Interest expense	(91.5)	(78.1)
Interest income	7.8	9.5
Income before income taxes and income from equity method investments	$ 251.9	$ 216.9

Hygiene, Health and Consumable Adhesives

($ in millions)	2022	2021	2022 vs 2021
Net revenue	$ 1,695.9	$ 1,472.7	15.2%
Segment operating income	$ 165.8	$ 138.4	19.8%
Segment profit margin %	9.8%	9.4%	

The following tables provide details of Hygiene, Health and Consumable Adhesives net revenue variances:

	2022 vs 2021
Organic revenue growth	20.0%
Extra week (53 week year)	2.1%
Currency	(6.9)%
Net revenue growth	15.2%

Net revenue increased 15.2 percent in 2022 compared to 2021. The 20.0 percent increase in organic growth was attributable to favorable product pricing. The negative currency effect was due to the weaker Euro, Turkish lira, Argentinian peso and Egyptian pound compared to the U.S. dollar. Additionally, net revenue in 2022 was higher than 2021 by 2.1 percent from an additional week of revenue in 2022 as it was a 53 week fiscal year compared to a 52 week fiscal year in 2021. As a percentage of net revenue, raw material costs increased 300 basis points due to higher raw material costs partially offset by higher net revenue. Other manufacturing costs as a percentage of net revenue decreased 250 basis points due to higher net revenue. SG&A expenses as a percentage of net revenue decreased 90 basis points in 2022 as compared to 2021 due to higher net revenue. Segment operating income increased 19.8 percent and segment operating margin as a percentage of net revenue increased 40 basis points in 2022 as compared to 2021.

Engineering Adhesives

($ in millions)	2022	2021	2022 vs 2021
Net revenue	$ 1,532.7	$ 1,371.8	11.7%
Segment operating income	$ 168.8	$ 135.9	24.2%
Segment profit margin %	11.0%	9.9%	

The following tables provide details of Engineering Adhesives net revenue variances:

	2022 vs 2021
Organic revenue growth	15.9%
Extra week (53 week year)	2.0%
Currency	(6.2)%
Net revenue growth	11.7%

Net revenue increased 11.7 percent in 2022 compared to 2021. The 15.9 percent increase in organic growth was attributable to favorable product pricing and increase in sales volume. The negative currency effect was due to a weaker Euro, Turkish lira and Chinese renminbi compared to the U.S. dollar. Additionally, net revenue in 2022 was higher than 2021 by 2.0 percent from an additional week of revenue in 2022 as it was a 53 week fiscal year compared to a 52 week fiscal year in 2021. Raw material costs as a percentage of net revenue increased 150 basis points due to higher raw material costs partially offset by higher net revenue. Other manufacturing costs as a percentage of net revenue decreased 170 basis points due to higher net revenue. SG&A expense as a percentage of net revenue decreased 90 basis points due to higher net revenue. Segment operating income increased 24.2 percent and segment operating margin increased 110 basis points compared to 2021.

Construction Adhesives

($ in millions)	2022	2021	2022 vs 2021
Net revenue	$ 520.6	$ 433.5	20.1%
Segment operating income (loss)	$ 23.0	$ 14.1	63.1%
Segment profit margin %	4.4%	3.3%	

The following tables provide details of Construction Adhesives net revenue variances:

	2022 vs 2021
Organic revenue growth	7.0%
Extra week (53 week year)	1.9%
M&A	12.4%
Currency	(1.2)%
Net revenue growth	20.1%

Net revenue increased 20.1 percent in 2022 compared to 2021. The 7.0 percent increase in organic growth was attributable to favorable product pricing, partially offset by lower sales volume. The increase in net revenue from M&A was primarily due to the acquisitions of Fourny and Apollo during the first quarter of 2022. The negative currency effect was due to a weaker British pound, Euro and Australian dollar compared to the U.S. dollar. Additionally, net revenue in 2022 was higher than 2021 by 1.9 percent from an additional week of revenue in 2022 as it was a 53 week fiscal year compared to a 52 week fiscal year in 2021. Raw material costs as a percentage of net revenue increased 150 basis points due to higher raw material costs partially offset by higher net revenue. Other manufacturing costs as a percentage of net revenue decreased 160 basis points primarily due to higher net revenue and the impact of acquisitions. SG&A expenses as a percentage of net revenue decreased 100 basis points also due to higher net revenue. Segment operating income increased 63.1 percent and segment operating margin increased 110 basis points compared to 2021.

Corporate Unallocated

($ in millions)	2022	2021	2022 vs 2021
Segment operating loss	$ (34.9)	$ (35.8)	(2.5)%
Segment profit margin %	NMP	NMP	

NMP = Non-meaningful percentage

Corporate Unallocated includes acquisition and integration-related charges, restructuring-related charges, the results of business divestitures and costs related to the implementation of Project ONE.

Segment operating loss increased 2.5 percent in 2022 reflecting increased acquisition project costs compared to 2021.

Financial Condition, Liquidity and Capital Resources

Total cash and cash equivalents as of December 3, 2022 were $79.9 million compared to $61.8 million as of November 27, 2021. Total long and short-term debt was $1,765.1 million as of December 3, 2022 and $1,616.5 million as of November 27, 2021.

We believe that cash flows from operating activities will be adequate to meet our short-term and long-term liquidity and capital expenditure needs. In addition, we believe we have the ability to obtain both short-term and long-term debt to meet our financing needs for the foreseeable future. Cash available in the United States has historically been sufficient and we expect it will continue to be sufficient to fund U.S. operations, U.S. capital spending and U.S. pension and other postretirement benefit contributions in addition to funding U.S. acquisitions, dividend payments, debt service and share repurchases as needed. For those international earnings considered to be reinvested indefinitely, we currently have no intention to, and plans do not indicate a need to, repatriate these funds for U.S. operations.

Our credit agreements include restrictive covenants that, if not met, could lead to a renegotiation of our credit lines and a significant increase in our cost of financing. At December 3, 2022, we were in compliance with all covenants of our contractual obligations as shown in the following table:

Covenant	Debt Instrument	Measurement	Result as of December 3, 2022
Total Indebtedness / TTM EBITDA	Term Loan B Credit Agreement	Not greater than 5.25	2.3
Total Indebtedness / TTM EBITDA	Revolving Credit Agreement	Not greater than 5.25	2.3
TTM EBITDA / Consolidated Interest Expense	Revolving Credit Agreement	Not less than 2.0	5.4

- TTM = trailing 12 months
- EBITDA for Term Loan B covenant purposes is defined as consolidated net income, plus interest expense, expense for taxes paid or accrued, depreciation and amortization, certain non-cash impairment losses, extraordinary non-cash losses incurred other than in the ordinary course of business, nonrecurring extraordinary non-cash restructuring charges and the non-cash impact of purchase accounting, expenses related to the Royal Adhesives acquisition not to exceed $40.0 million, expenses relating to the integration of Royal Adhesives during the fiscal years ending in 2017, 2018 and 2019 not exceeding $30 million in aggregate, restructuring expenses that began prior to the Royal Adhesives acquisition incurred in fiscal years ending in 2017 and 2018 not exceeding $28 million in aggregate, and non-capitalized charges relating to the SAP implementation during fiscal years ending in 2017 through 2021 not exceeding $13 million in any single fiscal year, minus extraordinary non-cash gains. For the Total Indebtedness / TTM EBITDA ratio, TTM EBITDA is adjusted for the pro forma results from Material Acquisitions and Material Divestitures as if the acquisition or divestiture occurred at the beginning of the calculation period. The full definition is set forth in the Term Loan B Credit Agreement and can be found in the Company’s 8-K filing dated October 20, 2017.
- EBITDA for Revolving Credit Facility covenant purposes is defined as consolidated net income, plus interest expense, expense for taxes paid or accrued, depreciation and amortization, non-cash impairment losses related to long-lived assets, intangible assets or goodwill, nonrecurring or unusual non-cash losses incurred other than in the ordinary course of business, nonrecurring or unusual non-cash restructuring charges and the non-cash impact of purchase accounting, fees, premiums, expenses and other transaction costs incurred or paid by the borrower or any of its Subsidiaries on the effective date in connection with the transactions, this agreement and the other loan documents, the 2020 supplemental indenture and the transactions contemplated hereby and thereby, one-time, non-capitalized charges and expenses relating to the Company’s SAP implementation during fiscal years ending in 2017 through 2024, in an amount not exceeding $15.0 million in any single fiscal year of the Company, charges and expenses relating to the ASP Royal Acquisition, including but not limited to advisory and financing costs, during the Company’s fiscal years ending in 2020 and 2021, in an aggregate amount (as to such years combined) not exceeding $40.0 million, charges and expenses related to the reorganization of the Company and its subsidiaries from five business units to three business units to reduce costs during the Company’s fiscal years ending in 2020 and 2021 in an aggregate amount (as to such years combined) not exceeding $24.0 million, and charges and expenses related to the Company’s manufacturing and operations project to improve delivery, implement cost savings and reduce inventory during the Company’s fiscal years ending in 2020, 2021 and 2022 in an aggregate amount (as to such years combined) not exceeding $15.5 million.
- Consolidated Interest Expense for the Revolving Credit Facility is defined as the interest expense (including without limitation the portion of capital lease obligations that constitutes imputed interest in accordance with GAAP) of the Company and its subsidiaries calculated on a consolidated basis for such period with respect to all outstanding indebtedness of the Company and its subsidiaries allocable to such period in accordance with GAAP.

We believe we have the ability to meet all of our contractual obligations and commitments in fiscal 2022.

Net Financial Assets (Liabilities)

($ in millions)		2022		2021
Financial assets:				
Cash and cash equivalents	$	**79.9**	$	61.8
Foreign exchange contracts		**10.3**		5.7
Cash flow hedges		**-**		14.5
Financial liabilities:				
Notes payable		**(28.9)**		(25.0)
Long-term debt		**(1,736.3)**		(1,591.5)
Foreign exchange contracts		**(4.6)**		(6.1)
Interest rate and cross currency swaps		**(42.5)**		(22.9)
Net investment hedges		**(54.0)**		-
Net financial liabilities	$	**(1,776.1)**	$	(1,563.5)

Of the $79.9 million in cash and cash equivalents as of December 3, 2022, $75.2 million was held outside the U.S. Of the $75.2 million of cash held outside the U.S., earnings on $73.3 million are indefinitely reinvested outside of the U.S. It is not practical for us to determine the U.S. tax implications of the repatriation of these funds.

There are no contractual or regulatory restrictions on the ability of consolidated and unconsolidated subsidiaries to transfer funds in the form of cash dividends, loans or advances to us, except for: 1) a credit facility limitation restricting investments, loans, advances or capital contributions from Loan Parties to non-Loan Parties in excess of $100.0 million, 2) a credit facility limitation that provides total investments, loans, advances or guarantees not otherwise permitted in the credit agreement for all subsidiaries shall not exceed $125.0 million in the aggregate, 3) a credit facility limitation that provides total investments, dividends, and distributions shall not exceed the Available Amount defined in these agreements, all three of which do not apply once our secured leverage ratio drops below 4.0x and 4) typical statutory restrictions, which prohibit distributions in excess of net capital or similar tests. The Royal Adhesives acquisition and any investments, loans, and advances established to consummate the Royal Adhesives acquisition, are excluded from the credit facility limitations described above. Additionally, we have taken the income tax position that the majority of our cash in non-U.S. locations is indefinitely reinvested.

Debt Outstanding and Debt Capacity

Notes Payable

Notes payable were $28.9 million at December 3, 2022 and $25.0 million at November 27, 2021. These amounts primarily represented various foreign subsidiaries' short-term borrowings that were not part of committed lines. The weighted-average interest rates on these short-term borrowings were 16.2 percent in 2022 and 8.1 percent in 2021.

Long-Term Debt

Long-term debt consisted of a secured term loan ("Term Loan B") and two unsecured public notes ("Public Notes"). The Term Loan B has a principal amount of $1,001.2 million and bears a floating interest rate at LIBOR plus 2.00 percent (6.19 percent at December 3, 2022) and matures in fiscal year 2024. The 10-year Public Notes have a principal amount of $300.0 million, bear fixed interest at 4.00 percent and mature in 2027. We are subject to a par call of 1.00 percent except within three months of the maturity date. The 8-year Public Notes have a principal amount of $300.0 million, bear fixed interest at 4.25 percent and mature in 2028. We are subject to a par call plus 50 percent of coupon in year 4, plus 25 percent of coupon in year 5 and at par thereafter. We currently have no intention to prepay the Public Notes. Additional details on the Public Notes and the Term Loan B Credit Agreement can be found in Form 8-K dated February 9, 2017, Form 8-K dated October 20, 2017 and Form 8-K dated October 20, 2020, respectively. Interest payable on our long-term debt totaled $7.4 million as of December 3, 2022.

We entered into interest rate swap agreements to convert our $300.0 million Public Notes that were issued on October 20, 2020 to a variable interest rate of 1-month LIBOR plus 3.28 percent. We entered into interest rate swap agreements to convert $150.0 million of our $300.0 million Public Notes that were issued on February 14, 2017 to a variable interest rate of 1-month LIBOR plus 1.86 percent. See Note 7 to the Consolidated Financial Statements for further discussion on the issuance of our Public Notes. The swaps were designated for hedge accounting treatment as fair value hedges. We applied the hypothetical derivative method to assess hedge effectiveness for this interest rate swap. Changes in the fair value of a hypothetically perfect swap with terms that match the critical terms of our fixed rate Public Notes are compared with the change in the fair value of the swaps. On May 1, 2020, we terminated the swap agreement. Upon termination, we received $15.8 million in cash. The remaining swap liability will be accounted for as a discount on long-term debt and will be amortized to interest expense over the remaining life of the Public Notes of seven years.

Revolving Credit Facility

We have a revolving credit agreement with a consortium of financial institutions at December 3, 2022. This revolving credit agreement creates a secured multi-currency revolving credit facility that we can draw upon to repay existing indebtedness, finance working capital needs, finance acquisitions and for general corporate purposes up to a maximum of $700 million.

On January 24, 2022, we relied on the accordion feature in our credit agreement to increase the commitment under the existing credit facility from $400 million to $600 million. On February 28, 2022, we executed an amendment to amend and restate the revolving credit agreement to move from borrowing under LIBOR to borrowing under SOFR along with further upsizing the revolving credit facility by $100 million to $700 million in total aggregate commitments. Interest on the revolving credit facility is payable at the SOFR plus a credit spread adjustment (0.11448 percent) plus 1.75 percent (5.94 percent at December 3, 2022). A facility fee of 0.25 percent of the unused commitment under the revolving credit facility is payable quarterly. The interest rate and the facility fee are based on a leverage grid. The revolving credit facility expires on July 22, 2024. As of December 3, 2022, we had $175.5 million drawn under the revolving credit facility. Additional details on the revolving credit agreement can be found in Form 8-K dated October 20, 2020. For further information related to debt outstanding and debt capacity, see Note 7 to the Consolidated Financial Statements.

Uncertainty relating to the LIBOR phase out may adversely impact the value of, and our obligations under, our Term Loan B and Public Notes. See the applicable discussion under Item 1A. Risk Factors.

Goodwill and Other Intangible Assets

As of December 3, 2022, goodwill totaled $1,392.6 million (31.2 percent of total assets) and other intangible assets, net of accumulated amortization, totaled $702.1 million (15.7 percent of total assets).

The components of goodwill and other identifiable intangible assets, net of amortization, by segment are as follows:

	2022			
($ in millions)	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Total
Goodwill	$ 329.0	$ 637.9	$ 425.7	$ 1,392.6
Purchased technology and patents	5.7	31.5	15.1	52.3
Customer relationships	105.8	228.5	281.3	615.6
Tradenames	4.5	14.6	9.8	28.9
Other finite-lived intangible assets	1.9	0.1	2.8	4.8
Indefinite-lived intangible assets	-	0.5	-	0.5

	2021			
($ in millions)	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Total
Goodwill	$ 325.4	$ 662.0	$ 311.4	$ 1,298.8
Purchased technology and patents	7.0	36.4	10.2	53.6
Customer relationships	108.0	253.9	235.6	597.5
Tradenames	4.6	16.5	8.7	29.8
Other finite-lived intangible assets	2.3	0.2	3.2	5.7
Indefinite-lived intangible assets	-	0.5	-	0.5

Selected Metrics of Liquidity and Capital Resources

Key metrics we monitor are net working capital as a percent of annualized net revenue, trade receivables days sales outstanding (DSO), inventory days on hand, free cash flow after dividends and debt capitalization ratio.

	December 3, 2022	November 27, 2021
Net working capital as a percentage of annualized net revenue[1]	16.7%	15.7%
Trade receivables DSO (in days)[2]	62	62
Inventory days on hand (in days)[3]	71	65
Free cash flow after dividends[4]	$ 87.3	$ 82.3
Debt capitalization ratio[5]	52.3%	50.2%

[1] Current quarter net working capital (trade receivables, net of allowance for doubtful accounts plus inventory minus trade payables) divided by annualized net revenue (current quarter, multiplied by 4).

[2] Trade receivables net of allowance for doubtful accounts multiplied by 91 (13 weeks) and divided by the net revenue for the quarter.

[3] Total inventory multiplied by 91 and divided by cost of sales (excluding delivery costs) for the quarter.

[4] Net cash provided by operating activities less purchased property, plant and equipment and dividends paid. See reconciliation to net cash provided by operating activities to free cash flow after dividends below.

[5] Total debt divided by (total debt plus total stockholders' equity).

Free cash flow after dividends, a non-GAAP financial measure, is defined as net cash provided by operating activities less purchased property, plant and equipment and dividends paid. Free cash flow after dividends is an integral financial measure used by the Company to assess its ability to generate cash in excess of its operating needs, therefore, the Company believes this financial measure provides useful information to investors. The following table reflects the manner in which free cash flow after dividends is determined and provides a reconciliation of free cash flow after dividends to net cash provided by operating activities, the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

Reconciliation of "Net cash provided by operating activities" to "Free cash flow after dividends"

($ in millions)	2022	2021
Net cash provided by operating activities	$ **256.5**	$ 213.3
Less: Purchased property, plant and equipment	**130.0**	96.1
Less: Dividends paid	**39.2**	34.9
Free cash flow after dividends	$ **87.3**	$ 82.3

Summary of Cash Flows

Cash Flows from Operating Activities

($ in millions)	2022	2021
Net cash provided by operating activities	$ **256.5**	$ 213.3

Net income including non-controlling interest was $180.4 million in 2022 and $161.5 million in 2021. Depreciation and amortization expense totaled $147.0 million in 2022 compared to $143.2 million in 2021. The higher depreciation and amortization expense in 2022 is related to the assets acquired in our business acquisitions.

Changes in net working capital (trade receivables, inventory and trade payables) accounted for a use of cash of $103.2 million and $83.9 million in 2022 and 2021, respectively. Following is an assessment of each of the net working capital components:

- Trade Receivables, net – Changes in trade receivables resulted in a $24.8 million use of cash in 2022 compared to a $124.8 million use of cash in 2021. The lower use of cash in 2022 compared to 2021 was related to higher collections in the current year compared to the prior year. The DSO was 62 days at December 3, 2022 and November 27, 2021.

- Inventory – Changes in inventory resulted in a $55.8 million use of cash in 2022 compared to a $135.4 million use of cash in 2021. In 2022, inventory levels increased from 2021 as a result of acquisitions and also reflecting higher raw material costs and efforts to maintain service levels. Inventory days on hand were 71 days at the end of 2022 compared to 65 days at the end of 2021.

- Trade Payables – Changes in trade payables resulted in a $22.6 million use of cash in 2022 and a $176.3 million source of cash in 2021. The use of cash in 2022 compared to the source of cash in 2021 primarily related to the timing of payments.

Contributions to our pension and other postretirement benefit plans were $3.0 million and $3.8 million in 2022 and 2021, respectively. Income taxes payable resulted in a $12.9 million and a $4.1 million use of cash in 2022 and 2021, respectively. Other assets resulted in a $46.5 million source of cash and a $79.1 million use of cash in 2022 and 2021, respectively. The source of cash in 2022 is primarily driven by an decrease in pension and post-retirement assets related to year-end pension valuation and a decrease in derivative assets. Accrued compensation was a $1.1 million and a $27.7 million source of cash in 2022 and 2021, respectively, relating to higher accruals for our employee incentive plans. Other operating activity was a $6.2 million and a $108.6 million source of cash in 2022 and 2021, respectively. Other operating activity includes equity adjustments of approximately ($25.0) million and $55.0 million related to year-end pension valuations in 2022 and 2021, respectively.

Cash Flows Used In Investing Activities

($ in millions)	2022	2021
Net cash used in investing activities	$ **(375.3)**	$ (94.7)

Purchases of property, plant and equipment were $130.0 million in 2022 compared to $96.1 million in 2021. The higher purchases in 2022 reflect the timing of capital projects and expenditures related to growth initiatives. Proceeds from the sale of property, plant and equipment were $1.6 million in 2022 compared to $2.9 million in 2021.

Purchased businesses, net of cash acquired, were $250.8 million in 2022 compared to $5.4 million in 2021. In 2022, we acquired Tissue Seal for $22.2 million, Fourny for $14.3 million, Apollo for $194.4 million, ZKLT for $13.5 million and GSSI for $6.4 million. In 2021, we acquired STR Holdings, Inc. for $5.4 million. In 2021, we received payment of a government grant related to the building of a plant in China of $5.8 million and we expended cash related to the building of this plant of $1.8 million.

Cash Flows Used In Financing Activities

($ in millions)	2022	2021
Net cash used in financing activities	$ **160.3**	$ (154.1)

In 2022 and 2021, we repaid $159.5 million and $156.5 million of long-term debt, respectively. See Note 7 to the Consolidated Financial Statements for further discussion of debt borrowings and repayments. Cash paid for dividends were $39.2 million and $34.9 million in 2022 and 2021, respectively. Cash generated from the exercise of stock options was $30.1 million and $32.3 million in 2022 and 2021, respectively. Repurchases of common stock related to statutory minimum tax withholding upon vesting of restricted stock were $4.0 million in 2022 compared to $2.7 million in 2021. There were no repurchases from our share repurchase program in 2022 and 2021.

We are subject to mandatory prepayments in the first quarter of each fiscal year equal to 50% of Excess Cash Flow, as defined in the Term Loan B Credit Agreement, of the prior fiscal year less any voluntary prepayments made during that fiscal year. The Excess Cash Flow Percentage shall be reduced to 25% when our Secured Leverage Ratio is below 4.25:1.00 and to 0% when our Secured Leverage Ratio is below 3.75:1.00. The prepayment for the 2022 measurement period was satisfied through amounts prepaid prior to 2022.

We expect 2023 capital expenditures to be approximately $120.0 million.

Forward-Looking Statements and Risk Factors

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements. This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be identified by the use of words like "plan," "expect," "aim," "believe," "project," "anticipate," "intend," "estimate," "will," "should," "could" (including the negative or variations thereof) and other expressions that indicate future events and trends. These plans and expectations are based upon certain underlying assumptions, including those mentioned with the specific statements. Such assumptions are in turn based upon internal estimates and analyses of current market conditions and trends, our plans and strategies, economic conditions and other factors. These plans and expectations and the assumptions underlying them are necessarily subject to risks and uncertainties inherent in projecting future conditions and results. Actual results could differ materially from expectations expressed in the forward-looking statements if one or more of the underlying assumptions and expectations proves to be inaccurate or is unrealized. In addition to the factors described in this report, Item 1A. Risk Factors identifies some of the important factors that could cause our actual results to differ materially from those in any such forward-looking statements. In order to comply with the terms of the safe harbor, we have identified these important factors which could affect our financial performance and could cause our actual results for future periods to differ materially from the anticipated results or other expectations expressed in the forward-looking statements. These factors should be considered, together with any similar risk factors or other cautionary language that may be made elsewhere in this Annual Report on Form 10-K.

The list of important factors in Item 1A. Risk Factors does not necessarily present the risk factors in order of importance. This disclosure, including that under Forward-Looking Statements and Risk Factors, and other forward-looking statements and related disclosures made by us in this report and elsewhere from time to time, represents our best judgment as of the date the information is given. We do not undertake responsibility for updating any of such

information, whether as a result of new information, future events, or otherwise, except as required by law. Investors are advised, however, to consult any further public company disclosures (such as in filings with the SEC or in our press releases) on related subjects.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Market Risk

We are exposed to various market risks, including changes in interest rates, foreign currency rates and prices of raw materials. Market risk is the potential loss arising from adverse changes in market rates and prices, such as interest rates and foreign currency exchange rates.

Our financial performance may be negatively affected by unfavorable economic conditions. Recessionary economic conditions may have an adverse impact on our sales volumes, pricing levels and profitability. As domestic and international economic conditions change, trends in discretionary consumer spending also become unpredictable and subject to reductions due to uncertainties about the future. A general reduction in consumer discretionary spending due to a recession in the domestic and international economies, or uncertainties regarding future economic prospects, could have a material adverse effect on our results of operations.

Interest Rate Risk

Exposure to changes in interest rates results primarily from borrowing activities used to fund operations. Committed floating rate credit facilities are used to fund a portion of operations. We believe that probable near-term changes in interest rates would not materially affect financial condition, results of operations or cash flows. The annual impact on interest expense of a one-percentage point interest rate change on the outstanding balance of our variable rate debt, net of interest rate swap derivatives as of December 3, 2022, would have resulted in a change in net income of approximately $10.7 million or $0.19 per diluted share.

Foreign Exchange Risk

As a result of being a global enterprise, there is exposure to market risks from changes in foreign currency exchange rates. Our operating results, financial condition and net investment in foreign subsidiaries are subject to both currency translation and currency transaction risk. Approximately 55 percent of net revenue was generated outside of the United States in 2022. Principal foreign currency exposures relate to the Euro, British pound sterling, Canadian dollar, Chinese renminbi, Japanese yen, Australian dollar, Argentine peso, Brazilian real, Colombian peso, Mexican peso, Turkish lira, Egyptian pound, Indian rupee, Indonesian rupiah and Malaysian ringgit.

We enter into cross border transactions through importing and exporting goods to and from different countries and locations. These transactions generate foreign exchange risk as they create assets, liabilities and cash flows in currencies other than their functional currency. This also applies to services provided and other cross border agreements among subsidiaries. Our objective is to balance, where possible, non-functional currency denominated assets to non-functional currency denominated liabilities to have a natural hedge and minimize foreign exchange impacts.

In the event a natural hedge is not available, we take steps to minimize risks from foreign currency exchange rate fluctuations through normal operating and financing activities and, when deemed appropriate, through the use of derivative instruments. We do not enter into any speculative positions with regard to derivative instruments.

Based on 2022 financial results, a hypothetical one percent change in our cost of sales due to foreign currency rate changes would have resulted in a change in net income attributable to H.B. Fuller of approximately $10.5 million or $0.19 per diluted share. Based on 2022 financial results and foreign currency balance sheet positions as of December 3, 2022, a hypothetical overall 10 percent change in the U.S. dollar would have resulted in a change in net income of approximately $16.4 million or $0.30 per diluted share.

Raw Materials

The principal raw materials used to manufacture products include resins, polymers, synthetic rubbers, vinyl acetate monomer and plasticizers. We generally avoid sole source supplier arrangements for raw materials. While alternate supplies of most key raw materials are available, unplanned supplier production outages may lead to strained supply-demand situations for several key raw materials such as ethylene and propylene, several polymers and other petroleum derivatives such as waxes.

The purchase of raw materials is our largest expenditure. Our objective is to purchase raw materials that meet both our quality standards and production needs at the lowest total cost. Most raw materials are purchased on the open market or under contracts that limit the frequency but not the magnitude of price increases. In some cases, however, the risk of raw material price changes is managed by strategic sourcing agreements which limit price increases to increases in supplier feedstock costs, while requiring decreases as feedstock costs decline. The leverage of having substitute raw materials approved for use wherever possible is used to minimize the impact of possible price increases. Based on 2022 financial results, a hypothetical one percent change in our raw material costs would have resulted in a change in net income of approximately $15.7 million or $0.28 per diluted share.

See Item 1A. Risk Factors for a discussion of the effects of the COVID-19 pandemic on raw material cost and availability.

Recently Issued Accounting Pronouncements

See Note 1 to the Consolidated Financial Statements for information concerning new accounting standards and the impact of the implementation of these standards on our financial statements.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of H.B. Fuller Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of H.B. Fuller Company and subsidiaries (the Company) as of December 3, 2022 and November 27, 2021, the related consolidated statements of income, comprehensive income, total equity and cash flows for each of the three years in the period ended December 3, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 3, 2022 and November 27, 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 3, 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 3, 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 January 24, 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 consolidated 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 disclosure to which it relates.

Valuation of Goodwill for the Construction Adhesives reporting unit

Description of the Matter

At December 3, 2022, the Company had goodwill of approximately $425.8 million related to the Construction Adhesive reporting unit. As discussed in Notes 1 and 5 of the consolidated financial statements, the Company performs goodwill impairment testing on an annual basis as of the beginning of the fourth quarter, and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

Auditing management’s goodwill impairment test for the Construction Adhesives reporting unit was complex and judgmental due to the significant estimation required in determining the fair value of the reporting unit. In particular, the Company estimates fair value using the income approach which is sensitive to certain assumptions, such as forecasted revenue and related revenue growth rate, the earnings before interest, taxes, depreciation and amortization (EBITDA) margins rate, and the weighted average cost of capital which are affected by management’s business plans and expectations about future market or economic conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over the Company's goodwill impairment review process, including controls over management’s review of the significant assumptions described above.

To test the estimated fair value of the Construction Adhesive reporting unit, we performed audit procedures that included, among others, assessing the valuation methodology used by management and testing the significant assumptions discussed above, as well as the underlying data used by the Company in its analysis. For example, we compared the significant assumptions used by management in the prospective financial information to current industry, market and economic trends as well as other relevant factors. We assessed the reasonableness of the forecasted future revenue growth rate and EBITDA margins rate by comparing the forecasts to historical results. We involved our valuation specialists to assist in our evaluation of the valuation models, methodologies and significant assumptions used by the Company, specifically the weighted average cost of capital.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2019.

Minneapolis, Minnesota
January 24, 2023

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of H.B. Fuller Company

Opinion on Internal Control Over Financial Reporting

We have audited H.B. Fuller Company and subsidiaries' internal control over financial reporting as of December 3, 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, H.B. Fuller Company and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 3, 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 3, 2022 and November 27, 2021, the related consolidated statements of income, comprehensive income, total equity and cash flows for each of the three years in the period ended December 3, 2022, and the related notes, and our report dated January 24, 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.

/s/ Ernst & Young LLP

Minneapolis, Minnesota
January 24, 2023

CONSOLIDATED STATEMENTS OF INCOME
H.B. Fuller Company and Subsidiaries
(In thousands, except per share amounts)

	Fiscal Years		
	December 3, 2022	**November 27, 2021**	**November 28, 2020**
Net revenue	$ **3,749,183**	$ 3,278,031	$ 2,790,269
Cost of sales	**(2,785,484)**	(2,432,709)	(2,033,620)
Gross profit	**963,699**	845,322	756,649
Selling, general and administrative expenses	**(640,981)**	(592,710)	(538,332)
Other income, net	**12,952**	32,855	15,398
Interest expense	**(91,521)**	(78,092)	(86,776)
Interest income	**7,779**	9,476	11,417
Income before income taxes and income from equity method investments	**251,928**	216,851	158,356
Income tax expense	**(77,186)**	(63,033)	(41,921)
Income from equity method investments	**5,665**	7,657	7,353
Net income including non-controlling interest	**180,407**	161,475	123,788
Net income attributable to non-controlling interest	**(94)**	(82)	(69)
Net income attributable to H.B. Fuller	$ **180,313**	$ 161,393	$ 123,719
Earnings per share attributable to H.B. Fuller common stockholders:			
Basic	$ **3.37**	$ 3.05	$ 2.38
Diluted	$ **3.26**	$ 2.97	$ 2.36
Weighted-average common shares outstanding:			
Basic	**53,580**	52,887	52,039
Diluted	**55,269**	54,315	52,520
Dividends declared per common share	$ **0.738**	$ 0.665	$ 0.648

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
H.B. Fuller Company and Subsidiaries
(In thousands)

	Fiscal Years		
	December 3, 2022	**November 27, 2021**	**November 28, 2020**
Net income including non-controlling interest	$ **180,407**	$ 161,475	$ 123,788
Other comprehensive (loss) income			
Foreign currency translation	**(131,806)**	(26,294)	41,742
Defined benefit pension plans adjustment, net of tax	**(15,063)**	48,181	4,588
Interest rate swaps, net of tax	**9,924**	15,179	(11,765)
Cash-flow hedges, net of tax	**(3,483)**	(4,486)	6,206
Net investment hedges, net of tax	**(40,743)**	-	-
Other comprehensive (loss) income	**(181,171)**	32,580	40,771
Comprehensive (loss) income	**(764)**	194,055	164,559
Less: Comprehensive income attributable to non-controlling interest	**33**	50	99
Comprehensive (loss) income attributable to H.B. Fuller	$ **(797)**	$ 194,005	$ 164,460

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS
H.B. Fuller Company and Subsidiaries
(In thousands, except share and per share amounts)

	December 3, 2022	November 27, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ **79,910**	$ 61,786
Trade receivables, net	**607,365**	614,645
Inventories	**491,781**	448,404
Other current assets	**120,319**	96,335
Total current assets	**1,299,375**	1,221,170
Property, plant and equipment, net	**733,667**	695,367
Goodwill	**1,392,627**	1,298,845
Other intangibles, net	**702,092**	687,075
Other assets	**335,868**	372,073
Total assets	$ **4,463,629**	$ 4,274,530
Liabilities, non-controlling interest and total equity		
Current liabilities:		
Notes payable	$ **28,860**	$ 24,983
Current maturities of long-term debt	-	-
Trade payables	**460,669**	500,321
Accrued compensation	**108,328**	109,542
Income taxes payable	**18,530**	15,943
Other accrued expenses	**89,345**	86,061
Total current liabilities	**705,732**	736,850
Long-term debt, net of current maturities	**1,736,256**	1,591,479
Accrued pension liabilities	**52,561**	71,651
Other liabilities	**358,286**	277,190
Total liabilities	**2,852,835**	2,677,170
Commitments and contingencies (Note 14)		
Equity:		
H.B. Fuller stockholders' equity:		
Preferred stock (no shares outstanding) Shares authorized – 10,045,900	**-**	-
Common stock, par value $1.00 per share, Shares authorized – 160,000,000, Shares outstanding – 53,676,576 and 52,777,753 for 2022 and 2021, respectively	**53,677**	52,778
Additional paid-in capital	**266,491**	213,637
Retained earnings	**1,741,359**	1,600,601
Accumulated other comprehensive loss	**(451,357)**	(270,247)
Total H.B. Fuller stockholders' equity	**1,610,170**	1,596,769
Non-controlling interest	**624**	591
Total equity	**1,610,794**	1,597,360
Total liabilities, non-controlling interest and total equity	$ **4,463,629**	$ 4,274,530

See accompanying Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF TOTAL EQUITY
H.B. Fuller Company and Subsidiaries
(In thousands)

	H.B. Fuller Company Shareholders					
	Common Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-Controlling Interest	Total
Balance at November 30, 2019, as adjusted	**$ 51,241**	**$ 130,295**	**$ 1,384,411**	**$ (343,600)**	**$ 442**	**$ 1,222,789**
Comprehensive income (loss)	-	-	123,719	40,741	99	164,559
Dividends	-	-	(33,724)	-	-	(33,724)
Stock option exercises	397	11,924	-	-	-	12,321
Share-based compensation plans other, net	341	19,008	-	-	-	19,349
Repurchases of common stock	(72)	(3,360)	-	-	-	(3,432)
Balance at November 28, 2020	**$ 51,907**	**$ 157,867**	**$ 1,474,406**	**$ (302,859)**	**$ 541**	**$ 1,381,862**
Comprehensive income (loss)	-	-	161,393	32,612	50	194,055
Dividends	-	-	(35,198)	-	-	(35,198)
Stock option exercises	741	31,584	-	-	-	32,325
Share-based compensation plans other, net	181	26,817	-	-	-	26,998
Repurchases of common stock	(51)	(2,631)	-	-	-	(2,682)
Balance at November 27, 2021	**$ 52,778**	**$ 213,637**	**$ 1,600,601**	**$ (270,247)**	**$ 591**	**$ 1,597,360**
Comprehensive income	-	-	180,313	(181,110)	33	(764)
Dividends	-	-	(39,555)	-	-	(39,555)
Stock option exercises	658	29,464	-	-	-	30,122
Share-based compensation plans other, net	296	27,284	-	-	-	27,580
Repurchases of common stock	(55)	(3,894)	-	-	-	(3,949)
Balance at December 3, 2022	**$ 53,677**	**$ 266,491**	**$ 1,741,359**	**$ (451,357)**	**$ 624**	**$ 1,610,794**

CONSOLIDATED STATEMENTS of CASH FLOWS
H.B. Fuller Company and Subsidiaries
(In thousands)

	Fiscal Years		
	December 3, 2022	**November 27, 2021**	**November 28, 2020**
Cash flows from operating activities:			
Net income including non-controlling interest	$ **180,407**	$ 161,475	$ 123,788
Adjustments to reconcile net income including non-controlling interest to net cash provided by operating activities:			
Depreciation	**72,593**	72,106	68,226
Amortization	**74,383**	71,068	70,591
Deferred income taxes	**(15,230)**	16,192	(24,730)
Income from equity method investments, net of dividends received	**(9)**	2,776	375
(Gain) loss on sale of assets	**(1,195)**	648	86
Share-based compensation	**24,368**	22,366	16,914
Pension and other postretirement benefit plan contributions	**(3,009)**	(3,840)	(5,479)
Pension and other postretirement benefit plan income	**(24,021)**	(28,662)	(14,763)
Mark to market adjustment related to contingent consideration liabilities	**-**	2,300	800
Change in assets and liabilities, net of effects of acquisitions:			
Trade receivables, net	**(24,753)**	(124,849)	(14,842)
Inventories	**(55,772)**	(135,351)	15,708
Other assets	**46,499**	(79,097)	38,412
Trade payables	**(22,629)**	176,337	23,130
Accrued compensation	**1,135**	27,741	2,588
Other accrued expenses	**6,303**	1,186	16,361
Income taxes payable	**(12,873)**	(4,137)	5,511
Other liabilities	**4,104**	(73,508)	24,566
Other	**6,213**	108,566	(15,683)
Net cash provided by operating activities	**256,514**	213,317	331,559
Cash flows from investing activities:			
Purchased property, plant and equipment	**(129,964)**	(96,089)	(87,288)
Purchased businesses, net of cash acquired	**(250,807)**	(5,445)	(9,500)
Purchased business assets	**-**	-	(5,623)
Proceeds from sale of property, plant and equipment	**1,556**	2,896	1,506
Cash received from government grant	**3,928**	5,800	-
Cash outflow related to government grant	**-**	(1,822)	(8,555)
Net cash used in investing activities	**(375,287)**	(94,660)	(109,460)
Cash flows from financing activities:			
Proceeds from issuance of long-term debt	**335,000**	-	300,000
Repayment of long-term debt	**(159,500)**	(156,500)	(518,000)
Payment of debt issue costs	(600)	-	-
Net proceeds from notes payable	**3,455**	9,346	4,128
Dividends paid	**(39,207)**	(34,859)	(33,461)
Contingent consideration payment	**(5,000)**	(1,700)	(767)
Proceeds from stock options exercised	**30,122**	32,325	12,321
Repurchases of common stock	**(3,950)**	(2,682)	(3,432)
Net cash provided by (used in) financing activities	**160,320**	(154,070)	(239,211)
Effect of exchange rate changes on cash and cash equivalents	**(23,423)**	(3,335)	5,455
Net change in cash and cash equivalents	**18,124**	(38,748)	(11,657)
Cash and cash equivalents at beginning of year	**61,786**	100,534	112,191
Cash and cash equivalents at end of year	$ **79,910**	$ 61,786	$ 100,534
Supplemental disclosure of cash flow information:			
Dividends paid with company stock	$ **348**	$ 339	$ 263
Cash paid for interest, net of amount capitalized of $1,518, $905, and $565 for the years ended December 3, 2022, November 27, 2021 and November 28, 2020, respectively	$ **83,527**	$ 62,753	$ 69,452
Cash paid for income taxes, net of refunds	$ **73,449**	$ 72,955	$ 49,986

See accompanying Notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
H.B. Fuller Company and Subsidiaries
(In thousands, except share and per share amounts)

Note 1: Nature of Business and Summary of Significant Accounting Policies

Nature of Business

H.B. Fuller Company and our subsidiaries formulate, manufacture and market specialty adhesives, sealants, coatings, polymers, tapes, encapsulants, additives and other specialty chemical products globally, with sales operations in 34 countries in North America, Europe, Latin America, the Asia Pacific region, India, the Middle East and Africa.

We have three reportable segments: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives. In 2022, as a percentage of total net revenue by operating segment, Hygiene, Health and Consumable Adhesives accounted for 45 percent, Engineering Adhesives 41 percent and Construction Adhesives 14 percent.

Our Hygiene, Health and Consumable Adhesives operating segment produces and supplies a full range of specialty industrial adhesives such as thermoplastic, thermoset, reactive, water-based and solvent-based products for applications in various markets, including packaging (food and beverage containers, flexible packaging, consumer goods, package integrity and re-enforcement, and non-durable goods), converting (corrugation, folding carton, tape and label, paper converting, envelopes, books, multi-wall bags, sacks, and tissue and towel), nonwoven and hygiene (disposable diapers, feminine care and medical garments) and health and beauty.

Our Engineering Adhesives operating segment produces and supplies high performance industrial adhesives such as reactive, light cure, two-part liquids, polyurethane, silicone, film and fast cure products to the durable assembly (appliances and filters), performance wood (windows, doors and wood flooring) and textile (footwear and sportswear), transportation, electronics, medical, clean energy, aerospace and defense, appliance, heavy machinery and insulating glass markets.

Our Construction Adhesives operating segment includes products used for tile setting (adhesives, grouts, mortars, sealers and levelers), the commercial roofing industry (pressure-sensitive adhesives, tapes and sealants) and heating, ventilation and air conditioning and insulation applications (duct sealants, weather barriers and fungicidal coatings and block fillers). This operating segment also includes caulks and sealants for the consumer market and professional trade, sold through retailers, primarily in Australia.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of H.B. Fuller Company and its wholly-owned and majority-owned subsidiaries. All significant intercompany transactions and accounts have been eliminated. Investments in affiliated companies in which we exercise significant influence, but which we do not control, are accounted for in the Consolidated Financial Statements under the equity method of accounting. As such, consolidated net income includes our equity portion in current earnings of such companies, after elimination of intercompany profits. Investments in which we do not exercise significant influence (generally less than a 20 percent ownership interest) are accounted for using the measurement alternative.

Our 50 percent ownership in Sekisui-Fuller Company, Ltd., our Japan joint venture, is accounted for under the equity method of accounting as we do not exercise control over the investee. In fiscal years 2022, 2021 and 2020, this equity method investment was not significant as defined in Regulation S-X under the Securities Exchange Act of 1934. As such, financial information as of December 3, 2022, November 27, 2021, and November 28, 2020 for Sekisui-Fuller Company, Ltd. is not required.

Our fiscal year ends on the Saturday closest to November 30. Fiscal year-end dates were December 3, 2022, November 27, 2021, and November 28, 2020 for 2022, 2021 and 2020, respectively. Every five or six years we have a 53rd week in our fiscal year. 2022 was a 53-week year.

Use of Estimates

Preparation of the Consolidated Financial Statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Revenue Recognition

We sell a variety of adhesives, sealants and other specialty chemical products to a diverse customer base. The vast majority of our arrangements contain a single performance obligation to transfer manufactured goods to the customer as governed by an individual purchase order.

We recognize revenue at the amount of consideration to which we expect to be entitled in exchange for transferring the promised goods to the customer. The transaction price includes an estimation of any variable amounts of consideration to which we will be entitled. The most common forms of variable consideration within our arrangements are customer rebates, which are recorded as a reduction to revenue at the time of the initial sale using the expected value method. The expected value method is the sum of probability-weighted amounts in a range of possible consideration amounts and is based on a consideration of historical, current and forecast information. Changes in estimates are updated each reporting period. There are no material instances where variable consideration is constrained and not recorded at the initial time of sale. Product returns are recorded as a reduction to revenue based on historical experience and anticipated sales returns that occur in the normal course of business. We primarily have assurance-type warranties that do not result in separate performance obligations. We have elected to present revenue net of sales and other similar taxes.

We recognize revenue when control of goods is transferred to the customer. For the vast majority of our arrangements, control transfers at a point in time either upon shipment or upon delivery of the goods to the customer. The timing of transfer of control is determined considering the timing of the transfer of legal title, physical possession, and risks and rewards of goods to the customer.

We record shipping and handling revenue in net revenue and outbound shipping and handling costs in cost of goods sold. The majority of our shipping and handling activities are performed prior to transfer of control of the goods to the customer. For those arrangements where we provide shipping and handling services after control of the goods has transferred to the customer, we have elected the practical expedient allowed under Financial Accounting Standards Board ("FASB") Accounting Standard Codification ("ASC") Topic 606 to account for these activities as a fulfillment cost rather than as a separate performance obligation.

Provisions for sales returns are estimated based on historical experience and are adjusted for known returns, if material. Customer incentive programs (primarily volume purchase rebates) and arrangements such as cooperative advertising, slotting fees and buy-downs are recorded as a reduction of net revenue in accordance with ASC 606. Customer incentives recorded in the Consolidated Statements of Income as a reduction of net revenue were $50,146, $33,441 and $34,860 in 2022, 2021 and 2020, respectively.

For certain products, consigned inventory is maintained at customer locations. For this inventory, revenue is recognized in the period that the inventory is consumed. Sales to distributors require a distribution agreement or purchase order. As a normal practice, distributors do not have a right of return.

Cost of Sales

Cost of sales includes raw materials, container costs, direct labor, manufacturing overhead, freight costs and other less significant indirect costs related to the production of our products.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses include sales and marketing, research and development, technical and customer service, finance, legal, human resources, general management and similar expenses.

Income Taxes

The income tax provision is computed based on income before income from equity method investments included in the Consolidated Statement of Income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Enacted statutory tax rates applicable to future years are applied to differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. Valuation allowances reduce deferred tax assets when it is not more-likely-than-not that a tax benefit will be realized. See Note 11 for further information.

Acquisition Accounting

As we enter into business combinations, we perform acquisition accounting requirements including the following:

- Identifying the acquirer,
- Determining the acquisition date,
- Recognizing and measuring the identifiable assets acquired and the liabilities assumed, and
- Recognizing and measuring goodwill or a gain from a bargain purchase

We complete valuation procedures and record the resulting fair value of the acquired assets and assumed liabilities based upon the valuation of the business enterprise and the tangible and intangible assets acquired. Enterprise value allocation methodology requires management to make assumptions and apply judgment to estimate the fair value of assets acquired and liabilities assumed. If estimates or assumptions used to complete the enterprise valuation and estimates of the fair value of the acquired assets and assumed liabilities significantly differed from assumptions made, the resulting difference could materially affect the fair value of net assets.

The calculation of the fair value of the tangible assets, including property, plant and equipment, utilizes the cost approach, which computes the cost to replace the asset, less accrued depreciation resulting from physical deterioration, functional obsolescence and external obsolescence. The calculation of the fair value of the identified intangible assets is determined using cash flow models following the income approach or a discounted market-based methodology approach. Significant inputs include estimated revenue growth rates, gross margins, operating expenses and estimated attrition, royalty and discount rates. Goodwill is recorded as the difference in the fair value of the acquired assets and assumed liabilities and the purchase price.

Cash Equivalents

Cash equivalents are highly liquid instruments with an original maturity of three months or less. We review cash and cash equivalent balances on a bank by bank basis to identify book overdrafts. Book overdrafts occur when the amount of outstanding checks exceed the cash deposited at a given bank. Book overdrafts, if any, are included in trade payables in our Consolidated Balance Sheets and in operating activities in our Consolidated Statements of Cash Flows.

Restrictions on Cash

There were no restrictions on cash as of December 3, 2022 or November 28, 2020. There are no contractual or regulatory restrictions on the ability of consolidated and unconsolidated subsidiaries to transfer funds to us, except for typical statutory restrictions which prohibit distributions in excess of net capital or similar tests. The majority of our cash in non-U.S. locations is considered indefinitely reinvested.

Trade Receivables and Allowances

Trade receivables are recorded at the invoiced amount and do not bear interest. Allowances are maintained for doubtful accounts, credits related to pricing or quantities shipped and early payment discounts. The allowance for doubtful accounts includes an estimate of future uncollectible receivables based on the aging of the receivable balance and our collection experience. The allowance also includes specific customer accounts when it is probable that the full amount of the receivable will not be collected. Current expectations of future credit losses using market and industry data are considered in the specific customer accounts. See Note 4 for further information.

Inventories

Inventories are recorded at cost (not in excess of net realizable value) as determined by the weighted-average cost method and are valued at the lower of cost or net realizable value.

Investments

Investments with a value of $8,957 and $9,584 represent the cash surrender value of life insurance contracts as of December 3, 2022 and November 27, 2021, respectively. These assets are held to primarily support supplemental pension plans and are recorded in other assets in the Consolidated Balance Sheets. The corresponding gain or loss associated with these contracts is reported in earnings each period as a component of selling, general and administrative expenses.

Equity Investments

Investments in an entity where we own less than 20% of the voting stock of the entity and do not exercise significant influence over operating and financial policies of the entity are accounted for using the measurement alternative at cost less impairment plus or minus observable price changes in orderly transactions. We have a policy in place to review our investments at least annually, to evaluate the accounting method and identify observable price changes that could indicate impairment. If we believe that an impairment exists, it is our policy to calculate the fair value of the investment and recognize as impairment any amount by which the carrying value exceeds the fair value of the investment. We recognized impairment of $303 for the year ended December 3, 2022 and did not have any impairment of our equity investments for the years ended November 27, 2021, and November 28, 2020. The book value of the equity investments was $1,362 as of December 3, 2022 and $1,667 as of November 27, 2021.

Property, Plant and Equipment

Property, plant and equipment are carried at cost and depreciated over the useful lives of the assets using the straight-line method. Estimated useful lives range from 20 to 40 years for buildings and improvements, 3 to 20 years for machinery and equipment, and the shorter of the lease or expected life for leasehold improvements. Fully depreciated assets are retained in property and accumulated depreciation accounts until removed from service. Upon disposal, assets and related accumulated depreciation are removed. Upon sale of an asset, the difference between the proceeds and remaining net book value is charged or credited to other income, net on the Consolidated Statements of Income. Expenditures that add value or extend the life of the respective assets are capitalized, while expenditures that are typical recurring repairs and maintenance are expensed as incurred. Interest costs associated with construction and implementation of property, plant and equipment of $1,518, $905 and $565 were capitalized in 2022, 2021 and 2020, respectively.

Goodwill

We evaluate our goodwill for impairment annually at the beginning of the fourth quarter or earlier upon the occurrence of substantive unfavorable changes in economic conditions, industry trends, costs, cash flows or ongoing declines in market capitalization. The quantitative impairment test requires judgment, including the identification of reporting units, the assignment of assets, liabilities and goodwill to reporting units, and the determination of fair value of each reporting unit. The impairment test requires the comparison of the fair value of each reporting unit with its carrying amount, including goodwill. In performing the impairment test, we determined the fair value of our reporting units through the income approach by using discounted cash flow (“DCF”) analyses. Determining fair value requires the company to make judgments about appropriate discount rates, perpetual growth rates and the amount and timing of expected future cash flows. The cash flows employed in the DCF analysis for each reporting unit are based on the reporting unit's budget, long-term business plan and recent operating performance. Discount rate assumptions are based on an assessment of the risk inherent in the future cash flows of the respective reporting unit and market conditions. If the estimated fair value of a reporting unit exceeds its carrying value, goodwill is considered to not be impaired. If the carrying value exceeds estimated fair value, an impairment charge is recorded for any excess of the carrying value over the estimated fair value. Based on the analysis performed for our fiscal 2022 annual impairment test, there were no indications of impairment for any of our reporting units. See Note 5 for further information.

Intangible Assets

Intangible assets include patents, customer lists, technology, trademarks and other intangible assets acquired from independent parties and are amortized on a straight-line basis with estimated useful lives ranging from 3 to 20 years. The straight-line method of amortization of these assets reflects an appropriate allocation of the costs of the intangible assets to earnings in proportion to the amount of economic benefits obtained in each reporting period.

Impairment of Long-Lived Assets

Our long-lived assets are tested for impairment whenever events or circumstances indicate that a carrying amount of an asset (asset group) may not be recoverable. An impairment loss would be measured and recognized when the carrying amount of an asset (asset group) exceeds the estimated undiscounted future cash flows expected to result from the use of the asset (asset group) and its eventual disposition. The impairment loss to be recorded would be the excess of the asset's carrying value over its fair value. Fair value is generally determined using a DCF analysis or other valuation technique. Costs related to internally developed intangible assets are expensed as incurred.

Foreign Currency Translation

Assets and liabilities of non-U.S. functional currency entities are translated to U.S. dollars at period-end exchange rates, and the resulting gains and losses arising from the translation of those net assets are recorded as a cumulative translation adjustment, a component of accumulated other comprehensive income (loss) in stockholders' equity. Revenues and expenses are translated using average exchange rates during the year. Foreign currency transaction gains and losses are included in other income, net in the Consolidated Statements of Income.

We consider a subsidiary’s sales price drivers, currency denomination of sales transactions and inventory purchases to be the primary indicators in determining a foreign subsidiary’s functional currency. Our subsidiaries in certain European countries have a functional currency different than their local currency. All other foreign subsidiaries, which are located in North America, Latin America, Europe and the Asia Pacific region, have the same local and functional currency.

Pension and Other Postretirement Benefits

We sponsor defined-benefit pension plans in both the U.S. and non-U.S. entities. Also in the U.S., we sponsor other postretirement plans for health care and life insurance benefits. Expenses and liabilities for the pension plans and other postretirement plans are actuarially calculated. These calculations are based on our assumptions related to the discount rate, expected return on assets, projected salary increases, health care cost trend rates and mortality rates. The discount rate assumption is determined using an actuarial yield curve approach, which results in a discount rate that reflects the characteristics of the plan. The approach identifies a broad population of corporate bonds that meet the quality and size criteria for the particular plan. We use this approach rather than a specific index that has a certain set of bonds that may or may not be representative of the characteristics of our particular plan. Our expected long-term rate of return on U.S. plan assets was based on our target asset allocation assumption of 55 percent equities and 45 percent fixed income. Management, in conjunction with our external financial advisors, determines the expected long-term rate of return on plan assets by considering the expected future returns and volatility levels for each asset class that are based on historical returns and forward-looking observations. The expected long-term rate of return on plan assets assumption used in each non-U.S. plan is determined on a plan-by-plan basis for each local jurisdiction and is based on expected future returns for the investment mix of assets currently in the portfolio for that plan. Management, in conjunction with our external financial advisors, develops expected rates of return for each plan, considers expected long-term returns for each asset category in the plan, reviews expectations for inflation for each local jurisdiction, and estimates the impact of active management of the plan's assets. Note 10 includes disclosure of assumptions employed in these measurements for both the non-U.S. and U.S. plans.

Asset Retirement Obligations

We recognize asset retirement obligations ("ARO") in the period in which we have an existing legal obligation associated with the retirement of a tangible long-lived asset, and the amount can be reasonably estimated. The ARO is recognized at fair value when the liability is incurred. Upon initial recognition of a liability, that cost is capitalized as part of the related long-lived asset and depreciated on a straight-line basis over the remaining estimated useful life of the related asset. We have recognized a liability related to special handling of asbestos related materials in certain facilities for which we have plans or expectation of plans to undertake a major renovation or demolition project that would require the removal of asbestos or have plans or expectation of plans to exit a facility. In addition, we have determined that we have facilities with some level of asbestos that will require abatement action in the future. Once the probability and timeframe of an action are determined, we apply certain assumptions to determine the related liability and asset. These assumptions include the use of inflation rates, the use of credit adjusted risk-free discount rates and the estimation of costs to handle asbestos related materials. The recorded liability is required to be adjusted for changes resulting from the passage of time and/or revisions to the timing or the amount of the original estimate. The asset retirement obligation liability was $2,888 and $2,917 at December 3, 2022 and November 27, 2021, respectively.

Environmental Costs

Environmental expenditures that relate to current operations are expensed or capitalized as appropriate. Expenditures that relate to an existing condition caused by past operations, and which do not contribute to current or future revenue generation, are expensed. Liabilities are recorded when environmental assessments are made, or remedial efforts are probable, and the costs can be reasonably estimated. The timing of these accruals is generally no later than the completion of feasibility studies.

Contingent Consideration Liability

Concurrent with business acquisitions, we enter into agreements that require us to pay the sellers a certain amount based upon a formula related to the entity's financial results. The change in fair value of the contingent consideration liability is recorded in SG&A expenses in the Consolidated Statements of Income.

Share-based Compensation

We have various share-based compensation programs which provide for equity awards, including non-qualified stock options, incentive stock options, restricted stock units, performance awards and deferred compensation. We use the straight-line attribution method to recognize compensation expense associated with share-based awards based on the fair value on the date of grant, net of the estimated forfeiture rate. Expense is recognized over the requisite service period related to each award, which is the period between the grant date and the earlier of the award's stated vesting term or the date the employee is eligible for early retirement based on the terms of the plan. The fair value of stock options is estimated using the Black-Scholes option pricing model. All of our stock compensation expense is recorded in SG&A expenses in the Consolidated Statements of Income. See Note 9 for additional information.

Earnings per Share

Basic earnings per share is calculated by dividing net income attributable to H.B. Fuller by the weighted-average number of common shares outstanding during the applicable period. Diluted earnings per share is based upon the weighted-average number of common and common equivalent shares outstanding during the applicable period. The difference between basic and diluted earnings per share is attributable to share-based compensation awards. We use the treasury stock method to calculate the effect of outstanding awards, which computes total employee proceeds as the sum of (a) the amount the employee must pay upon exercise of the award and (b) the amount of unearned share-based compensation costs attributed to future services. Share-based compensation awards for which total employee proceeds exceed the average market price over the applicable period have an antidilutive effect on earnings per share, and accordingly, are excluded from the calculation of diluted earnings per share. The computations for basic and diluted earnings per share are as follows:

(in thousands, except per share data)	2022	2021	2020
Net income attributable to H.B. Fuller	$ **180,313**	$ 161,393	$ 123,719
Weighted-average common shares – basic	**53,580**	52,887	52,039
Equivalent shares from share-based compensation plans	**1,689**	1,428	481
Weighted-average common and common equivalent shares – diluted	**55,269**	54,315	52,520
Basic earnings per share	$ **3.37**	$ 3.05	$ 2.38
Diluted earnings per share	$ **3.26**	$ 2.97	$ 2.36

Share-based compensation awards for 707,197, 1,535,503 and 3,982,275 shares for 2022, 2021 and 2020, respectively, were excluded from the diluted earnings per share calculation because they were antidilutive.

Financial Instruments and Derivatives

As a part of our ongoing operations, we are exposed to market risks such as changes in foreign currency exchange rates and interest rates. To manage these risks, we may enter into derivative transactions pursuant to our established policies.

Our objective is to balance, where possible, non-functional currency denominated assets to non-functional currency denominated liabilities to have a natural hedge and minimize foreign exchange impacts. We minimize risks from foreign currency exchange rate fluctuations through normal operating and financing activities and, when deemed appropriate, through the use of derivative instruments. Derivatives consisted primarily of forward currency contracts used to manage foreign currency denominated assets and liabilities. For derivative instruments outstanding that were not designated as hedges for accounting purposes, the gains and losses related to mark-to-market adjustments were recognized as other income or expense in the income statement during the periods the derivative instruments were outstanding. To manage exposure to currency rate movements on expected cash flows, the company may enter into cross-currency swap agreements.

The company manages interest expense using a mix of fixed and floating rate debt. To manage exposure to interest rate movements and to reduce borrowing costs, the company may enter into interest rate swap agreements.

Changes in the fair values of derivatives are recorded in net earnings or other comprehensive income, based on the type of derivative, and whether the instrument is designated and effective as a hedge transaction. Gains or losses on derivative instruments reported in accumulated other comprehensive income (loss) are reclassified to earnings in the period the hedged item affects earnings. Any ineffectiveness is recognized in earnings in the current period. We maintain master netting arrangements that allow us to net settle contracts with the same counterparties; we do not elect to offset amounts in our Consolidated Balance Sheet. These arrangements generally do not call for collateral. We do not enter into any speculative positions with regard to derivative instruments. See Note 12 for further information regarding our financial instruments.

Purchase of Company Common Stock

Under the Minnesota Business Corporation Act, repurchased stock is included in authorized shares, but is not included in shares outstanding. The excess of the repurchase cost over par value is charged to additional paid-in capital. When additional paid-in capital is exhausted, the excess reduces retained earnings. We repurchased 49,869, 47,481 and 72,000 shares of common stock in 2022, 2021 and 2020, respectively, in connection with the statutory minimum tax withholding related to vesting of restricted stock.

Change in Accounting Principle - Credit Losses

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Statements.* This ASU requires a financial asset (or a group of financial assets) measured at amortized cost basis to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The FASB also issued ASU No. 2018-19, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses,* in November 2018, ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments,* in April 2019 and ASU No. 2019-11, *Codification Improvements to Topic 326, Financial Instruments,* in November 2019. ASU No. 2018-19 clarifies that receivables arising from operating leases are within the scope of Topic 842, *Leases.* ASU No. 2019-04 and ASU No. 2019-11 clarify various scoping and other issues arising from ASU No. 2016-13. The amendments in these ASUs affect the guidance in ASU No. 2016-13 and are effective in the same timeframe as ASU No. 2016-13. We adopted these ASUs and related standards during the first quarter ended February 27, 2021. Based on the conducted analyses on the change in accounting principle, the ASUs did not have a material impact on the Consolidated Statements of Income or the Consolidated Balance Sheets. Therefore, a modified retrospective adjustment was not required. The trade receivables and allowances significant accounting policy has been changed in accordance with these ASUs.

New Accounting Pronouncements

In September 2022, the FASB issued ASU No. 2022-04, *Liabilities - Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations.* This ASU requires that a buyer in a supplier finance program disclose sufficient information about the program to allow a user of the financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. To achieve that objective, the buyer should disclose qualitative and quantitative information about its supplier finance programs. Our effective date of this ASU is our fiscal year ending December 1, 2024. We are evaluating the effect that this guidance will have on our Consolidated Financial Statements.

Recently issued accounting standards or pronouncements not disclosed above have been excluded as they are not relevant to the company.

Note 2: Acquisitions

GSSI

On October 24, 2022, we acquired GSSI Sealants, Inc. ("GSSI") for a total purchase price of $7,483, which was funded through existing cash. This includes a holdback amount of $1,050 that will be paid on the 12 month anniversary of the closing date. GSSI, headquartered in Houston, Texas, is a manufacturer of premier elastomeric butyl rubber sealant tapes. The acquisition of GSSI is expected to expand our Construction Adhesives global footprint and product range and enable our growth in the metal building, wastewater, and building envelope applications and will also expand our reach in Central America and the U.S. The acquisition fair value measurement was preliminary as of December 3, 2022 and includes intangible assets of $4,305 and other net assets of $3,178. GSSI is included in our Construction Adhesives operating segment.

ZKLT

On August 16, 2022, we acquired ZKLT Polymer Co., Ltd. ("ZKLT") for a base purchase price of 102,812 Chinese renminbi, or approximately $15,183, which was funded through existing cash. We are also required to pay 27,000 Chinese renminbi, or approximately $3,987, with half to be paid on each of the 12 month and 18 month anniversaries of the closing date, as well as contingent consideration up to 30,000 Chinese renminbi, or approximately $4,430, following the completion of certain performance goals and conditions. ZKLT, headquartered in Chongquin City, China, is a manufacturer of liquid adhesives primarily for the automotive market. The acquisition of ZKLT is expected to add market knowledge, strong customer relationships and a strategic manufacturing location to further strengthen our presence in Southwest China. The acquisition fair value measurement was preliminary as of December 3, 2022 and includes intangible assets of $5,316, goodwill of $3,720 and other net assets of $10,134. Goodwill is not deductible for tax purposes. See Note 13 for further discussion of the fair value of the contingent consideration. ZKLT is included in our Engineering Adhesives operating segment.

Apollo

On January 26, 2022, we acquired Apollo Chemicals Limited, Apollo Roofing Solutions Limited and Apollo Construction Solutions Limited (collectively, "Apollo") for a base purchase price of 151,214 British pound sterling, or approximately $203,573, which was funded through borrowings on our credit facility. The agreement requires us to pay an additional 1,500 British pound sterling, or approximately $2,019, following the completion of certain environmental studies. As of December 3, 2022, the environmental studies were complete and the $2,019 was paid. Apollo, headquartered in Tamworth, UK, is a manufacturer of liquid adhesives, coatings and primers for the roofing, industrial and construction markets. Apollo is expected to enhance our position in key high-value, high-margin markets in the UK and throughout Europe. The acquisition fair value measurement was final as of December 3, 2022. The acquisition is included in our Construction Adhesives operating segment.

The following table summarizes the fair value measurement of the assets acquired and liabilities assumed as of December 3, 2022:

	December 3, 2022
Cash	$ 12,165
Current assets	19,074
Property, plant and equipment	7,877
Goodwill	119,358
Other intangibles	
Customer relationships	67,447
Trademarks/trade names	2,289
Technology	6,462
Current liabilities	(9,615)
Other liabilities	(19,465)
Total	$ 205,592

The expected useful lives of the acquired intangible assets are 15 years for technology, 10 years for customer relationships and five years for trademarks/trade names.

Based on the fair value measurement of the assets acquired and liabilities assumed, we allocated $119,358 to goodwill for the expected synergies from combining Apollo with our existing business. Such goodwill is not deductible for tax purposes. The goodwill was assigned to our Construction Adhesives operating segment.

Fourny NV

On January 11, 2022, we acquired Fourny NV ("Fourny") for a base purchase price of 12,867 Euro, or approximately $14,627, which was funded through existing cash. The agreement requires us to pay an additional 3,100 Euro, or approximately $3,524, 18 months following the date of acquisition. Fourny, headquartered in Willebroek, Belgium, is a manufacturer of construction and automotive adhesives. Fourny is expected to enhance our position in key high-value, high-margin markets in Europe. The acquisition fair value measurement was final as of December 3, 2022 and includes intangible assets of $10,117, goodwill of $6,455 and other net assets of $1,391. Goodwill is not deductible for tax purposes. Fourny is included in our Construction Adhesives operating segment.

TissueSeal, LLC

On November 30, 2021, we acquired certain assets of Tissue Seal, LLC ("TissueSeal") for a base purchase price of $22,167, which was funded through existing cash. The agreement requires us to pay an additional $2,475 on the first anniversary of the acquisition and contingent consideration of up to $500 on November 30, 2024 based on certain agreement provisions. TissueSeal, headquartered in Ann Arbor, Michigan, is a distributor of topical tissue adhesives and sutures. With this acquisition, we add TissueSeal's regulatory clearances, customer and distribution relationships, regulatory approvals and trademarks into our portfolio of products. The acquisition fair value measurement was final as of December 3, 2022 and includes intangible assets of $11,160, goodwill of $13,765 and other net assets of $217. Goodwill is deductible for tax purposes. See Note 13 for further discussion of the fair value of the contingent consideration liability. TissueSeal is recorded in our Hygiene, Health and Consumable Adhesives operating segment.

STR Holdings, Inc.

On January 13, 2021, we acquired certain assets of STR Holdings, Inc. ("STR") for a base purchase price of $5,445 which was funded through existing cash. The agreement requires us to pay an additional $800 on the first anniversary of the acquisition and contingent consideration of up to $1,700 based on certain agreement provisions. STR, headquartered in Enfield, Connecticut, is a manufacturer of encapsulant products used in the solar industry. The acquisition fair value measurement, which includes intangible assets of $6,700 and other net assets of $1,245, was final as of November 27, 2021. As of November 27, 2021, the agreement provisions for the contingent consideration were met, and as a result, the $1,700 was paid. STR is reported in our Engineering Adhesives operating segment.

All acquisitions, individually and in the aggregate, are not material and therefore pro forma financial information is not provided.

Note 3: Restructuring Actions

The company has approved restructuring plans consisting of consolidation plans, organizational changes and other actions related to the reorganization of our business into three segments, the integration of the operations of Royal Adhesives with the operations of the company and other actions to optimize operations. The following table summarizes the pre-tax distribution of charges under these restructuring plans by income statement classification:

	December 3, 2022	November 27, 2021	November 28, 2020
Cost of sales	$ **(152)**	$ (188)	$ 1,013
Selling, general and administrative	**(297)**	975	3,567
	$ **(449)**	$ 787	$ 4,580

The restructuring charges are all recorded in Corporate Unallocated for segment reporting purposes.

A summary of the restructuring liability is presented below:

	Employee-Related	Other	Total
Balance at end November 28, 2020	$ 5,834	$ 248	$ 6,082
Expense incurred	(807)	1,594	787
Non-cash charges	-	(135)	(135)
Cash payments	(3,917)	(1,707)	(5,624)
Foreign currency translation	(15)	-	(15)
Balance at end November 27, 2021	$ **1,095**	$ **-**	$ **1,095**
Expense incurred	**(449)**	**-**	**(449)**
Non-cash charges	**-**	**-**	**-**
Cash payments	**(529)**	**-**	**(529)**
Foreign currency translation	**(60)**	**-**	**(60)**
Balance at end December 3, 2022	$ **57**	$ **-**	$ **57**

Non-cash charges include accelerated depreciation resulting from the cessation of use of certain long-lived assets. Restructuring liabilities have been classified as a component of other accrued expenses on the Consolidated Balance Sheets.

Note 4: Supplemental Financial Statement Information

Statement of Income Information

Additional details of income statement amounts for 2022, 2021 and 2020 are as follows:

	2022	2021	2020
Foreign currency transaction losses, net	$ **(12,935)**	$ (5,962)	$ (3,078)
Gain (loss) on disposal of assets	**1,416**	(648)	(86)
Net periodic pension benefit	**26,787**	32,070	17,902
Other, net	**(2,316)**	7,395	660
Total other income, net	$ **12,952**	$ 32,855	$ 15,398
Research and development expenses (included in SG&A expenses)	$ **44,853**	$ 39,344	$ 36,969

Balance Sheet Information

Additional details of balance sheet amounts as of December 3, 2022 and November 27, 2021 are as follows:

	2022	2021
Inventories		
Raw materials	$ **237,071**	$ 226,723
Finished goods	**254,710**	221,681
Total inventories	$ **491,781**	$ 448,404
Other current assets		
Other receivables	$ **36,338**	$ 28,874
Prepaid income taxes	**27,169**	13,359
Prepaid taxes other than income taxes	**29,322**	26,929
Prepaid expenses	**27,490**	25,889
Assets held for sale	**-**	1,284
Total other current assets	$ **120,319**	$ 96,335
Property, plant and equipment		
Land	$ **84,320**	$ 84,492
Buildings and improvements	**405,037**	395,849
Machinery and equipment	**957,371**	915,914
Construction in progress	**133,010**	104,734
Total, at cost	**1,579,738**	1,500,989
Accumulated depreciation	**(846,071)**	(805,622)
Net property, plant and equipment	$ **733,667**	$ 695,367
Other assets		
Investments in company owned life insurance	$ **8,957**	$ 9,584
Equity method investments	**42,143**	49,333
Equity investments	**1,362**	1,667
Long-term deferred income taxes	**39,048**	37,116
Prepaid pension costs	**86,616**	90,946
Postretirement other than pension asset	**98,848**	107,323
Operating lease right-of-use assets	**32,440**	32,744
Other long-term receivables	**9,262**	23,661
Other long-term assets	**17,192**	19,699
Total other assets	$ **335,868**	$ 372,073
Other accrued expenses		
Taxes other than income taxes	$ **14,642**	$ 14,280
Miscellaneous services	**7,092**	5,626
Customer rebates	**24,915**	20,743
Interest	**7,498**	2,964
Product liability	**154**	432
Contingent consideration liability	**1,977**	8,100
Current operating lease liabilities	**9,794**	8,921
Accrued expenses	**23,273**	24,995
Total other accrued expenses	$ **89,345**	$ 86,061
Other liabilities		
Asset retirement obligations	$ **2,888**	$ 2,917
Long-term deferred income taxes	**183,190**	179,401
Long-term income tax liability	**22,202**	14,364
Long-term deferred compensation	**9,957**	9,665
Postretirement other than pension	**2,021**	2,657
Noncurrent operating lease liabilities	**23,421**	24,061
Environmental liabilities	**3,064**	3,521
Net investment hedge liabilities	**54,046**	-
Other long-term liabilities	**57,497**	40,604
Total other liabilities	$ **358,286**	$ 277,190

Additional details on the trade receivables allowance for doubtful accounts, credits related to pricing or quantities shipped and early payment discounts for 2022, 2021 and 2020 are as follows:

	2022	2021	2020
Balance at beginning of year	$ **9,935**	$ 12,905	$ 10,682
Charged to expenses and other adjustments	**1,794**	(546)	8,313
Write-offs	**(851)**	(2,278)	(6,158)
Foreign currency translation effect	**61**	(146)	68
Balance at end of year	$ **10,939**	$ 9,935	$ 12,905

Statement of Comprehensive Income Information

The following tables provides details of total comprehensive income (loss):

	December 3, 2022			
	H.B. Fuller Stockholders			Non-controlling Interest
	Pretax	Tax	Net	Net
Net income attributable to H.B. Fuller and non-controlling interests	**-**	**-**	$ **180,313**	$ **94**
Other comprehensive income (loss)				
Foreign currency translation adjustment[1]	$ **(131,745)**	**-**	**(131,745)**	**(61)**
Defined benefit pension plans adjustment[2]	**(18,881)**	**3,818**	**(15,063)**	**-**
Interest rate swap[3]	**13,148**	**(3,224)**	**9,924**	**-**
Other cash flow hedges[3]	**(3,536)**	**53**	**(3,483)**	**-**
Net investment hedges[3]	**(54,040)**	**13,297**	**(40,743)**	**-**
Other comprehensive income (loss)	$ **(195,054)**	$ **13,944**	$ **(181,110)**	$ **(61)**
Comprehensive income			$ **(797)**	$ **33**

	November 27, 2021			
	H.B. Fuller Stockholders			Non-controlling Interest
	Pretax	Tax	Net	Net
Net income attributable to H.B. Fuller and non-controlling interests	-	-	$ 161,393	$ 82
Other comprehensive income (loss)				
Foreign currency translation adjustment[1]	$ (26,262)	-	(26,262)	(32)
Defined benefit pension plans adjustment[2]	64,912	(16,731)	48,181	-
Interest rate swap[3]	20,109	(4,930)	15,179	-
Other cash flow hedges[3]	(4,554)	68	(4,486)	-
Other comprehensive income	$ 54,205	$ (21,593)	32,612	(32)
Comprehensive income			$ 194,005	$ 50

	November 28, 2020			
	H.B. Fuller Stockholders			Non-controlling Interest
	Pretax	Tax	Net	Net
Net income attributable to H.B. Fuller and non-controlling interests	-	-	$ 123,719	$ 69
Other comprehensive income (loss)				
Foreign currency translation adjustment[1]	$ 41,712	-	41,712	30
Defined benefit pension plans adjustment[2]	5,823	(1,235)	4,588	-
Interest rate swap[3]	(15,618)	3,853	(11,765)	-
Other cash flow hedges[3]	6,307	(101)	6,206	-
Other comprehensive (loss) income	$ 38,224	$ 2,517	40,741	30
Comprehensive income			$ 164,460	$ 99

[1] Income taxes are not provided for foreign currency translation relating to indefinite investments in international subsidiaries.

[2] Loss reclassified from accumulated other comprehensive income (loss) into earnings as part of net periodic cost related to pension and other postretirement benefit plans is reported in cost of sales and SG&A expenses.

[3] Loss reclassified from accumulated other comprehensive income (loss) into earnings is reported in other income, net.

Statement of Total Equity Information

Components of accumulated other comprehensive income (loss) are as follows:

	December 3, 2022		
	Total	H.B. Fuller Stockholders	Non-controlling Interests
Foreign currency translation adjustment	$ **(264,054)**	$ **(264,012)**	$ **(42)**
Net investment hedges, net of taxes of $13,297	**(40,743)**	**(40,743)**	**-**
Defined benefit pension plans adjustment, net of taxes of $67,744	**(128,261)**	**(128,261)**	**-**
Reclassification of AOCI tax effects	**(18,341)**	**(18,341)**	**-**
Total accumulated other comprehensive loss	$ **(451,399)**	$ **(451,357)**	$ **(42)**

	November 27, 2021		
	Total	H.B. Fuller Stockholders	Non-controlling Interests
Foreign currency translation adjustment	$ (132,370)	$ (132,267)	$ (103)
Interest rate swap, net of taxes of $3,224	(9,924)	(9,924)	-
Cash flow hedges, net of taxes of ($53)	3,483	3,483	-
Defined benefit pension plans adjustment, net of taxes of $63,925	(113,198)	(113,198)	-
Reclassification of AOCI tax effects	(18,341)	(18,341)	-
Total accumulated other comprehensive loss	$ (270,350)	$ (270,247)	$ (103)

	November 28, 2020		
	Total	H.B. Fuller Stockholders	Non-controlling Interests
Foreign currency translation adjustment	$ (106,140)	$ (106,005)	$ (135)
Interest rate swap, net of taxes of ($8,153)	(25,103)	(25,103)	-
Cash flow hedges, net of taxes of ($121)	7,969	7,969	-
Defined benefit pension plans adjustment, net of taxes of $80,656	(161,379)	(161,379)	-
Reclassification of AOCI tax effects	(18,341)	(18,341)	-
Total accumulated other comprehensive loss	$ (302,994)	$ (302,859)	$ (135)

Note 5: Goodwill and Other Intangible Assets

Goodwill balances by reportable segment consisted of the following:

	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Total
As of November 27, 2021	$ **325,470**	$ **662,021**	$ **311,354**	$ **1,298,845**
TissueSeal acquisition	**13,765**	**-**	**-**	**13,765**
Fourny acquisition	-	**-**	**6,455**	**6,455**
Apollo acquisition	-	**-**	**119,358**	**119,358**
ZKLT acquisition	**-**	**3,720**	**-**	**3,720**
Foreign currency translation effect	**(10,273)**	**(27,831)**	**(11,412)**	**(49,516)**
As of December 3, 2022	$ **328,962**	$ **637,910**	$ **425,755**	$ **1,392,627**

We evaluate our goodwill for impairment annually at the beginning of the fourth quarter or earlier upon the occurrence of substantive unfavorable changes in economic conditions, industry trends, costs, cash flows, or ongoing declines in market capitalization. The quantitative impairment test requires judgment, including the identification of reporting units, the assignment of assets, liabilities and goodwill to reporting units, and the determination of fair value of each reporting unit. The impairment test requires the comparison of the fair value of each reporting unit with its carrying amount, including goodwill. In performing the impairment test, we determined the fair value of our reporting units through the income approach by using DCF analyses. Determining fair value requires the company to make judgments about appropriate discount rates, perpetual growth rates and the amount and timing of expected future cash flows. The cash flows employed in the DCF analysis for each reporting unit are based on the reporting unit's budget, long-term business plan and recent operating performance. Discount rate assumptions are based on an assessment of the risk inherent in the future cash flows of the respective reporting unit and market conditions. Based on the analysis performed during the fourth quarter of 2022, there were no indications of impairment for any of our reporting units.

Balances of amortizable identifiable intangible assets, excluding goodwill and other non-amortizable intangible assets, are as follows:

Amortizable Intangible Assets	Purchased Technology and Patents	Customer Relationships	Tradename	All Other	Total
As of December 3, 2022					
Original cost	**$ 118,727**	**$ 1,004,008**	**$ 50,324**	**$ 11,053**	**$ 1,184,112**
Accumulated amortization	**(66,433)**	**(388,394)**	**(21,401)**	**(6,251)**	**(482,479)**
Net identifiable intangibles	**$ 52,294**	**$ 615,614**	**$ 28,923**	**$ 4,802**	**$ 701,633**
Weighted-average useful lives (in years)	**13**	**17**	**13**	**13**	**16**
As of November 27, 2021					
Original cost	$ 115,980	$ 932,644	$ 63,543	$ 11,343	$ 1,123,510
Accumulated amortization	(62,364)	(335,143)	(33,786)	(5,635)	(436,928)
Net identifiable intangibles	$ 53,616	$ 597,501	$ 29,757	$ 5,708	$ 686,582
Weighted-average useful lives (in years)	13	17	14	12	17

Amortization expense with respect to amortizable intangible assets was $74,383, $71,068 and $70,591 in 2022, 2021 and 2020, respectively.

Estimated aggregate amortization expense based on the current carrying value of amortizable intangible assets for the next five fiscal years are as follows:

Fiscal Year	2023	2024	2025	2026	2027	Thereafter
Amortization Expense	$75,151	$69,611	$67,091	$60,396	$57,201	$372,183

The above amortization expense forecast is an estimate. Actual amounts may change from such estimated amounts due to fluctuations in foreign currency exchange rates, additional intangible asset acquisitions, potential impairment, accelerated amortization or other events.

Non-amortizable intangible assets as of December 3, 2022 and November 27, 2021 were $459 and $493, respectively, and relate to trademarks and trade names. The change in non-amortizable assets in 2022 compared to 2021 was due to changes in foreign currency exchange rates.

Note 6: Leases

As a lessee, the company leases office, manufacturing and warehouse space, and equipment. Certain lease agreements include rental payments adjusted annually based on changes in an inflation index. Our leases do not contain material residual value guarantees or material restrictive covenants. Lease expense is recognized on a straight-line basis over the lease term. We determine if an arrangement is a lease upon inception. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The right to control the use of an asset includes the right to obtain substantially all of the economic benefits of the underlying asset and the right to direct how and for what purpose the asset is used.

Operating lease and finance lease right-of-use assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The discount rate used to calculate present value is the company's incremental borrowing rate. We determine the incremental borrowing rate for each lease based primarily on its lease term and the economic environment of the applicable country or region.

Certain leases include one or more options to renew, with terms that can extend the lease term up to five years. We include options to renew the lease as part of the right-of-use lease asset and liability when it is reasonably certain we will exercise the option. In addition, certain leases contain termination options with an associated penalty. In general, the company is not reasonably certain to exercise such options.

For the measurement and classification of lease agreements, we group lease and non-lease components into a single lease component for all underlying asset classes. Variable lease payments primarily include payments for non-lease components, such as maintenance costs, payments for leased assets used beyond their non-cancelable lease term as adjusted for contractual options to terminate or renew, and payments for non-components such as sales tax. Certain leases contain immaterial variable lease payments based on usage.

The components of lease expense are as follows:

	December 3, 2022	November 27, 2021
Operating lease cost	$ **12,026**	$ 11,958
Finance lease cost:		
Amortization of assets	**1,535**	673
Interest on lease liabilities	**261**	110
Variable lease cost	**6,481**	5,990
Total net lease cost	$ **20,303**	$ 18,731

Supplemental balance sheet information related to leases is as follows:

	Location on Balance Sheet	December 3, 2022	November 27, 2021
Operating leases:			
Operating lease right-of-use assets	Other assets	$ **32,440**	$ 32,744
Current operating lease liabilities	Other accrued expenses	**9,794**	8,921
Noncurrent operating lease liabilities	Other liabilities	**23,421**	24,061
Total operating lease liabilities		$ **33,215**	$ 32,982
Finance leases:			
Equipment right-of-use assets	Property, plant and equipment	$ **11,150**	$ 9,455
Current obligations of finance leases	Other accrued expenses	$ **1,541**	$ 1,109
Finance leases, net of current obligations	Other liabilities	**7,507**	7,548
Total finance lease liabilities		$ **9,048**	$ 8,657

As of December 3, 2022, the weighted average remaining lease term is 6.9 years and the weighted average discount rate is 3.6% for the company's operating lease agreements. The weighted average remaining lease term is 9.4 years and the weighted average discount rate is 3.0% for the company's finance lease agreements.

Supplemental information related to leases is as follows:

	December 3, 2022	November 27, 2021
Cash paid amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ **15,209**	$ 15,251
Operating cash flows from finance leases	**261**	110
Financing cash flows from finance leases	**607**	546
Right-of-use assets obtained in exchange for lease liabilities:		
Operating leases	$ **15,442**	$ 20,030
Finance leases	**1,258**	7,630

Maturities of lease liabilities are as follows:

	December 3, 2022	
Fiscal Year	**Finance Leases**	**Operating Leases**
2023	$ **1,786**	$ **10,714**
2024	**1,528**	**7,525**
2025	**1,483**	**5,272**
2026	**1,360**	**3,763**
2027	**1,072**	**2,672**
2028 and beyond	**2,985**	**6,689**
Total	**10,214**	**36,635**
Less: amounts representing interest	**(1,166)**	**(3,420)**
Present value of future minimum payments	**9,048**	**33,215**
Less: current obligations	**(1,541)**	**(9,794)**
Noncurrent lease liabilities	$ **7,507**	$ **23,421**

Note 7: Notes Payable, Long-Term Debt and Lines of Credit

Notes Payable

Notes payable were $28,860 and $24,983 at December 3, 2022 and November 27, 2021, respectively. This amount primarily represents various foreign subsidiaries' other short-term borrowings that were not part of committed lines. The weighted-average interest rates on short-term borrowings were 16.2 percent in 2022 and 8.1 percent in 2021 and 2020. Fair values of these short-term obligations approximate their carrying values due to their short maturity. There were no funds drawn from the short-term committed lines at December 3, 2022.

Long-Term Debt

Long-Term Debt	Weighted-Average Interest Rate at December 3, 2022	Fiscal Year Maturity Date	Balance at December 3, 2022	Balance at November 27, 2021
Revolving credit facility	5.94%	2024	$ **175,500**	$ -
Term Loan B	6.19%	2024	**1,001,150**	1,001,150
Public Notes[2]	4.00%	2027	**300,000**	300,000
Public Notes[3]	4.25%	2028	**300,000**	300,000
Other, including debt issuance cost and discount			**(40,394)**	(9,671)
Total debt			$ **1,736,256**	$ 1,591,479
Less: current maturities			-	-
Total long-term debt, excluding current maturities			$ **1,736,256**	$ 1,591,479

[1] Term Loan B, due on October 20, 2024, $2,150,000 variable rate at the London Interbank Offered Rate (LIBOR) plus 2.00 percent (6.19 percent at December 3, 2022).

[2] Public Notes, due February 15, 2027, $300,000 4.00 percent fixed.

[3] Public Notes, due October 15, 2028, $300,000 4.25 percent fixed; swapped to a floating rate as detailed below.

Term Loans

On October 20, 2017, we entered into a secured term loan credit agreement ("Term Loan B Credit Agreement") with a consortium of financial institutions under which we established a $2,150,000 term loan ("Term Loan B") that we used to repay existing indebtedness, finance working capital needs, finance acquisitions and for general corporate purposes. The Term Loan B Credit Agreement is secured by a security interest in substantially all of the personal property assets of the company and each Guarantor, including 100% of the equity interests in certain domestic subsidiaries and 65% of the equity interests of first-tier foreign subsidiaries together with certain domestic material real property. At December 3, 2022, a balance of $1,001,150 was outstanding on the Term Loan B. The interest rate on the Term Loan B is payable at the LIBOR rate plus 2.00 percent (6.19 percent at December 3, 2022). The interest rate is based on a leverage grid. The Term Loan B Credit Agreement matures on October 20, 2024.

On February 27, 2018, we entered into an interest rate swap agreement to convert $200,000 of our Term Loan B to a fixed rate of 4.589 percent. During the second quarter of 2021, we settled a portion of this interest rate swap as the debt underlying this swap was less than the swap value due to debt paydown. We settled the ineffective portion of the interest rate swap by making a cash payment of $378 and recorded that payment to interest expense in our Consolidated Statements of Income during the second quarter of 2021. On October 20, 2017, we entered into interest rate swap agreements to convert $1,050,000, which was amortized down to $800,000 on October 20, 2021, of our Term Loan B to a fixed interest rate of 4.0275%. These interest rate swap agreements matured on October 20, 2022 and we have no interest rate swap agreements on our Term Loan B as of December 3, 2022. See Note 12 for further discussion of these interest rate swaps.

We are subject to mandatory prepayments in the first quarter of each fiscal year equal to 50% of Excess Cash Flow, as defined in the Term Loan B Credit Agreement, of the prior fiscal year less any voluntary prepayments made during that fiscal year. The Excess Cash Flow Percentage shall be reduced to 25% when our Secured Leverage Ratio is below 4.25:1.00 and to 0% when our Secured Leverage Ratio is below 3.75:1.00. The prepayment for the 2022 measurement period was satisfied through amounts prepaid during 2022. We have estimated the 2023 prepayment to be zero.

Public Notes

On February 14, 2017, we issued $300,000 aggregate principal of 10-year unsecured public notes ("10-year Public Notes") due February 15, 2027 with a fixed coupon of 4.00 percent. Proceeds from this debt issuance were used to repay $138,000 outstanding under the revolving credit facility at that time and prepay $158,750 of our Term Loan A. On February 14, 2017, we entered into an interest rate swap agreement to convert $150,000 of the 10-year Public Notes to a variable interest rate of 1-month LIBOR plus 1.86 percent and on May 1, 2020, we terminated the swap. See Note 12 for further discussion of this interest rate swap.

On October 20, 2020, we issued $300,000 aggregate principal of 8-year unsecured public notes ("8-year Public Notes") due October 15, 2028 with a fixed coupon of 4.25 percent. Proceeds from this debt issuance were used to prepay $300,000 of our Term Loan B. On February 12, 2021, we entered into interest rate swap agreements to convert our 8-year Public Notes to a variable interest rate of 1-month LIBOR plus 3.28 percent.

The Public Notes are senior unsecured obligations of the company and will rank equally with the company's other unsecured and unsubordinated debt from time to time outstanding.

Fair Value of Long-Term Debt

Long-term debt had an estimated fair value of $1,713,257 and $1,618,291 as of December 3, 2022 and November 27, 2021, respectively. The fair value of long-term debt is based on quoted market prices for the same or similar issues or on the current rates offered for debt of similar maturities. The estimated fair value of these long-term obligations is not necessarily indicative of the amount that would be realized in a current market exchange.

Long-term Debt Maturities

Maturities of long-term debt for the next five fiscal years are as follows:

Fiscal Year	2023	2024	2025	2026	2027	Thereafter
Long-term debt obligations	$ -	$ 1,001,150	$ -	$ -	$ 300,000	$ 300,000

Revolving Credit Facility

On October 20, 2020, we amended and restated our revolving credit facility. On January 24, 2022, we relied on the accordion feature in our credit agreement to increase the commitment under the existing credit facility from $400,000 to $600,000. On February 28, 2022, we executed an amendment to amend and restate the revolving credit agreement to move from borrowing under LIBOR to borrowing under SOFR along with further upsizing the revolving credit facility by $100,000 to $700,000 in total aggregate commitments.

The revolving credit facility is secured along with the Term Loan B Credit Agreement, by a first-priority security interest in substantially all of the personal property assets of the company and each Guarantor, including 100% of the equity interests in certain domestic subsidiaries and 65% of the equity interests of first-tier foreign subsidiaries. Interest on the revolving credit facility is payable at the SOFR plus a credit spread adjustment (0.11448 percent) plus 1.75 percent (5.94 percent at December 3, 2022). A facility fee of 0.25 percent of the unused commitment under the revolving credit facility is payable quarterly. The interest rates and the facility fee are based on a leverage grid. The revolving credit facility matures on July 22, 2024.

As of December 3, 2022, amounts related to our revolving credit facility was as follows:

	Committed	Drawn	Unused
Revolving credit facility	$ 700,000	$ 175,500	$ 515,186

The secured, multi-currency revolving credit facility can be drawn upon for general corporate purposes up to a maximum of $700,000, less issued letters of credit. At December 3, 2022, letters of credit reduced the available amount under the revolving credit facility by $9,314.

Covenants

The secured Term Loan B Credit Agreement and secured revolving credit facility are subject to certain covenants and restrictions. Restrictive covenants include, but are not limited to, limitations on secured and unsecured borrowings, interest coverage, intercompany transfers and investments, third party investments, dispositions of assets, leases, liens, dividends and distributions, and contains a maximum secured debt to trailing twelve months EBITDA requirement. Certain covenants become less restrictive after meeting leverage or other financial ratios. In addition, we cannot be a member of any consolidated group as defined for income tax purposes other than with our subsidiaries. At December 3, 2022 and November 27, 2021, all financial covenants were met.

The Indenture under which the Public Notes have been issued contains covenants imposing certain limitations on the ability of the company to incur liens or enter into sales and leaseback transactions. It also provides for customary events of default (subject in certain cases to customary grace and cure periods), which include among other things nonpayment, breach of covenants in the Indenture and certain events of bankruptcy and insolvency. If an event of default occurs and is continuing with respect to the Public Notes, the Trustee or holders of at least 25% in principal amount outstanding of the Public Notes may declare the principal and the accrued and unpaid interest, if any, on all of the outstanding Public Notes to be due and payable. These covenants and events of default are subject to a number of important qualifications, limitations and exceptions that are described in the Indenture.

Note 8: Stockholders' Equity

Preferred Stock

The Board of Directors is authorized to issue up to 10,045,900 shares of preferred stock that may be issued in one or more series and with such stated value and terms as the Board of Directors may determine.

Common Stock

There were 160,000,000 shares of common stock with a par value of $1.00 authorized and 53,676,576 and 52,777,753 shares issued and outstanding at December 3, 2022 and November 27, 2021, respectively.

On April 7, 2022, the Board of Directors authorized a new share repurchase program of up to $300,000 of our outstanding common shares for a period of up to five years. Under the program, we are authorized to repurchase shares for cash on the open market, from time to time, in privately negotiated transactions or block transactions, or through an accelerated repurchase agreement. The timing of such repurchases is dependent on price, market conditions and applicable regulatory requirements. Upon repurchase of the shares, we reduce our common stock for the par value of the shares with the excess being applied against additional paid-in capital. This authorization replaces the April 6, 2017 authorization to repurchase shares. We did not repurchase any shares during 2022, 2021 and 2020 under our share repurchase program. Up to $300,000 of our outstanding common shares may still be repurchased under the current share repurchase program.

Common Shares Outstanding	2022	2021	2020
Beginning balance	**52,777,753**	51,906,663	51,241,190
Stock options exercised	**657,789**	740,731	397,456
Deferred compensation paid	**118,429**	19,895	118,742
Restricted units vested	**172,474**	157,945	221,275
Shares withheld for taxes	**(49,869)**	(47,481)	(72,000)
Ending balance	**53,676,576**	52,777,753	51,906,663

Note 9: Accounting for Share-Based Compensation

Overview

We have various share-based compensation programs, which provide for equity awards including non-qualified stock options, incentive stock options, restricted stock units, performance awards and deferred compensation. These equity awards fall under several plans and are described below.

Share-based Compensation Plans

We currently grant stock options and restricted stock units under equity compensation and deferred compensation plans.

Stock options are granted to officers and key employees at prices not less than the fair market value at the date of grant. Non-qualified stock options are generally exercisable beginning one year from the date of grant in cumulative yearly amounts of 33.3 percent. Incentive stock options are based on certain performance-based criteria and are generally exercisable at a stated date when the performance criteria is measured. Stock options generally have a contractual term of 10 years. Options exercised represent newly issued shares.

Restricted stock awards are nonvested stock-based awards that include grants of restricted stock units. Restricted stock awards are independent of option grants and are subject to forfeiture if employment terminates prior to the release of the restrictions. Such awards generally vest beginning one year from the date of grant or 33.3 percent per year for three years, depending on the grant. During the vesting period, ownership of the shares cannot be transferred.

Restricted stock units have dividend equivalent rights equal to the cash dividend paid on restricted stock shares. However, restricted stock units do not have voting rights of common stock and are not considered issued and outstanding upon grant. Restricted stock units become newly issued shares when vested. The dividend equivalent rights for restricted stock units are forfeitable.

We expense the cost, which is the grant date fair market value, of the restricted stock units ratably over the period during which the restrictions lapse. The grant date fair value is our closing stock price on the date of grant.

We are required to recognize compensation expense when an employee is eligible to retire. We consider employees eligible to retire at age 55 and after 10 years of service. Awards granted to retirement-eligible employees are forfeited if the retirement-eligible employees retire prior to 180 days after the grant. Accordingly, the related compensation expense is recognized during the 180 day period for awards granted to retirement-eligible employees or over the period from the grant date to the date retirement eligibility is achieved, if less than the stated vesting period.

2020 Master Incentive Plan

This plan allows for granting of awards to to any employee, officer, non-employee director, consultant, independent contractor or advisor providing services to us or any of our affiliates, or any person to whom an offer of employment or engagement with us or any of our affiliates has been made. The plan permits granting of (a) stock options; (b) stock appreciation rights; (c) restricted stock and restricted stock units; (d) performance awards; (e) dividend equivalents; (f) other awards based on our common stock, including shares for amounts employees or non-employee directors deferred under the deferred compensation plans. There were 1,268,608 common shares available for grant as of December 3, 2022.

2018 Master Incentive Plan

This plan allows for granting of awards to employees. The plan permits granting of (a) stock options; (b) stock appreciation rights; (c) restricted stock and restricted stock units; (d) performance awards; (e) dividend equivalents; (f) other awards based on our common stock, including shares for amounts employees deferred under the Key Employee Deferred Compensation Plan.

Year 2016 Master Incentive Plan

This plan allows for granting of awards to employees. The plan permits granting of (a) stock options; (b) stock appreciation rights; (c) restricted stock awards; (d) performance awards; (e) dividend equivalents; and (f) other awards based on our common stock, including shares for amounts employees deferred under the Key Employee Deferred Compensation Plan.

2009 Directors' Stock Incentive Plan

This plan permits granting of (a) shares for amounts non-employee directors defer under the Directors' Deferred Compensation Plan and (b) discretionary grants of restricted stock, stock options, stock appreciation rights, performance awards and other stock awards.

Directors' Deferred Compensation Plan

This plan allows non-employee directors to defer all or a portion of their retainer and meeting fees in a number of investment choices, including units representing shares of our common stock. We provide a 10 percent match on deferred compensation invested in these units. These units are required to be paid out in our common stock.

Key Employee Deferred Compensation Plan

This plan allows key employees to defer a portion of their eligible compensation in a number of investment choices, including units representing shares of company common stock. We provide a 10 percent match on deferred compensation invested in these units.

Grant-Date Fair Value

We use the Black-Scholes option-pricing model to calculate the grant-date fair value of stock option awards. The fair value of options granted during 2022, 2021 and 2020 were calculated using the following assumptions:

	2022	**2021**	**2020**
Expected life (in years)	**5.00**	5.00	5.00
Weighted-average expected volatility	**33.35%**	32.50%	24.32%
Expected volatility range	**33.33-34.34%**	32.48% - 32.94%	24.18% - 30.99%
Risk-free interest rate	**1.53-4.06%**	0.39% - 1.20%	0.21% - 1.51%
Weighted-average expected dividend	**0.95%**	1.26%	1.38%
Expected dividend yield range	**0.94-1.23%**	0.92% - 1.27%	1.35% - 2.53%
Weighted-average fair value of grants	$ **20.91**	$ 13.29	$ 9.63

Expected life – We use historical employee exercise and option expiration data to estimate the expected life assumption for the Black-Scholes grant-date valuation. We believe that this historical data is currently the best estimate of the expected term of a new option. We use a weighted-average expected life for all awards.

Expected volatility – Volatility is calculated using our stock's historical volatility for the same period of time as the expected life. We have no reason to believe that its future volatility will differ from the past.

Risk-free interest rate – The rate is based on the U.S. Treasury yield curve in effect at the time of the grant for the same period of time as the expected life.

Expected dividend yield – The calculation is based on the total expected annual dividend payout divided by the average stock price.

Expense

We use the straight-line attribution method to recognize share-based compensation expense for option awards and restricted stock units with graded and cliff vesting. Incentive stock options and performance awards are based on certain performance-based metrics and the expense is adjusted quarterly, based on our projections of the achievement of those metrics. The amount of share-based compensation expense recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest. The expense is recognized over the requisite service period, which for us is the period between the grant date and the earlier of the award's stated vesting term or the date the employee is eligible for early vesting based on the terms of the plans.

Total share-based compensation expense was $24,368, $22,366 and $16,914 for 2022, 2021 and 2020, respectively. All share-based compensation was recorded as SG&A expense.

As of December 3, 2022, $6,906 of unrecognized compensation costs related to unvested stock option awards is expected to be recognized over a weighted-average period of 0.7 years. Unrecognized compensation costs related to unvested restricted stock units was $8,151 which is expected to be recognized over a weighted-average period of 0.72 years.

Stock Option Activity

The stock option activity for the years ended December 3, 2022, November 27, 2021, and November 28, 2020 is summarized below:

	Options	**Weighted-Average Exercise Price**
Outstanding at November 30, 2019	5,060,310	$ 46.04
Granted	1,052,968	47.70
Exercised	(397,456)	31.00
Forfeited or cancelled	(169,907)	49.11
Outstanding at November 28, 2020	5,545,915	$ 47.34
Granted	1,237,094	53.33
Exercised	(740,731)	43.64
Forfeited or cancelled	(1,069,886)	56.33
Outstanding at November 27, 2021	**4,972,392**	$ **47.45**
Granted	**549,458**	**72.75**
Exercised	**(657,789)**	**45.79**
Forfeited or cancelled	**(40,991)**	**61.31**
Outstanding at December 3, 2022	**4,823,070**	$ **50.42**

The fair value of options granted during 2022, 2021 and 2020 was $5,400, $17,250 and $10,132, respectively. Total intrinsic value of options exercised during 2022, 2021 and 2020 was $16,877, $15,261 and $6,563, respectively. For options outstanding at December 3, 2022, the weighted-average remaining contractual life was 6.13 years and the aggregate intrinsic value was $144,265. There were 3,311,412 options exercisable at December 3, 2022, with a weighted-average remaining contractual life of 5.14 years and an aggregate intrinsic value of $111,209. Intrinsic value is the difference between our closing stock price on the respective trading day and the exercise price, multiplied by the number of options exercised. Proceeds received from option exercises during the year ended December 3, 2022, November 27, 2021, and November 28, 2020 were $30,122, $32,325 and $12,321, respectively. The company's actual tax benefits realized for the tax deductions related to the exercise of stock options for 2022, 2021 and 2020 was $3,687, $3,874 and $1,278, respectively.

Restricted Stock Unit Activity

The nonvested restricted stock unit activity for the years ended December 3, 2022, November 27, 2021, and November 28, 2020 is summarized below:

	Units	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Contractual Life (in Years)
Nonvested at November 30, 2019	487,997	$ 46.56	0.8
Granted	216,293	46.39	3.4
Vested	(221,275)	46.83	-
Forfeited	(50,666)	47.55	0.1
Nonvested at November 28, 2020	432,349	$ 46.22	0.8
Granted	356,779	54.49	3.2
Vested	(157,945)	48.69	-
Forfeited	(78,818)	47.79	0.8
Nonvested at November 27, 2021	**552,365**	$ **50.63**	**1.9**
Granted	**179,603**	**67.92**	**3.2**
Vested	**(172,474)**	**46.74**	**-**
Forfeited	**(68,374)**	**45.83**	**0.1**
Nonvested at December 3, 2022	**491,120**	$ **58.98**	**0.7**

Total fair value of restricted stock units vested during 2022, 2021, and 2020 was $8,062, $7,691 and $10,362, respectively. The total fair value of nonvested restricted stock at December 3, 2022 was $28,967.

We repurchased 55,081, 50,799 and 70,380 shares during 2022, 2021 and 2020, respectively, in connection with the statutory minimum tax withholding related to vesting of restricted stock. The company's actual tax benefits realized for the tax deductions related to the restricted stock vested for 2022, 2021 and 2020 was $2,569, $1,439 and $2,136, respectively.

Deferred Compensation Activity

Deferred compensation units are fully vested at the date of contribution. The deferred compensation units outstanding for the years ended December 3, 2022, November 27, 2021, and November 28, 2020 is summarized below:

	Non-employee Directors	Employees	Total
Units outstanding November 30, 2019	525,660	36,664	562,324
Participant contributions	18,008	13,814	31,822
Company match contributions[1]	23,033	1,381	24,414
Payouts	(111,436)	(7,306)	(118,742)
Units outstanding November 28, 2020	455,265	44,553	499,818
Participant contributions	13,036	10,487	23,523
Company match contributions[1]	20,118	1,049	21,167
Payouts	(19,895)	(7,728)	(27,623)
Units outstanding November 27, 2021	**468,524**	**48,361**	**516,885**
Participant contributions	**89,054**	**12,985**	**102,039**
Company match contributions[1]	**26,843**	**1,299**	**28,142**
Payouts	**(118,429)**	**(6,073)**	**(124,502)**
Units outstanding December 3, 2022	**465,992**	**56,572**	**522,564**

[1] The non-employee directors' company match includes 17,937, 18,814 and 21,323 deferred compensation units paid as discretionary awards to all non-employee directors in 2022, 2021 and 2020, respectively.

The fair value of non-employee directors' company matches for 2022, 2021 and 2020 was $172, $163 and $128, respectively. The fair value of the non-employee directors' discretionary award was $1,080, $1,215, $920 for 2022, 2021 and 2020, respectively. The fair value of employee company matches was $86, $61 and $56 for 2022, 2021 and 2020, respectively.

Note 10: Pension and Postretirement Benefits

Defined Contribution Plan

All U.S. employees have the option of contributing up to 75 percent of their pre-tax earnings to a 401(k) plan, subject to IRS limitations. We match up to the first 4 percent of each employee's pre-tax earnings, based on the employee's contributions. All U.S. employees are eligible for a separate annual non-discretionary retirement contribution to the 401(k) plan of 1 percent of pay, that is invested based on the election of the individual participant. The 1 percent contribution is in addition to our 4 percent matching contribution described above and is in lieu of participation in our defined benefit pension plan. The total contribution to the 401(k) plan for 2022 was $12,113 which included the cost of the 4 percent company match of $9,082 and the additional 1 percent contribution of $3,031. The total contributions to the 401(k) plan were $12,488 and $10,764 in 2021 and 2020, respectively.

All U.S. employees are eligible to receive an annual discretionary non-elective contribution to the 401(k) plan of up to 3 percent based on achieving the company's earnings per share target. This discretionary contribution is in addition to the contributions described above. A discretionary non-elective contribution of $950 and $5,205 was accrued for 2022 and 2021, respectively.

The defined contribution plan liability recorded in the Consolidated Balance Sheets was $12,263 and $10,494 in 2022 and 2021, respectively, for the U.S. Plan and several statutorily required non-U.S. Plans.

Defined Benefit Plans

Noncontributory defined benefit pension plans cover all U.S. employees employed prior to January 1, 2007. Benefits for these plans are based primarily on each employee's years of service and average compensation. During 2011, we made significant changes to our U.S. pension plan. The changes included: benefits under the plan were locked-in using service and salary as of May 31, 2011, participants no longer earn benefits for future service and salary as they had in the past, affected participants receive a three percent increase to the locked-in benefit for every year they continue to work for us and we are making a retirement contribution of three percent of eligible compensation to the 401(k) Plan for those participants. The funding policy is consistent with the funding requirements of federal law and regulations. Plan assets consist principally of listed equity securities and bonds. During 2020, we amended the U.S. pension plan to add a program for eligible employees to take a lump sum distribution. No amounts were paid under this program in 2022 and a total of $6,673 was paid during 2021 as distributions under this program. Other U.S. postretirement benefits are funded through a Voluntary Employees' Beneficiaries Association Trust.

Health care and life insurance benefits are provided for eligible retired employees and their eligible dependents. These benefits are provided through various insurance companies and health care providers. Costs are accrued during the years the employee renders the necessary service.

Certain non-U.S. subsidiaries provide pension benefits for their employees consistent with local practices and regulations. These plans are primarily defined benefit plans covering substantially all employees upon completion of a specified period of service. Benefits for these plans are generally based on years of service and annual compensation.

Following is a reconciliation of the beginning and ending balances of the benefit obligation and fair value of plan assets as of December 3, 2022 and November 27, 2021:

	Pension Benefits				Other Postretirement Benefits	
	U.S. Plans		Non-U.S. Plans			
	2022	2021	2022	2021	2022	2021
Change in projected benefit obligation						
Benefit obligation at beginning of year	$ **361,212**	$ 388,530	$ **238,400**	$ 250,561	$ **31,262**	$ 39,075
Service cost	**-**	-	**2,765**	3,280	**-**	21
Interest cost	**9,653**	9,299	**2,893**	2,941	**748**	822
Participant contributions	**-**	-	**-**	-	**296**	365
Actuarial (gain)/loss[1]	**(80,296)**	(9,177)	**(57,159)**	(3,630)	**(5,395)**	(6,115)
Other	**-**	-	**-**	-	**-**	-
Curtailments	**-**	-	**231**	-	**-**	-
Settlement payments	**(200)**	(6,673)	**(7,988)**	996	**-**	-
Benefits paid	**(20,495)**	(20,767)	**(8,370)**	(8,578)	**(2,738)**	(2,906)
Foreign currency translation effect	**-**	-	**(15,922)**	(7,170)	**-**	-
Benefit obligation at end of year	**269,874**	361,212	**154,850**	238,400	**24,173**	31,262
Change in plan assets						
Fair value of plan assets at beginning of year	**409,811**	398,403	**216,623**	202,242	**135,701**	109,056
Actual return on plan assets	**(63,562)**	37,466	**(45,328)**	25,204	**(12,613)**	28,716
Employer contributions	**1,232**	1,382	**1,640**	1,989	**136**	470
Participant contributions	**-**	-	**-**	-	**296**	365
Other	**-**	-	**-**	996	**-**	-
Settlement payments	**(200)**	(6,673)	**-**	-	**-**	-
Benefits paid[2]	**(20,495)**	(20,767)	**(8,369)**	(8,578)	**(2,738)**	(2,906)
Foreign currency translation effect	**-**	-	**(22,658)**	(5,230)	**-**	-
Fair value of plan assets at end of year	**326,786**	409,811	**141,908**	216,623	**120,782**	135,701
Plan assets in excess of (less than) benefit obligation as of year end	$ **56,912**	$ 48,599	$ **(12,942)**	$ (21,776)	$ **96,608**	$ 104,439

[1] Actuarial gain in 2022 and 2021 for the U.S. Plans is primarily due to assumption changes. Actuarial gain in 2022 and 2021 for the Non-U.S. Plans are due to both assumption changes and plan experience.

[2] Amount excludes benefit payments made from sources other than plan assets.

Amounts in accumulated other comprehensive income (loss) that have not been recognized as components of net periodic benefit cost	Pension Benefits				Other Postretirement Benefits	
	U.S. Plans		Non-U.S. Plans			
	2022	2021	2022	2021	2022	2021
Unrecognized actuarial loss	$ **137,351**	$ 129,198	$ **49,306**	$ 64,782	$ **(8,530)**	$ (30,278)
Unrecognized prior service (benefit) cost	**-**	(3)	**1,219**	1,390	**-**	-
Ending balance	$ **137,351**	$ 129,195	$ **50,525**	$ 66,172	$ **(8,530)**	$ (30,278)

	Pension Benefits				Other Postretirement Benefits	
	U.S. Plans		Non-U.S. Plans			
	2022	2021	2022	2021	2022	2021
Statement of financial position as of fiscal year-end						
Non-current assets	$ **69,826**	$ 66,157	$ **16,790**	$ 24,772	$ **98,848**	$ 107,323
Accrued benefit cost						
Current liabilities	**(1,248)**	(1,342)	**(1,727)**	(1,795)	**(218)**	(227)
Non-current liabilities	**(11,666)**	(16,216)	**(28,006)**	(44,753)	**(2,021)**	(2,657)
Ending balance	$ **56,912**	$ 48,599	$ **(12,943)**	$ (21,776)	$ **96,609**	$ 104,439

The accumulated benefit obligation of the U.S. pension and other postretirement plans was $289,049 at December 3, 2022 and $384,124 at November 27, 2021. The accumulated benefit obligation of the non-U.S. pension plans was $148,927 at December 3, 2022 and $228,713 at November 27, 2021.

The following amounts relate to pension plans with accumulated benefit obligations in excess of plan assets as of December 3, 2022 and November 27, 2021:

	Pension Benefits and Other Postretirement Benefits			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Accumulated benefit obligation	$ **12,914**	$ 17,558	$ **36,820**	$ 48,912
Fair value of plan assets	**-**	-	**9,617**	11,350

The following amounts relate to pension plans with projected benefit obligations in excess of plan assets as of December 3, 2022 and November 27, 2021:

	Pension Benefits and Other Postretirement Benefits			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Projected benefit obligation	$ **12,914**	$ 17,558	$ **39,350**	$ 131,174
Fair value of plan assets	**-**	-	$ **9,617**	84,626

Information about the expected cash flows is as follows:

	Pension Benefits		Other Postretirement Benefits
	U.S. Plans	Non-U.S. Plans	
Employer contributions			
2023	$ -	$ 6	$ -
Expected benefit payments			
2023	21,081	8,055	2,832
2024	21,247	8,132	2,731
2025	21,280	8,276	2,617
2026	21,247	8,559	2,519
2027- 2032	123,707	53,015	12,305

The components of our net period defined benefit pension and postretirement benefit costs other than service cost are presented as non-operating expenses and service cost is presented in operating expenses.

Components of net periodic benefit cost and other supplemental information for the years ended December 3, 2022, November 27, 2021, and November 28, 2020 are as follows:

	Pension Benefits						Other Postretirement Benefits		
	U.S. Plans			Non-U.S. Plans					
Net periodic cost (benefit)	2022	2021	2020	2022	2021	2020	2022	2021	2020
Service cost	$ **-**	$ -	$ -	$ **2,765**	$ 3,280	$ 2,950	$ **-**	$ 21	$ 73
Interest cost	**9,653**	9,299	11,738	**2,893**	2,941	3,158	**748**	822	1,135
Expected return on assets	**(29,018)**	(31,123)	(25,758)	**(6,465)**	(12,348)	(11,312)	**(11,084)**	(8,945)	(7,976)
Amortization:									
Prior service cost (benefit)	**(3)**	(3)	(3)	**63**	69	64	**-**	-	-
Actuarial loss	**4,132**	3,198	7,195	**2,411**	4,053	3,829	**(3,445)**	73	62
Curtailment loss	**-**	-	-	**-**	-	14	**-**	-	-
Settlement charge	**-**	-	-	**3,329**	-	67	**-**	-	-
Net periodic (benefit) cost	$ **(15,237)**	$ (18,629)	$ (6,828)	$ **4,996**	$ (2,005)	$ (1,230)	$ **(13,781)**	$ (8,029)	$ (6,706)

Weighted-average assumptions used to determine benefit obligations	Pension Benefits U.S. Plans 2022	2021	2020	Non-U.S. Plans 2022	2021	2020	Other Postretirement Benefits 2022	2021	2020
Discount rate	**5.36%**	2.75%	2.50%	**3.70%**	1.27%	1.16%	**5.29%**	2.51%	2.19%
Rate of compensation increase[1]	**0.00%**	0.00%	4.50%	**1.83%**	1.48%	1.74%	**N/A**	N/A	N/A

Weighted-average assumptions used to determine net costs for years ended	2022	2021	2020	2022	2021	2020	2022	2021	2020
Discount rate	**2.75%**	2.50%	3.17%	**1.29%**	1.19%	1.34%	**2.51%**	2.19%	3.00%
Expected return on plan assets	**7.00%**	7.24%	7.49%	**3.49%**	6.15%	6.23%	**8.25%**	8.25%	8.50%
Rate of compensation increase[1]	**0.00%**	0.00%	4.50%	**1.68%**	1.67%	1.74%	**0.00%**	0.00%	N/A

[1] Under the U.S. pension plan, the compensation amount was locked-in as of May 31, 2011 and thus the benefit no longer includes compensation increases. The 4.50 percent rate for 2020 is for the supplemental executive retirement plan only; for and since 2021, there has been no compensation increase as subsequent to November 27, 2021, there were no active employees in the supplemental executive retirement plan.

The discount rate assumption is determined using an actuarial yield curve approach, which results in a discount rate that reflects the characteristics of the plan. The approach identifies a broad population of corporate bonds that meet the quality and size criteria for the particular plan. We use this approach rather than a specific index that has a certain set of bonds that may or may not be representative of the characteristics of our particular plan. A higher discount rate reduces the present value of the pension obligations. The discount rate for the U.S. pension plan was 5.36 percent at December 3, 2022, 2.76 percent at November 27, 2021 and 2.53 percent at November 28, 2020. Net periodic pension cost for a given fiscal year is based on assumptions developed at the end of the previous fiscal year. A discount rate change of 0.5 percentage points at December 3, 2022 would impact U.S. pension and other postretirement plan (income) expense by approximately ($11) (pre-tax) in fiscal 2023. Discount rates for non-U.S. plans are determined in a manner consistent with the U.S. plans.

For the U.S. pension plan, we adopted the Adjusted Pri-2012 base mortality table projected generationally using scale MP-2021.

The expected long-term rate of return on plan assets assumption for the U.S. pension plan was 7.00 percent in 2022, 7.25 percent in 2021 and 7.50 in 2020. Our expected long-term rate of return on U.S. plan assets was based on our target asset allocation assumption of 55 percent equities and 45 percent fixed-income. Management, in conjunction with our external financial advisors, determines the expected long-term rate of return on plan assets by considering the expected future returns and volatility levels for each asset class that are based on historical returns and forward-looking observations. For 2022, the expected long-term rate of return on the target equities allocation was 8.50 percent and the expected long-term rate of return on the target fixed-income allocation was 5.60 percent. The total plan rate of return assumption included an estimate of the effect of diversification and the plan expense. A change of 0.5 percentage points for the expected return on assets assumption would impact U.S. net pension and other postretirement plan expense by approximately $2,238 (pre-tax).

Management, in conjunction with our external financial advisors, uses the actual historical rates of return of the asset categories to assess the reasonableness of the expected long-term rate of return on plan assets.

The expected long-term rate of return on plan assets assumption for non-U.S. pension plans was a weighted-average of 3.49 percent in 2022 compared to 6.15 percent in 2021 and 6.23 percent in 2020. The expected long-term rate of return on plan assets assumption used in each non-U.S. plan is determined on a plan-by-plan basis for each local jurisdiction and is based on expected future returns for the investment mix of assets currently in the portfolio for that plan. Management, in conjunction with our external financial advisors, develops expected rates of return for each plan, considers expected long-term returns for each asset category in the plan, reviews expectations for inflation for each local jurisdiction, and estimates the effect of active management of the plan's assets. Our largest non-U.S. pension plans are in the United Kingdom and Germany. The expected long-term rate of return on plan assets for the United Kingdom was 2.50 percent and the expected long-term rate of return on plan assets for Germany was 4.50 percent. Management, in conjunction with our external financial advisors, uses actual historical returns of the asset portfolio to assess the reasonableness of the expected rate of return for each plan.

Assumed health care trend rates	2022	2021	2020
Health care cost trend rate assumed for next year	**6.50%**	6.50%	6.75%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	**5.75%**	5.00%	5.00%
Fiscal year that the rate reaches the ultimate trend rate	**2026**	2028	2028

The asset allocation for the company's U.S. and non-U.S. pension plans at the end of 2022 and 2021 follows.

	U.S. Pension Plans			Non-U.S. Pension Plans			Other Postretirement Plans		
	Target	Percentage of Plan Assets at Year-End		Target	Percentage of Plan Assets at Year-End		Target	Percentage of Plan Assets at Year-End	
Asset Category	2022	2022	2021	2022	2022	2021	2022	2022	2021
Equities	55.0%	53.1%	57.7%	24.8%	25.5%	21.3%	0.0%	0.0%	0.0%
Fixed income	45.0%	45.8%	40.1%	75.2%	70.0%	67.0%	0.0%	0.0%	0.0%
Insurance	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%	98.9%	99.8%
Cash[1]	0.0%	1.0%	2.2%	0.0%	4.5%	11.7%	0.0%	1.1%	0.2%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Plan Asset Management

Plan assets are held in trust and invested in mutual funds, separately managed accounts and other commingled investment vehicles holding U.S. and non-U.S. equity securities, fixed income securities and other investment classes. We employ a total return approach whereby a mix of equities and fixed income investments are used to maximize the long-term return of plan assets for a prudent level of risk. Futures and options may also be used to enhance risk-adjusted long-term returns while improving portfolio diversification and duration. Risk management is accomplished through diversification across asset classes, utilization of multiple investment managers and general plan-specific investment policies. Risk tolerance is established through careful consideration of the plan liabilities, plan funded status and our assessment of our overall liquidity position. This asset allocation policy mix is reviewed annually and actual versus target allocations are monitored regularly and rebalanced on an as-needed basis. Plan assets are invested using a combination of active and passive investment strategies. Passive, or "indexed" strategies, attempt to mimic rather than exceed the investment performance of a market benchmark. The plans' active investment strategies employ multiple investment management firms which in aggregate cover a range of investment styles and approaches. Performance is monitored and compared to relevant benchmarks on a regular basis.

The U.S. pension plans consist of two plans: a pension plan and a supplemental executive retirement plan ("SERP"). There were no assets in the SERP in 2022 and 2021. Consequently, all of the data disclosed in the asset allocation table for the U.S. pension plans pertain to our U.S. pension plan.

During 2022, we maintained our assets within the allowed ranges of the target asset allocation mix of 55 percent equities and 45 percent fixed income plus or minus 5 percent and continued our focus to reduce volatility of plan assets in future periods and to more closely match the duration of the assets with the duration of the liabilities of the plan.

The non-U.S. pension plans consist of all the pension plans administered by us outside the U.S., principally consisting of plans in Germany, the United Kingdom, France and Canada. During 2022, we maintained our assets for the non-U.S. pension plans at the specific target asset allocation mix determined for each plan plus or minus the allowed rate and continued our focus to reduce volatility of plan assets in future periods and to more closely match the duration of the assets with the duration of the liabilities of the individual plans. We plan to maintain the portfolios at their respective target asset allocations in 2023.

Other postretirement benefits plans consist of two U.S. plans: a retiree medical health care plan and a group term life insurance plan. There were no assets in the group term life insurance plan for 2022 and 2021. Consequently, all of the data disclosed in the asset allocation table for other postretirement plans pertain to our retiree medical health care plan. Our investment strategy for other postretirement benefit plans is to own insurance policies that maintain an asset allocation nearly completely in equities. These equities are invested in a passive portfolio indexed to the S&P 500.

Fair Value of Plan Assets

The following table presents plan assets categorized within a three-level fair value hierarchy as described in Note 13.

	December 3, 2022			
U.S. Pension Plans	**Level 1**	**Level 2**	**Level 3**	**Total Assets**
Equities	$ -	$ 152,084	$ 21,525	$ 173,609
Fixed income	-	126,114	23,547	149,661
Insurance	-	-	179	179
Cash	3,337	-	-	3,337
Total categorized in the fair value hierarchy	3,337	278,198	45,251	326,786
Non-U.S. Pension Plans	**Level 1**	**Level 2**	**Level 3**	**Total Assets**
Equities	$ 28,422	$ -	$ -	$ 28,422
Fixed income	41,515	-	703	42,218
Cash	491	-	-	491
Total categorized in the fair value hierarchy	70,428	-	703	71,131
Other investments measured at NAV1				70,777
Total	$ 70,428	$ -	$ 703	$ 141,908
Other Postretirement Benefits	**Level 1**	**Level 2**	**Level 3**	**Total Assets**
Insurance	$ -	$ -	$ 119,446	$ 119,446
Cash	1,336	-	-	1,336
Total	$ 1,336	$ -	$ 119,446	$ 120,782

	November 27, 2021			
U.S. Pension Plans	**Level 1**	**Level 2**	**Level 3**	**Total Assets**
Equities	$ -	$ 236,557	$ -	$ 236,557
Fixed income	-	164,133	186	164,319
Cash	8,935	-	-	8,935
Total categorized in the fair value hierarchy	8,935	400,690	186	409,811

Non-U.S. Pension Plans	Level 1	Level 2	Level 3	Total Assets
Equities	$ 35,117	$ -	$ -	$ 35,117
Fixed income	48,243	5,285	749	54,277
Cash	4,399	-	-	4,399
Total categorized in the fair value hierarchy	87,759	5,285	749	93,793
Other investments measured at NAV1				122,830
Total	$ 87,759	$ 5,285	$ 749	$ 216,623

Other Postretirement Benefits	Level 1	Level 2	Level 3	Total Assets
Insurance	$ -	$ -	$ 135,484	$ 135,484
Cash	217	-	-	217
Total	$ 217	$ -	$ 135,484	$ 135,701

[1] In accordance with ASC Topic 820-10, *Fair Value Measurement*, certain investments that are measured at NAV (Net Asset Value per share) (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts represented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the statement of financial position.

[2] Negative cash for 2021 represents unsettled pending trades within an investment that are classified in cash and cash equivalents until settled.

The definitions of fair values of our pension and other postretirement benefit plan assets at December 3, 2022 and November 27, 2021 by asset category are as follows:

Equities—Primarily publicly traded common stock for purposes of total return and to maintain equity exposure consistent with policy allocations. Investments include: (i) U.S. and non-U.S. equity securities and mutual funds valued at closing prices from national exchanges; and (ii) commingled funds valued at unit values or net asset values provided by the investment managers, which are based on the fair value of the underlying investments. Funds valued at net asset value have various investment strategies including seeking maximum total returns consistent with prudent investment management, seeking current income consistent with preservation of capital and daily liquidity and seeking to approximate the risk and return characterized by a specific index fund. There are no restrictions for redeeming holdings out of these funds and the funds have no unfunded commitments.

Fixed income—Primarily corporate and government debt securities for purposes of total return and managing fixed income exposure to policy allocations. Investments include (i) mutual funds valued at closing prices from national exchanges, (ii) corporate and government debt securities valued at closing prices from national exchanges, (iii) commingled funds valued at unit values or net asset value provided by the investment managers, which are based on the fair value of the underlying investments, and (iv) an annuity contract, the value of which is determined by the provider and represents the amount the plan would receive if the contract were cashed out at year-end.

Insurance—Insurance contracts for purposes of funding postretirement medical benefits. Fair values are the cash surrender values as determined by the providers which are the amounts the plans would receive if the contracts were cashed out at year end.

Cash–Cash balances on hand, accrued income and pending settlements of transactions for purposes of handling plan payments. Fair values are the cash balances as reported by the Trustees of the plans.

The following is a roll forward of the Level 3 investments of our pension and postretirement benefit plan assets during the years ended December 3, 2022 and November 27, 2021:

	Fixed Income	
U.S. Pension Plans	**2022**	**2021**
Level 3 balance at beginning of year	$ **186**	$ 205
Net transfers into / (out of) level 3	**16,564**	-
Purchases, sales, issuances and settlements, net	**28,501**	(19)
Level 3 balance at end of year	$ **45,251**	$ 186

	Fixed Income	
Non-U.S. Pension Plans	**2022**	**2021**
Level 3 balance at beginning of year	$ **749**	$ 770
Net transfers into / (out of) level 3	**7**	64
Net (losses)/gains	**(1)**	(43)
Currency change effect	**(52)**	(42)
Level 3 balance at end of year	$ **703**	$ 749

	Insurance	
Other Postretirement Benefits	**2022**	**2021**
Level 3 balance at beginning of year	$ **135,484**	$ 108,406
Net transfers into / (out of) level 3	**(1,992)**	(1,658)
Purchases, sales, issuances and settlements, net	**(1,122)**	(1,093)
Net (losses)/gains	**(12,924)**	29,829
Level 3 balance at end of year	$ **119,446**	$ 135,484

Note 11: Income Taxes

Income before income taxes and income from equity method investments	2022	2021	2020
United States	$ **63,718**	$ 14,989	$ 20,328
Non-U.S.	**188,210**	201,862	138,028
Total	$ **251,928**	$ 216,851	$ 158,356

Components of the provision for income tax expense (benefit)	2022	2021	2020
Current:			
U.S. federal	$ **12,181**	$ 10,310	$ 5,243
State	**3,389**	2,265	1,320
Non-U.S.	**63,750**	57,801	56,542
	79,320	70,376	63,105
Deferred:			
U.S. federal	**8,150**	(6,891)	(4,709)
State	**(1,767)**	(350)	(4,111)
Non-U.S.	**(8,517)**	(102)	(12,364)
	(2,134)	(7,343)	(21,184)
Total	$ **77,186**	$ 63,033	$ 41,921

Reconciliation of effective income tax	2022	2021	2020
Tax at statutory U.S. federal income tax rate	$ **52,760**	$ 45,539	$ 33,255
State income taxes, net of federal benefit	**1,252**	1,444	(2,104)
Foreign dividend repatriation	**2,596**	1,104	900
Foreign operations	**1,868**	19,673	(563)
Executive compensation over $1.0 million	**2,847**	2,507	1,420
Non-U.S. stock option expense	**525**	575	358
Change in valuation allowance	**3,187**	(9,572)	5,925
Research and development tax credit	**(927)**	(993)	(906)
Foreign-derived intangible income	**(2,786)**	(2,617)	(1,396)
Global intangible low-taxed income	**1,890**	2,334	1,932
Provision to return	**840**	1,122	1,704
Cross currency swap	**7,020**	3,931	(6,748)
Contingency reserve	**5,909**	(2,139)	8,287
Other	**205**	125	(143)
Total income tax expense	$ **77,186**	$ 63,033	$ 41,921

Deferred income tax balances at each year-end related to:	2022	2021
Deferred tax assets:		
Pension and other post-retirement benefit plans	$ **6,752**	$ 12,118
Employee benefit costs	**25,196**	26,799
Foreign tax credit carryforward	**7,884**	7,309
Tax loss carryforwards	**22,948**	24,071
Leases	**8,538**	8,590
Hedging activity	**13,299**	2,623
Interest deduction limitation	**17,736**	12,428
Other	**28,840**	27,410
Gross deferred tax assets	**131,193**	121,348
Less: valuation allowance	**(14,424)**	(11,341)
Total net deferred tax assets	**116,769**	110,007
Deferred tax liability:		
Depreciation and amortization	**(215,219)**	(207,726)
Pension and other post-retirement benefit plans	**(37,362)**	(36,042)
Leases	**(8,329)**	(8,524)
Total deferred tax liability	**(260,910)**	(252,292)
Net deferred tax liability	$ **(144,141)**	$ (142,285)

The difference between the change in the deferred tax assets in the balance sheet and the deferred tax provision is primarily due to the defined benefit pension plan adjustment and floating-to-fixed hedges recorded in accumulated other comprehensive income (loss).

Valuation allowances primarily relate to foreign net operating loss carryforwards and branch foreign tax credit carryforwards where the future potential benefits do not meet the more-likely-than-not realization test. The increase in the valuation allowance is primarily related to a decrease in foreign net operating losses for which the Company does not expect to receive a full tax benefit.

Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those deferred tax assets and liabilities are expected to be realized or settled. We record a valuation allowance to reduce deferred tax assets to the amount that is believed more-likely-than-not to be realized. We believe it is more-likely-than-not that reversal of deferred tax liabilities and forecasted income will be sufficient to fully recover the net deferred tax assets not already offset by a valuation allowance. In the event that all or part of the gross deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

U.S. income taxes have not been provided on approximately $1,119,823 of undistributed earnings of non-U.S. subsidiaries. We intend to indefinitely reinvest these undistributed earnings. Cash available in the United States has historically been sufficient and we expect it will continue to be sufficient to fund U.S. cash flow requirements. In the event these earnings are later distributed to the U.S., such distributions would likely result in additional U.S. tax.

While non-U.S. operations have been profitable overall, there are cumulative tax losses of $77,315 in various countries. These tax losses can be carried forward to offset the income tax liabilities on future income in these countries. Cumulative tax losses of $58,762 can be carried forward indefinitely, while the remaining $18,553 of tax losses must be utilized during 2023 to 2040.

The U.S. has a branch foreign tax credit carryforward of $5,042. A valuation allowance has been recorded against this foreign tax credit carryforward to reflect that this amount is not more-likely-than-not to be realized.

The table below sets forth the changes to our gross unrecognized tax benefit as a result of uncertain tax positions, excluding accrued interest. We do not anticipate that the total unrecognized tax benefits will change significantly within the next twelve months.

	2022	2021
Balance at beginning of year	$ **13,281**	$ 14,569
Tax positions related to the current year:		
Additions	**469**	401
Tax positions related to prior years:		
Additions	**5,885**	1,323
Reductions	**(1,019)**	(950)
Settlements	**-**	(161)
Lapses in applicable statutes of limitation	**(1,034)**	(1,901)
Balance at end of year	$ **17,582**	$ 13,281

Included in the balance of unrecognized tax benefits as of December 3, 2022 and November 27, 2021 are potential benefits of $12,663 and $8,888 respectively, that, if recognized, would affect the effective tax rate.

We report accrued interest and penalties related to unrecognized tax benefits in income tax expense. For the year ended December 3, 2022, we recognized a net benefit for interest and penalties of $2,760 relating to unrecognized tax benefits and had net accumulated accrued interest and penalties of $6,275 as of December 3, 2022. For the year ended November 27, 2021, we recognized a net benefit for interest and penalties of $703 relating to unrecognized tax benefits and had net accumulated accrued interest and penalties of $2,817 as of November 27, 2021.

We are subject to U.S. federal income tax as well as income tax in numerous state and foreign jurisdictions. We are no longer subject to U.S. federal tax examination for years prior to 2019 or Swiss income tax examination for years prior to 2018. During the second quarter of 2016, H.B. Fuller (China) Adhesives, Ltd. was notified of a transfer pricing audit covering the calendar years 2005 through 2014. We are in various stages of examination and appeal in other foreign jurisdictions. Although the final outcomes of these examinations cannot currently be determined, we believe that we have recorded adequate liabilities with respect to these examinations.

Note 12: Financial Instruments

Overview

As a result of being a global enterprise foreign currency exchange rates and fluctuations in those rates may affect the Company's net investment in foreign subsidiaries and our earnings, cash flows and financial position are exposed to foreign currency risk from foreign currency denominated receivables and payables.

We use foreign currency forward contracts, cross-currency swaps, interest rate swaps and net investment hedges to manage risks associated with foreign currency exchange rates and interest rates. We do not hold derivative financial instruments of a speculative nature or for trading purposes. We record derivatives as assets and liabilities on the balance sheet at fair value. Changes in fair value are recognized immediately in earnings unless the derivative qualifies and is designated as a hedge. Cash flows from derivatives are classified in the Consolidated Statement of Cash Flows in the same category as the cash flows from the items subject to designated hedge or undesignated (economic) hedge relationships. The company evaluates hedge effectiveness at inception and on an ongoing basis. If a derivative is no longer expected to be effective, hedge accounting is discontinued. Hedge ineffectiveness, if any, is recorded in earnings.

We are exposed to credit risk in the event of nonperformance of counterparties for foreign currency forward exchange contracts and interest rate swap agreements. We select investment-grade multinational banks and financial institutions as counterparties for derivative transactions and monitor the credit quality of each of these banks on a periodic basis as warranted. We do not anticipate nonperformance by any of these counterparties, and valuation allowances, if any, are *de minimis*.

Cash Flow Hedges

October 20, 2017, we entered into four cross-currency swap agreements to convert a notional amount of $267,860 of foreign currency denominated intercompany loans into U.S. dollars, which matured on October 20, 2022. The swaps were designated as cash flow hedges for accounting treatment. The lesser amount between the cumulative change in the fair value of the actual swaps and the cumulative change in the fair value of hypothetical swaps is recorded in accumulated other comprehensive income (loss) in the Consolidated Balance Sheets and in other net cash provided by operating activities in the Consolidated Statement of Cash Flows. The differences between the cumulative change in the fair value of the actual swaps and the cumulative change in the fair value of hypothetical swaps are recorded as other income, net in the Consolidated Statements of Income. In a perfectly effective hedge relationship, the two fair value calculations would exactly offset each other. Any difference in the calculation represents hedge ineffectiveness.

On February 27, 2018, we entered into an interest rate swap agreement to convert $200,000 of our $2,150,000 Term Loan B to a fixed interest rate of 4.589 percent. During the second quarter of 2021, we settled a portion of this interest rate swap as the debt underlying this swap was less than the swap value due to debt paydown. We settled the ineffective portion of the interest rate swap by making a cash payment of $378 and recorded that payment to interest expense in our Consolidated Statements of Income during the second quarter of 2021. On October 20, 2017, we entered into interest rate swap agreements to convert $1,050,000, which amortized down to $800,000 on October 20, 2021, of our $2,150,000 Term Loan B to a fixed interest rate of 4.0275 percent. These interest rate swap agreements matured on October 20, 2022 and we have no interest rate swap agreements on our Term Loan B as of December 3, 2022.

The amounts of pretax gains (losses) recognized in comprehensive income related to derivative instruments designated as cash flow hedges are as follows:

	December 3, 2022	November 27, 2021	November 28, 2020
Cross-currency swap contracts	$ (3,536)	$ (4,554)	$ 6,307
Interest rate swap contracts	$ 13,148	$ 20,109	$ (15,618)
Net investment hedges	$ (54,040)	-	-

Fair Value Hedges

On February 12, 2021, we entered into interest rate swap agreements to convert our $300,000 Public Notes that were issued on October 20, 2020 to a variable interest rate of 1-month LIBOR plus 3.28 percent. See Note 7 for further discussion on the issuance of our Public Notes. These interest rate swap agreements mature on October 15, 2028. The combined fair value of the interest rate swaps was a liability of $42,542 at December 3, 2022, and was included in other liabilities in the Consolidated Balance Sheets. The swaps were designated for hedge accounting treatment as fair value hedges. We apply the short cut method and assume hedge effectiveness. Changes in the fair value of a hypothetically perfect swap with terms that match the critical terms of our $300,000 fixed rate Public Notes are compared with the change in the fair value of the swaps. On February 14, 2017, we entered into interest rate swap agreements to convert $150,000 of our $300,000 Public Notes that were issued on February 14, 2017 to a variable interest rate of 1-month LIBOR plus 1.86 percent. The swap was designated for hedge accounting treatment as fair value hedges. We applied the hypothetical derivative method to assess hedge effectiveness for this interest rate swap. Changes in the fair value of a hypothetically perfect swap with terms that match the critical terms of our $150,000 fixed rate Public Notes are compared with the change in the fair value of the swaps. On May 1, 2020, we terminated the swap agreement. Upon termination, we received $15,808 in cash. The remaining swap liability will be accounted for as a discount on long-term debt and will be amortized to interest expense over the remaining life of the Public Notes of seven years.

Net Investment Hedges

On October 17, 2022, we entered into a float-to-float cross-currency interest rate swap agreement with a notional amount of €307,173 maturing in October 2028. On October 20, 2022, we entered into fixed-to-fixed cross-currency interest rate swap agreements for a total notional amount of €300,000 with tranches maturing in August 2025, August 2026 and February 2027. As of December 3, 2022, the combined fair value of the swaps was a liability of $54,046 and was included in other liabilities in the Consolidated Balance Sheets. The cross-currency interest rate swaps hedge a portion of the Company's investment in Euro denominated foreign subsidiaries.

The swaps are designated as net investment hedges for accounting treatment. The net gains or losses attributable to changes in spot exchange rates are recorded in the cumulative translation adjustment within other comprehensive income (loss). The gains or losses are reclassified into earnings upon a liquidation event or deconsolidation of the foreign subsidiary. Any ineffective portions of net investment hedges are reclassified from accumulated other comprehensive income (loss) into earnings during the period of change. The amount in accumulated other comprehensive income (loss) related to net investment hedge cross-currency swaps was a loss of $40,743 as of December 3, 2022. In 2022, the Company did not reclassify any gains or losses into earnings from net investment hedges and we do not expect to reclassify any such gain or loss into earnings within the next twelve months. No amounts related to net investment hedges have been excluded from the assessment of hedge effectiveness.

Derivatives Not Designated As Hedging Instruments

The company uses foreign currency forward contracts to offset its exposure to the change in value of certain foreign currency denominated assets and liabilities held at foreign subsidiaries that are remeasured at the end of each period. Although the contracts are effective economic hedges, they are not designated as accounting hedges. Foreign currency forward contracts are recorded as assets and liabilities on the balance sheet at fair value. Changes in the value of these derivatives are recognized immediately in earnings, thereby offsetting the current earnings effect of the related foreign currency denominated assets and liabilities. See Note 13 for fair value amounts of these derivative instruments.

As of December 3, 2022, we had forward foreign currency contracts maturing between December 5, 2022 and November 21, 2023. The mark-to-market effect associated with these contracts was largely offset by the underlying transaction gains and losses resulting from the foreign currency exposures for which these contracts relate.

The amounts of pretax gains (losses) recognized in other income, net related to derivative instruments not designated as hedging instruments are as follows:

	December 3, 2022	November 27, 2021	November 28, 2020
Foreign currency forward contracts	$ 5,711	$ (357)	$ (2,908)

Concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of entities in the customer base and their dispersion across many different industries and countries. As of December 3, 2022, there were no significant concentrations of credit risk.

Note 13: Fair Value Measurements

Overview

Estimates of fair value for financial assets and liabilities are based on the framework established in the accounting guidance for fair value measurements. The framework defines fair value, provides guidance for measuring fair value and requires certain disclosures. The framework discusses valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flow) and the cost approach (cost to replace the service capacity of an asset or replacement cost). The framework utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3: Unobservable inputs that reflect management's assumptions, and include situations where there is little, if any, market activity for the asset or liability.

Balances Measured at Fair Value on a Recurring Basis

The following table presents information about our financial assets and liabilities that are measured at fair value on a recurring basis as of December 3, 2022 and November 27, 2021, and indicates the fair value hierarchy of the valuation techniques utilized to determine such fair value.

		Fair Value Measurements Using:		
Description	**December 3, 2022**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Marketable securities	$ 4,013	$ 4,013	$ -	$ -
Foreign exchange contract assets	10,282	-	10,282	-
Liabilities:				
Foreign exchange contract liabilities	$ 4,570	$ -	$ 4,570	$ -
Interest rate swaps, cash flow hedge liabilities	42,542		42,542	
Net investment hedge	54,046	-	54,046	-
Contingent consideration liabilities	1,977	-	-	1,977

		Fair Value Measurements Using:		
Description	**November 27, 2021**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Marketable securities	$ 2,079	$ 2,079	$ -	$ -
Foreign exchange contract assets	5,725	-	5,725	-
Cross-currency cash flow hedge assets	14,496	-	14,496	-
Liabilities:				
Foreign exchange contract liabilities	$ 6,082	$ -	$ 6,082	$ -
Cross-currency cash flow hedge liabilities	12,366	-	12,366	-
Interest rate swaps, cash flow hedge liabilities	10,539	-	10,539	-
Contingent consideration liability	8,100	-	-	8,100

The valuation of our contingent consideration liability related to the acquisitions of ZKLT and TissueSeal was $1,477 and $500, respectively, as of December 3, 2022. As of December 3, 2022, the agreement provisions for the D.H.M. contingent consideration were met, and as a result, $8,122 was paid during 2022. Adjustments to the fair value of contingent consideration are recorded to selling, general and administrative expenses in the Statement of Income. See Note 2 for further discussion regarding our acquisitions.

Contingent consideration liability	**2022**
Level 3 balance at beginning of year	$ 8,100
Acquisitions	1,977
Payment of contingent consideration	(8,122)
Mark to market adjustment	22
Level 3 balance at end of year	$ 1,977

Balances Measured at Fair Value on a Nonrecurring Basis

We measure certain assets and liabilities at fair value on a nonrecurring basis. These assets include intangible assets acquired in an acquisition. The identified intangible assets of customer relationships, technology and tradenames acquired in connection with our acquisitions were measured using unobservable (Level 3) inputs. The fair value of the intangible assets was calculated using either the income or cost approach. Significant inputs include estimated revenue growth rates, gross margins, operating expenses, attrition rate, royalty rate and discount rate.

See Note 2 for further discussion regarding our acquisitions.

See Note 7 for discussion regarding the fair value of debt.

Note 14: Commitments and Contingencies

Environmental Matters

From time to time, we become aware of compliance matters relating to, or receive notices from, federal, state or local entities regarding possible or alleged violations of environmental, health or safety laws and regulations. We review the circumstances of each individual site, considering the number of parties involved, the level of potential liability or our contribution relative to the other parties, the nature and magnitude of the hazardous substances involved, the method and extent of remediation, the estimated legal and consulting expense with respect to each site and the time period over which any costs would likely be incurred. Also, from time to time, we are identified as a potentially responsible party ("PRP") under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") and/or similar state laws that impose liability for costs relating to the clean up of contamination resulting from past spills, disposal or other release of hazardous substances. We are also subject to similar laws in some of the countries where current and former facilities are located. Our environmental, health and safety department monitors compliance with applicable laws on a global basis. To the extent we can reasonably estimate the amount of our probable liabilities for environmental matters, we establish an undiscounted financial provision. We recorded liabilities of $5,754 and $6,603 as of December 3, 2022 and November 27, 2021, respectively, for probable and reasonably estimable environmental remediation costs. Of the amount reserved, $2,789 and $3,333 as of December 3, 2022 and November 27, 2021, respectively, is attributable to a facility we own in Simpsonville, South Carolina as a result of our Royal Adhesives acquisition that is a designated site under CERCLA.

Currently we are involved in various environmental investigations, clean up activities and administrative proceedings and lawsuits. In particular, we are currently deemed a PRP in conjunction with numerous other parties, in a number of government enforcement actions associated with landfills and/or hazardous waste sites. As a PRP, we may be required to pay a share of the costs of investigation and clean up of these sites. In addition, we are engaged in environmental remediation and monitoring efforts at a number of current and former operating facilities. While uncertainties exist with respect to the amounts and timing of the ultimate environmental liabilities, based on currently available information, we have concluded that these matters, individually or in the aggregate, will not have a material adverse effect on our results of operations, financial condition or cash flow.

Other Legal Proceedings

From time to time and in the ordinary course of business, we are a party to, or a target of, lawsuits, claims, investigations and proceedings, including product liability, personal injury, contract, patent and intellectual property, environmental, health and safety, tax and employment matters. While we are unable to predict the outcome of these matters, we have concluded, based upon currently available information, that the ultimate resolution of any pending matter, individually or in the aggregate, including the asbestos litigation described in the following paragraphs, will not have a material adverse effect on our results of operations, financial condition or cash flow.

We have been named as a defendant in lawsuits in which plaintiffs have alleged injury due to products containing asbestos manufactured more than 35 years ago. The plaintiffs generally bring these lawsuits against multiple defendants and seek damages (both actual and punitive) in very large amounts. In many cases, plaintiffs are unable to demonstrate that they have suffered any compensable injuries or that the injuries suffered were the result of exposure to products manufactured by us. We are typically dismissed as a defendant in such cases without payment. If the plaintiff presents evidence indicating that compensable injury occurred as a result of exposure to our products, the case is generally settled for an amount that reflects the seriousness of the injury, the length, intensity and character of exposure to products containing asbestos, the number and solvency of other defendants in the case, and the jurisdiction in which the case has been brought.

A significant portion of the defense costs and settlements in asbestos-related litigation is paid by third parties, including indemnification pursuant to the provisions of a 1976 agreement under which we acquired a business from a third party. Currently, this third party is defending and paying settlement amounts, under a reservation of rights, in most of the asbestos cases tendered to the third party.

In addition to the indemnification arrangements with third parties, we have insurance policies that generally provide coverage for asbestos liabilities, including defense costs. Historically, insurers have paid a significant portion of our defense costs and settlements in asbestos-related litigation. However, certain of our insurers are insolvent. We have entered into cost-sharing agreements with our insurers that provide for the allocation of defense costs and settlements and judgments in asbestos-related lawsuits. These agreements require, among other things, that we fund a share of settlements and judgments allocable to years in which the responsible insurer is insolvent.

A summary of the number of and settlement amounts for asbestos-related lawsuits and claims is as follows:

	Year Ended December 3, 2022	Year Ended November 27, 2021	Year Ended November 28, 2020
Lawsuits and claims settled	7	2	4
Settlement amounts	$ 296	$ 85	$ 130
Insurance payments received or expected to be received	$ 195	$ 55	$ 88

We do not believe that it would be meaningful to disclose the aggregate number of asbestos-related lawsuits filed against us because relatively few of these lawsuits are known to involve exposure to asbestos-containing products that we manufactured. Rather, we believe it is more meaningful to disclose the number of lawsuits that are settled and result in a payment to the plaintiff. To the extent we can reasonably estimate the amount of our probable liabilities for pending asbestos-related claims, we establish a financial provision and a corresponding receivable for insurance recoveries.

Based on currently available information, we have concluded that the resolution of any pending matter, including asbestos-related litigation, individually or in the aggregate, will not have a material adverse effect on our results of operations, financial condition or cash flow.

Note 15: Segments

We are required to report segment information in the same way that we internally organize our business for assessing performance and making decisions regarding allocation of resources. Revenue and operating income of each of our segments are regularly reviewed by our chief operating decision maker to make decisions about resources to be allocated to the segments and assess their performance. Segment operating income is identified as gross profit less SG&A expenses. Corporate expenses, other than those included in Corporate Unallocated, are allocated to each operating segment. Consistent with our internal management reporting, Corporate Unallocated amounts include business acquisition and integration costs, organizational restructuring charges and project costs associated with our implementation of Project ONE. Corporate assets are not allocated to the operating segments. Inter-segment revenues are recorded at cost plus a markup for administrative costs.

We have three reportable segments: Hygiene, Health and Consumable Adhesives, Engineering Adhesives and Construction Adhesives. The business components within each operating segment are managed to maximize the results of the overall operating segment rather than the results of any individual business component of the operating segment. Results of individual components of each operating segment are subject to numerous allocations of segment-wide costs that may or may not have been focused on that particular component for a particular reporting period. The costs for these allocated resources are not tracked on a "where-used" basis as financial performance is assessed at the total operating segment level.

Reportable operating segment financial information for all periods presented is as follows:

		2022		2021		2020
Net revenue						
Hygiene, Health and Consumable Adhesives	$	**1,695,934**	$	1,472,756	$	1,332,786
Engineering Adhesives		**1,532,639**		1,371,756		1,088,313
Construction Adhesives		**520,610**		433,519		369,170
Total	$	**3,749,183**	$	3,278,031	$	2,790,269
Segment operating income						
Hygiene, Health and Consumable Adhesives	$	**165,786**	$	138,366	$	130,789
Engineering Adhesives		**168,873**		135,913		103,974
Construction Adhesives		**22,989**		14,148		11,148
Total segment		357,648		288,427		245,911
Corporate Unallocated[1]		**(34,930)**		(35,815)		(27,594)
Total	$	**322,718**	$	252,612	$	218,317
Depreciation and amortization						
Hygiene, Health and Consumable Adhesives	$	**46,374**	$	45,919	$	44,329
Engineering Adhesives		**58,307**		61,082		58,102
Construction Adhesives		**41,713**		35,002		35,811
Corporate Unallocated[1]		**582**		1,171		575
Total	$	**146,976**	$	143,174	$	138,817
Total assets[2]						
Hygiene, Health and Consumable Adhesives	$	**1,488,277**	$	1,370,924		
Engineering Adhesives		**1,610,015**		1,710,000		
Construction Adhesives		**987,610**		810,824		
Corporate		**377,727**		382,782		
Total	$	**4,463,629**	$	4,274,530		
Capital expenditures						
Hygiene, Health and Consumable Adhesives	$	**110,877**	$	60,164		
Engineering Adhesives		**(2,302)**		8,815		
Construction Adhesives		**(5,772)**		3,591		
Corporate		**27,161**		23,519		
Total	$	**129,964**	$	96,089		

[1] Consistent with our internal management reporting, Corporate Unallocated amounts in the tables above include net revenue and charges that are not allocated to the Company's reportable segments.

[2] Segment assets include primarily inventory, accounts receivable, property, plant and equipment, goodwill, intangible assets and other miscellaneous assets. Corporate assets include primarily corporate property, plant and equipment, deferred tax assets, certain investments and other assets.

Reconciliation of segment operating income to income before income taxes and income from equity method investments:

	2022	2021	2020
Segment operating income	$ **322,718**	$ 252,612	$ 218,317
Other income, net	**12,952**	32,855	15,398
Interest expense	**(91,521)**	(78,092)	(86,776)
Interest income	**7,779**	9,476	11,417
Income before income taxes and income from equity method investments	$ **251,928**	$ 216,851	$ 158,356

Financial information about geographic areas

	Net Revenue		
	2022	2021	2020
United States	$ **1,692,903**	$ 1,421,623	$ 1,248,495
China	**462,587**	433,998	351,204
Germany	**419,141**	409,193	330,755
Countries with more than 10 percent of total	**2,574,631**	2,264,814	1,930,454
All other countries with less than 10 percent of total	**1,174,552**	1,013,217	859,815
Total	$ **3,749,183**	$ **3,278,031**	$ 2,790,269

	Property, Plant and Equipment, net		
	2022	2021	2020
United States	$ **375,353**	$ 331,864	$ 297,046
Germany	**107,903**	120,548	131,879
China	**101,563**	96,300	99,513
All other countries with less than 10 percent of total	**148,848**	146,655	142,306
Total	$ **733,667**	$ 695,367	$ 670,744

We view the following disaggregation of net revenue by geographic region as useful to understanding the composition of revenue recognized during the respective reporting periods:

	December 3, 2022				
	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Corporate Unallocated	Total
Americas	$ 1,003,179	$ 630,484	$ 411,951	$ -	$ 2,045,614
EIMEA	471,299	478,573	78,773	-	1,028,645
Asia Pacific	221,456	423,582	29,886	-	674,924
	$ 1,695,934	$ 1,532,639	$ 520,610	$ -	$ 3,749,183

	November 27, 2021				
	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Corporate Unallocated	Total
Americas	$ 826,172	$ 504,626	$ 384,576	$ -	$ 1,715,374
EIMEA	425,324	470,466	22,156	-	917,946
Asia Pacific	221,260	396,664	26,787	-	644,711
	$ 1,472,756	$ 1,371,756	$ 433,519	$ -	$ 3,278,031

	November 28, 2020				
	Hygiene, Health and Consumable Adhesives	Engineering Adhesives	Construction Adhesives	Corporate Unallocated	Total
Americas	$ 736,681	$ 430,866	$ 325,622	$ -	$ 1,493,169
EIMEA	388,271	347,417	20,506	-	756,194
Asia Pacific	207,834	310,030	23,042	-	540,906
	$ 1,332,786	$ 1,088,313	$ 369,170	$ -	$ 2,790,269

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

As of the end of the period covered by this report, management conducted an evaluation, under the supervision and with the participation of our President and Chief Executive Officer and Executive Vice President, Chief Financial Officer, of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 ("Exchange Act")). Based on its evaluation, our management concluded that, as of December 3, 2022, our disclosure controls and procedures were effective (1) to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and (2) to ensure that information require to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to us, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our 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 accounting principles generally accepted in the United States. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance of achieving their control objectives.

Our management assessed the effectiveness of our internal control over financial reporting as of December 3, 2022. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control – Integrated Framework (2013 Framework)*. Based on its assessment, management concluded that, as of December 3, 2022, the Company's internal control over financial reporting was effective. Ernst and Young LLP, an independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting as of December 3, 2022, which is included elsewhere in this Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during our most recently completed fiscal quarter that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information under the headings “Proposal 1 - Election of Directors”, “Delinquent Section 16(a) Reports” and “Corporate Governance - Audit Committee” contained in the company's Proxy Statement for the Annual Meeting of Shareholders to be held on April 6, 2023 (the “2023 Proxy Statement”) is incorporated herein by reference.

The information contained at the end of Item 1. hereof under the heading “Information About Our Executive Officers” is incorporated herein by reference.

Since the date of our 2022 Proxy Statement, there have been no material changes to the procedures by which shareholders may recommend nominees to our Board of Directors.

The company has a code of business conduct applicable to all of its directors and employees, including its principal executive officer, principal financial officer, principal accounting officer, controller and other employees performing similar functions. A copy of the code of business conduct is available under the Investor Relations section of the company’s website at www.hbfuller.com. The company intends to disclose on its website information with respect to any amendment to or waiver from a provision of its code of business conduct that applies to its principal executive officer, principal financial officer, principal accounting officer, controller and other employees performing similar functions within four business days following the date of such amendment or waiver.

Item 11. Executive Compensation

The information under the headings “Executive Compensation,” “Director Compensation” and “CEO Pay Ratio Disclosure” contained in the 2023 Proxy Statement is incorporated herein by reference.

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

The information under the headings “Security Ownership of Certain Beneficial Owners and Management” and "Equity Compensation Plan Information" contained in the 2023 Proxy Statement is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information under the headings “Certain Relationships and Related Transactions” and “Corporate Governance - Director Independence” contained in the 2023 Proxy Statement is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information under the heading “Fees Paid to Independent Registered Public Accounting Firm” contained in the 2023 Proxy Statement is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Documents filed as part of this report:

1. Consolidated Financial Statements

Consolidated Statements of Income for the fiscal years ended December 3, 2022, November 27, 2021, and November 28, 2020.

Consolidated Statements of Comprehensive Income for the fiscal years ended December 3, 2022, November 27, 2021, and November 28, 2020.

Consolidated Balance Sheets as of December 3, 2022 and November 27, 2021.

Consolidated Statements of Total Equity for the fiscal years ended December 3, 2022, November 27, 2021, and November 28, 2020.

Consolidated Statements of Cash Flows for the fiscal years ended December 3, 2022, November 27, 2021, and November 28, 2020.

Notes to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm (PCAOB ID: 42)

2. Financial Statement Schedules

All financial statement schedules are omitted as the required information is inapplicable or the information is presented in the consolidated financial statements or related notes.

3. **Exhibits**

	Item	Incorporation by Reference
3.1	Restated Articles of Incorporation of H.B. Fuller Company, as amended	Exhibit 3.1 to the Quarterly Report on Form 10-Q for the quarter ended September 2, 2006 and Exhibit 3.1 to the Current Report on Form 8-K dated October 12, 2016.
3.2	By-Laws of H.B. Fuller Company	Exhibit 3.1 to the Current Report on Form 8-K dated December 2, 2015.
4.1	Form of Certificate for common stock, par value $1.00 per share	Exhibit 4.1 to the Annual Report on Form 10-K, as amended, for the year ended November 28, 2009.
4.2	Indenture, dated February 14, 2017, between H.B. Fuller Company and U.S. Bank National Association, as Trustee	Exhibit 4.1 to the Current Report on Form 8-K dated February 9, 2017.
4.3	First Supplemental Indenture, dated February 14, 2017, between H.B. Fuller Company and U.S. Bank National Association, as Trustee, relating to the 4.0000% Notes due 2027	Exhibit 4.2 to the Current Report on Form 8-K dated February 9, 2017.
4.4	Amendment No. 1 to First Supplemental Indenture, dated February 14, 2017 between H.B. Fuller Company and U.S. Bank National Association, as Trustee, relating to the 4.0000% Notes due 2027	Exhibit 4.6 to the Current Report on Form 10-K dated January 31, 2018.
4.5	Second Supplemental Indenture, dated October 20, 2020, between H.B. Fuller Company and U.S. Bank National Association, as Trustee, relating to the 4.250% Notes due 2028	Exhibit 4.1 to the Current Report on Form 8-K dated October 20, 2020.
4.6	Form of Global Note representing the 4.000% Notes due 2027 (included in Exhibit 4.3)	Exhibit 4.2 to the Current Report on Form 8-K dated February 9, 2017.
4.7	Form of Global Note representing the 4.250% Notes due 2028 (included in Exhibit 4.5)	Exhibit 4.2 to the Current Report on Form 8-K dated October 20, 2020.
4.8	Description of Securities	Exhibit 4.8 to the Annual Report on Form 10-K dated January 24, 2020.
10.1	Credit Agreement dated as of April 12, 2017 among (i) H.B. Fuller Company, a Minnesota corporation, as Borrower, (ii) certain of its subsidiaries party thereto as Foreign Subsidiary Borrowers, (iii) JPMorgan Chase Bank, N.A., as Administrative Agent, (iv) U.S. Bank National Association, Citibank, N.A., and Morgan Stanley MUFG Loan Partners, LLC, as Co-Syndication Agents, (v) Bank of America, N.A., HSBC Bank USA, National Association, and PNC Bank, National Association, as Co-Documentation Agents, and (vi) various other financial institutions party thereto as Lenders, as amended	Exhibit 10.1 to the Current Report on Form 8-K dated April 12, 2017, Exhibit 10.1 to the Current Report on Form 8-K dated September 29, 2017, and Exhibit 10.1 to the Current Report on Form 8-K dated November 17, 2017.
10.2	Amended and Restated Credit Agreement, dated October 20, 2020, among H.B. Fuller Company and JPMorgan Chase Bank, N.A., as administrative agent and the various other parties named thereto	Exhibit 10.1 to the Current Report on Form 8-K dated October 20, 2020.
10.3	Increasing Lender Supplement, dated January 24, 2022, to the Amended and Restated Credit Agreement dated October 20, 2020, among H.B. Fuller Company, JP Morgan Chase Bank, N.A., as administrative agent, and the lenders party thereto	Exhibit 10.1 to the Current Report on Form 10-Q dated March 24, 2022.
10.4	Amendment No. 1, dated as of February 28, 2022 to the Amended and Restated Credit Agreement dated October 20, 2020, between H.B. Fuller Company and JP Morgan Chase Bank, N.A., as administrative agent	Exhibit 10.2 to the Current Report on Form 10-Q dated March 24, 2022.
10.5	Increasing Lender Supplement, dated March 4, 2022, to the Amended and Restated Credit Agreement dated October 20, 2020, among H.B. Fuller Company, JP Morgan Chase Bank, N.A., as administrative agent, and the lenders party thereto	Exhibit 10.3 to the Current Report on Form 10-Q dated March 24, 2022.
10.6	Guaranty made as of April 12, 2017 by H.B. Fuller Construction Products Inc., a Minnesota corporation as Initial Guarantor, in favor of J.P. Morgan Chase Bank, N.A., as Administrative Agent	Exhibit 10.2 to the Current Report on Form 8-K dated April 12, 2017.
10.7	Term Loan Credit Agreement, dated as of October 20, 2017, by and among H.B. Fuller Company, Morgan Stanley Senior Funding, Inc., as administrative agent, and various other financial institutions party thereto as lenders, as amended	Exhibit 10.1 to the Current Report on Form 8-K dated October 20, 2017 and Exhibit 10.1 to the Current Report on Form 10-Q dated September 28, 2018.
*10.8	Amended and Restated H.B. Fuller Company Year 2000 Stock Incentive Plan	Exhibit 10.1 to the Current Report on Form 8-K dated April 5, 2006.
*10.9	H.B. Fuller Company Supplemental Executive Retirement Plan II – 2008, as amended	Exhibit 10.2 to the Current Report on Form 8-K dated December 19, 2007, Exhibit 10.5 to the Annual Report on Form 10-K for the year ended November 29, 2008, Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended May 28, 2011 and Exhibit 10.9 to the Annual Report on Form 10-K for the year ended November 27, 2021.

*10.10	H.B. Fuller Company Executive Benefit Trust dated October 25, 1993 between H.B. Fuller Company and U.S. Bank, National Association, as Trustee, as amended, relating to the H.B. Fuller Company Supplemental Executive Retirement Plan	Exhibit 10(k) to the Annual Report on Form 10-K for the year ended November 29, 1997, Exhibit 10(k) to the Annual Report on Form 10-K405 for the year ended November 28, 1998, Exhibit 10.3 to the Current Report on Form 8-K dated December 19, 2007 and Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended May 30, 2009.
*10.11	H.B .Fuller Company Key Employee Deferred Compensation Plan (2021 Restatement)	Exhibit 10.11 to the Annual Report on Form 10-K for the year ended November 27, 2021.
*10.12	Form of Change in Control Agreement between H.B. Fuller Company and each of its executive officers	Exhibit 10.11 to the Annual Report on Form 10-K for the year ended November 29, 2008.
*10.13	Form of Change-in-Control Agreement between H.B. Fuller Company and each of its executive officers for agreements entered into after January 24, 2019	Exhibit 10.9 to the Current Report on Form 8-K dated January 24, 2019.
*10.14	Form of Severance Agreement between H.B. Fuller Company and each of its executive officers	Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended May 31, 2008.
*10.15	Form of Non-Qualified Stock Option Agreement under the Amended and Restated H.B. Fuller Company Year 2000 Stock Incentive Plan for awards made on or after January 26, 2012	Exhibit 10.1 to the Current Report on Form 8-K dated January 26, 2012
*10.16	Form of Non-Qualified Stock Option Agreement under the Amended and Restated H.B. Fuller Company Year 2000 Stock Incentive Plan for awards made on or after January 24, 2013	Exhibit 10.1 to the Current Report on Form 8-K dated January 24, 2013.
*10.17	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2013 Master Incentive Plan for awards made on or after January 23, 2014	Exhibit 10.2 to the Current Report on Form 8-K dated January 23, 2014.
*10.18	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2016 Master Incentive Plan for awards made on or after April 7, 2016	Exhibit 10.1 to the Current Report on Form 8-K dated April 6, 2016.
*10.19	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2016 Master Incentive Plan for awards made on or after October 20, 2017	Exhibit 10.2 to the Current Report on Form 8-K dated October 20, 2017.
*10.20	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after April 12, 2018	Exhibit 10.1 to the Current Report on Form 8-K dated April 18, 2018.
*10.21	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after January 24, 2019	Exhibit 10.1 to the Current Report on Form 8-K dated January 24, 2019.
*10.22	Form of Restricted Stock Unit Agreement under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after January 24, 2019	Exhibit 10.3 to the Current Report on Form 8-K dated January 24, 2019.
*10.23	Form of Restricted Stock Unit Agreement for the CEO under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after January 24, 2019	Exhibit 10.4 to the Current Report on Form 8-K dated January 24, 2019.
*10.24	Form of Performance Share Award Agreement under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after January 24, 2019	Exhibit 10.5 to the Current Report on Form 8-K dated January 24, 2019.
*10.25	Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the H.B. Fuller Company 2018 Master Incentive Plan for awards made on or after January 24, 2019	Exhibit 10.6 to the Current Report on Form 8-K dated January 24, 2019.
*10.26	Form of Non-Qualified Stock Option Agreement under the H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 2, 2020	Exhibit 10.1 to the Current Report on Form 8-K dated April 2, 2020.
*10.27	Form of Restricted Stock Unit Award Agreement under the H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 2, 2020	Exhibit 10.2 to the Current Report on Form 8-K dated April 2, 2020.
*10.28	Form of Restricted Stock Unit Award Agreement for the CEO under the H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 2, 2020	Exhibit 10.3 to the Current Report on Form 8-K dated April 2, 2020.
*10.29	Form of Performance Share Award Agreement under the H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 2, 2020	Exhibit 10.4 to the Current Report on Form 8-K dated April 2, 2020.

*10.30	Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 2, 2020	Exhibit 10.5 to the Current Report on Form 8-K dated April 2, 2020.
*10.31	Form of Restricted Stock Unit (CEO) Award Agreement under the H.B. Fuller Company 2020 Master Incentive Plan	Exhibit 10.1 to the Current Report on Form 8-K dated January 27, 2021.
*10.32	Form of Performance-Based Non-Qualified Stock Option (CEO, TSR) Award Agreement under the H.B. Fuller Company 2020 Master Incentive Plan	Exhibit 10.2 to the Current Report on Form 8-K dated January 27, 2021.
*10.33	Form of Non-Qualified Stock Option Agreement under the Amended and Restated H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after January 24, 2022	Exhibit 10.1 to the Current Report on Form 10-K dated January 24, 2022.
*10.34	Form of Restricted Stock Unit Award Agreement under the Amended and Restated H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after January 24, 2022	Exhibit 10.2 to the Current Report on Form 10-K dated January 24, 2022.
*10.35	Form of Performance Share Award Agreement under the Amended and Restated H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after January 24, 2022	Exhibit 10.3 to the Current Report on Form 10-K dated January 24, 2022.
*10.36	Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the Amended and Restated H.B. Fuller Company 2020 Master Incentive Plan for awards made on or after April 7, 2022	Exhibit 10.1 to the Current Report on Form 10-Q dated June 23, 2022.
*10.37	H.B. Fuller Company Defined Contribution Restoration Plan (As Amended and Restated Effective January 1, 2008), as amended	Exhibit 10.4 to the Current Report on Form 8-K dated December 19, 2007 and Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended May 31, 2008. Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended March 2, 2019, Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 1, 2019, and Exhibit 10.43 to the Annual Report on Form 10-K for the year ended November 28, 2020.
*10.38	Fifth Amendment to the H.B. Fuller Company Defined Contribution Restoration Plan (As Amended and Restated Effective January 1, 2008), as amended	Exhibit 10.40 to the Annual Report on Form 10-K for the year ended November 27, 2021.
*10.39	H.B. Fuller Company Directors' Deferred Compensation Plan (2008 Amendment and Restatement), as amended	Exhibit 10.22 to the Annual Report on Form 10-K for the year ended November 29, 2008 and Exhibit 10.23 to the Annual Report on Form 10-K for the year ended November 29, 2008.
*10.40	H.B. Fuller Company 2009 Director Stock Incentive Plan	Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended May 30, 2009.
*10.41	H.B. Fuller Company Management Short-Term Incentive Plan for Executive Officers	Exhibit 10.1 to the Current Report on Form 8-K dated January 15, 2020.

*10.42	Amended and Restated H.B. Fuller Company Annual and Long-Term Incentive Plan	Exhibit 10.1 to the Current Report on Form 8-K dated April 3, 2008
*10.43	H.B. Fuller Company 2013 Master Incentive Plan	Annex B to the H.B. Fuller Company Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on February 27, 2013.
*10.44	H.B. Fuller Company 2016 Master Incentive Plan	Annex B to the H.B. Fuller Company Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on February 24, 2016.
*10.45	H.B. Fuller Company 2018 Master Incentive Plan	Annex B to the H.B. Fuller Company Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on February 28, 2018.
*10.46	Amended and Restated H.B. Fuller Company 2020 Master Incentive Plan	Annex B to the H.B. Fuller Company Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on February 24, 2021.
21	List of Subsidiaries	
23	Consent of Ernst & Young LLP	
24	Power of Attorney	
31.1	302 Certification – Celeste B. Mastin	
31.2	302 Certification – John J. Corkrean	
32.1	906 Certification – Celeste B. Mastin	
32.2	906 Certification – John J. Corkrean	
101	The following materials from the H.B. Fuller Company Annual Report on Form 10-K for the fiscal year ended December 3, 2022 formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) the Consolidated Statements of Income, (ii) the Consolidated Statements of Comprehensive Income, (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Total Equity, (v) the Consolidated Statements of Cash Flows and (vi) the Notes to Consolidated Financial Statements.	
104	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101)	

* Asterisked items are management contracts or compensatory plans or arrangements required to be filed.

(b) See Exhibit Index and Exhibits attached to this Form 10-K.

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.

H.B. FULLER COMPANY

Dated: January 24, 2023

By: /s/ Celeste B. Mastin
CELESTE B. MASTIN
President and Chief Executive Officer

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

Signature	Title
/s/ Celeste B. Mastin CELESTE B. MASTIN	President and Chief Executive Officer and Director (Principal Executive Officer)
/s/ John J. Corkrean JOHN J. CORKREAN	Executive Vice President, Chief Financial Officer (Principal Financial Officer)
/s/ Robert J. Martsching ROBERT J. MARTSCHING	Vice President, Controller (Principal Accounting Officer)
* DANIEL L. FLORNESS	Director
* THOMAS W. HANDLEY	Director
* MICHAEL J. HAPPE	Director
* RUTH S. KIMMELSHUE	Director
CHARLES T. LAUBER	Director
* LEE R. MITAU	Director
* TERESA J. RASMUSSEN	Director
* SRILATA A. ZAHEER	Director
* by /s/ Timothy J. Keenan TIMOTHY J. KEENAN, Attorney in Fact	Director

Dated: January 24, 2023

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Financial Summary (Continued)

Selected Balance Sheet Data[1]

	2013	2014	2015	2016	2017	2018	2019	2020	2021	**2022**
Total assets	$1,873.0	$1,890.3	$2,056.9	$2,066.6	$4,373.2	$4,176.3	$3,985.7	$4,036.7	$4,274.5	**$4,463.6**
Cash and equivalents	$155.1	$77.6	$119.2	$142.2	$194.4	$150.8	$112.2	$100.5	$61.8	**$79.9**
Total debt	$492.9	$574.9	$722.9	$705.7	$2,451.9	$2,247.5	$1,979.1	$1,773.9	$1,616.5	**$1,765.1**
Total H.B. Fuller stockholder equity	$930.1	$899.1	$882.0	$944.5	$1,051.4	$1,152.8	$1,222.3	$1,381.3	$1,596.8	**$1,610.2**

REGULATION G DISCLOSURE AND FOOTNOTES

REGULATION G: The information presented in this report regarding adjusted gross profit, adjusted gross profit margin, adjusted net income attributable to H.B. Fuller, adjusted diluted income per common share (also referred to as EPS), adjusted earnings before interest, taxes, and depreciation and amortization (EBITDA), and adjusted EBITDA margin does not conform to generally accepted accounting principles (GAAP) and should not be construed as an alternative to the reported results determined in accordance with GAAP. Management has included the non-GAAP information to assist in understanding the operating performance of the company and its operating segments as well as the comparability of results. The non-GAAP information provided may not be consistent with the methodologies used by other companies. The table shown inside the front cover of this report provides a reconciliation of non-GAAP information to the most directly comparable measure determined in accordance with U.S. GAAP.

[1] In the fourth quarter of 2018, the company elected to change our method of accounting for certain inventories in the United States from the last-in, first-out method ("LIFO") to weighted-average cost, as discussed in Item 7 in the 2018 Annual Report on Form 10-K. Results have been retrospectively adjusted to reflect this change through 2014. Results prior to 2014 have not been retrospectively adjusted for this change. In the first quarter of 2019, the company adopted new revenue recognition standards and a new accounting standard regarding the timing of income tax recognition for an intercompany sale of assets. Both of these adoptions resulted in an adjustment to beginning equity, as discussed in Item 7 in the 2019 Annual Report on Form 10-K. 2018 balance sheet amounts have been restated for these adoptions. In the first quarter of 2019, the company adopted a new accounting standard requiring that pension expense, other than service cost, be presented as non-operating expenses, while service cost remains in operating expenses. See Item 7 in the 2019 Annual Report on Form 10-K for further discussion of this adoption. Results for 2017 and 2018 have been retrospectively adjusted to reflect this change and results prior to 2016 have not been retrospectively adjusted for this change.

[2] Adjusted net income attributable to H.B. Fuller, adjusted diluted income per common share attributable to H.B. Fuller, adjusted EBITDA, and adjusted EBITDA margin are non-GAAP financial measures. Adjusted net income attributable to H.B. Fuller is defined as net income before the specific adjustments shown in the table on the inside front cover. Adjusted diluted income per common share is defined as adjusted net income attributable to H.B. Fuller divided by the number of diluted common shares. Adjusted EBITDA is defined as net income before interest, income taxes, depreciation, amortization, and the specific adjustments shown in the table on the inside front cover. Adjusted EBITDA margin is defined as adjusted EBITDA divided by net revenue. The table shown on the inside front cover provides a reconciliation of adjusted net income attributable to H.B. Fuller, adjusted diluted income per common share attributable to H.B. Fuller, adjusted EBITDA, and adjusted EBITDA margin to net income attributable to H.B. Fuller, the most directly comparable financial measure determined and reported in accordance with U.S. GAAP.

[3] Adjusted gross profit and adjusted gross profit margin are non-GAAP financial measures. Adjusted gross profit and adjusted gross profit margin are defined as gross profit and gross profit margin excluding the specific adjustments shown in the table on the inside front cover. The table provides a reconciliation of adjusted gross profit and adjusted gross profit margin to gross profit and gross profit margin, the most directly comparable financial measure determined and reported in accordance with U.S. GAAP.

H.B. Fuller

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