



**Graphic
Packaging**
INTERNATIONAL, INC.

Graphic Packaging Holding Annual Report 2023

Form 10-K (NYSE:GPK)

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2022

or

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

COMMISSION FILE NUMBER: 001-33988

Graphic Packaging Holding Company

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

1500 Riveredge Parkway, Suite 100

Atlanta, Georgia

(Address of principal executive offices)

26-0405422

(I.R.S. employer identification no.)

30328

(Zip Code)

(770) 240-7200

Registrant's telephone number, including area code:

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

<u>Title of Each Class</u>	<u>Trading Symbol(s)</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$0.01 par value per share	GPK	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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Smaller reporting company

Non-accelerated filer (Do not check if a 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. Yes No

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

The aggregate market value of voting and non-voting common equity held by non-affiliates at June 30, 2022 was approximately \$6.3 billion.

As of February 8, 2023 there were approximately 307,122,132 shares of the registrant's Common Stock, \$0.01 par value per share outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

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INFORMATION CONCERNING FORWARD-LOOKING STATEMENTS

Certain statements regarding the expectations of Graphic Packaging Holding Company ("GPHC" and, together with its subsidiaries, the "Company"), including, but not limited to, pension and postretirement healthcare benefit plan contributions, the re-classification of gain from Accumulated Other Comprehensive Loss to earnings, the timing of the sale of its operations in Russia, ESG benefits from the K2 paper machine investment, capital investment, and depreciation and amortization in this report constitute "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. Such statements are based on currently available operating, financial and competitive information and are subject to various risks and uncertainties that could cause actual results to differ materially from the Company's historical experience and its present expectations. These risks and uncertainties include, but are not limited to, the continuing effects of the COVID-19 pandemic on the Company's operations and business, inflation of and volatility in raw material and energy costs, changes in consumer buying habits and product preferences, competition with other paperboard manufacturers and converters, product substitution, the Company's ability to implement its business strategies, including strategic acquisitions, the Company's ability to successfully integrate acquisitions, productivity initiatives and cost reduction plans, the Company's debt level, currency movements and other risks of conducting business internationally, and the impact of regulatory and litigation matters, including those that could impact the Company's ability to utilize its U.S. federal income tax attributes to offset taxable income or U.S. federal income taxes and those that impact the Company's ability to protect and use its intellectual property. Undue reliance should not be placed on such forward-looking statements, as such statements speak only as of the date on which they are made and the Company undertakes no obligation to update such statements, except as may be required by law.

PART I

ITEM 1. BUSINESS

Overview

Graphic Packaging Holding Company ("GPHC" and, together with its subsidiaries, the "Company") is committed to providing consumer packaging that makes a world of difference. The Company, a leading fiber-based consumer packaging provider, serves the world's most widely-recognized food, beverage, foodservice and other consumer products companies and brands. The Company operates on a global basis, is one of the largest producers of folding cartons and fiber-based foodservice products in the United States ("U.S.") and Europe, and holds leading market positions in coated-recycled paperboard ("CRB"), coated unbleached kraft paperboard ("CUK") and solid bleached sulfate paperboard ("SBS").

The Company's customers include many of the world's most widely recognized companies and brands with prominent market positions in beverage, food, foodservice and other consumer products. The Company strives to provide its customers with innovative, fiber-based packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and global packaging network, its proprietary carton and packaging designs, and its commitment to quality, service, and environmental stewardship.

On January 1, 2018, GPHC, a Delaware corporation, International Paper Company, a New York corporation ("IP"), Graphic Packaging International Partners, LLC, a Delaware limited liability company formerly known as Gazelle Newco LLC and a wholly-owned subsidiary of the Company ("GPIP"), and Graphic Packaging International, LLC, a Delaware limited liability company formerly known as Graphic Packaging International, Inc. and a direct subsidiary of GPIP ("GPIL"), completed a series of transactions pursuant to an agreement dated October 23, 2017, among the foregoing parties (the "Transaction Agreement"). Pursuant to the Transaction Agreement (i) a wholly-owned subsidiary of the Company transferred its ownership interest in GPIL to GPIP; (ii) IP transferred its North America Consumer Packaging ("NACP") business to GPIP, which was then subsequently transferred to GPIL; (iii) GPIP issued membership interests to IP, and IP was admitted as a member of GPIP; and (iv) GPIL assumed certain indebtedness of IP (the "NACP Combination").

During 2020, GPIP purchased 32.5 million partnership units from IP for \$500 million in cash, fully redeeming the 18.2 million partnership units that were required to be redeemed in cash. On February 16, 2021, the Company announced that IP had notified the Company of its intent to exchange additional partnership units. Per an agreement between the parties, on February 19, 2021, GPIP purchased 9.3 million partnership units from IP for \$150 million in cash, and IP exchanged 15.3 million partnership units for an equivalent number of shares of GPHC common stock. On May 21, 2021, IP exchanged its remaining 22.8 million partnership units for an equivalent number of shares of GPHC common stock. As required by the parties' agreement, these shares were immediately sold by IP. As a result, IP has no ownership interest remaining in GPIP as of May 21, 2021.

As a result of IP's final exchange in 2021, the Company currently owns 100% of the outstanding interests in GPIP. GPIP continued to be treated as a partnership for U.S. federal and state income tax purposes despite IP's exit as a minority partner until September 1, 2022, when, due to an internal restructuring, GPIP became a single member limited liability company, terminating the partnership for income tax purposes.

Acquisitions, Closures, and Dispositions

The Company has successfully completed several acquisitions in the past three years and expects to pursue strategic acquisition opportunities in the future as part of its overall growth strategy.

2022

In May 2022, the Company closed the Battle Creek, MI CRB mill. For more information, see " *Note 18 - Exit Activities*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

In May 2022, the Company committed to sell its two folding carton plants in Russia and classified the facilities as held for sale, resulting in impairment charges of \$96 million in 2022, including \$12 million of goodwill impairment. For more information, see " *Note 19 - Impairment and Divestiture of Russian Business*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

In September 2022, the Company closed its Norwalk, Ohio carton facility, which it had announced to close in March 2022. For more information, see " *Note 18 - Exit Activities*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

2021

On July 1, 2021, the Company acquired substantially all the assets of Americraft Carton, Inc. ("Americraft"), the largest independent folding carton converter in North America. The acquisition included seven converting plants across the United States and is reported within the Americas Paperboard Packaging reportable segment. For more information, see " *Note 4 - Business Combinations*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

On November 1, 2021, the Company acquired all the shares of AR Packaging Group AB ("AR Packaging"), Europe's second largest producer of fiber-based consumer packaging. The acquisition included 30 converting plants in 13 countries and is reported within the Europe Paperboard Packaging reportable segment. For more information, see " *Note 4 - Business Combinations*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

2020

On January 31, 2020, the Company acquired a folding carton facility from Quad/Graphics, Inc. ("Quad"), a commercial printing company. The converting facility is located in Omaha, Nebraska and is included in the Americas Paperboard Packaging reportable segment. For more information, see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

In March 2020, the Company made the decision to close the White Pigeon, Michigan CRB mill and to shut down the PM1 containerboard machine in West Monroe, Louisiana. During the second quarter of 2020, the Company closed the White Pigeon, Michigan CRB mill and shut down the PM1 containerboard machine. For more information, see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

On April 1, 2020, the Company acquired the Consumer Packaging Group business from Greif, Inc. ("Greif"), a leader in industrial packaging products and services. The acquisition included seven converting plants across the United States, which are included in the Americas Paperboard Packaging reportable segment. For more information, see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

In June 2020, the Company made the decision to close certain converting plants that were acquired from Greif. The Burlington, North Carolina converting facility and the Los Angeles, California converting facility were closed during 2020. For more information, see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

Share Repurchases and Dividends

On January 28, 2019, the Company's board of directors authorized a share repurchase program to allow the Company to purchase up to \$500 million of the Company's issued and outstanding shares of common stock through open market purchases, privately negotiated transactions and Rule 10b5-1 plans (the "2019 share repurchase program").

Share repurchases are reflected as a reduction of common stock for the par value of the shares, with any excess of share repurchase price over par value allocated between capital in excess of par value and retained earnings.

The following presents the Company's share repurchases for the years ended December 31, 2022, 2021, and 2020:

<i>Amount repurchased in millions, except share and per share amounts</i>	Amount Repurchased	Number of Shares Repurchased	Average Price per Share
2022	\$ 28	1,315,839	\$ 20.91
2021	\$ —	—	\$ —
2020	\$ 316	23,420,010	\$ 13.48

At December 31, 2022, the Company had \$119 million available for additional repurchases under the 2019 share purchase program.

During 2022 and 2021, the Company paid cash dividends of \$92 million and \$87 million, respectively.

On September 22, 2022, the Company's board of directors voted to increase the quarterly dividend to \$0.10 per share of common stock, a 33% increase from the prior quarterly dividend of \$0.075. The dividend was paid on January 5, 2023, to common stockholders of record at the close of business on December 15, 2022.

Products

The Company has three reportable segments as follows:

Paperboard Mills includes the seven North American paperboard mills that produce primarily CRB, CUK, and SBS, which is consumed internally to produce paperboard packaging for the Americas and Europe Packaging segments. Paperboard not consumed internally is sold externally to a wide variety of paperboard packaging converters and brokers. The Paperboard Mills segment Net Sales represent the sale of paperboard only to external customers. The effect of intercompany transfers to the paperboard packaging segments has been eliminated from the Paperboard Mills segment to reflect the economics of the integration of these segments.

Americas Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to consumer packaged goods ("CPG") companies, and cups, lids and food containers sold primarily to foodservice companies and quick-service restaurants ("QSR"), serving the food, beverage, and consumer product markets in the Americas.

Europe Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to CPG companies serving the food, beverage and consumer product markets including healthcare and beauty primarily in Europe.

The Company operates in three geographic areas: the Americas, Europe and Asia Pacific.

For reportable segment and geographic area information for each of the last three fiscal years, see " *Note 15 - Business Segment and Geographic Area Information*" in the Notes to Consolidated Financial Statements included herein under "Item 8. Financial Statements and Supplementary Data."

Paperboard Packaging

The Company's paperboard packaging products deliver brand, marketing, sustainability, and performance benefits at a competitive cost. The Company supplies paperboard cartons, carriers and containers designed to protect and hold products while providing:

- Convenience through ease of carrying, storage, delivery, dispensing of product, and food preparation for consumers;
- A smooth surface printed with high-resolution, multi-color graphic images that help improve brand awareness and visibility of products on store shelves; and
- Durability, stiffness and wet and dry tear strength; leak, abrasion and heat resistance; barrier protection from moisture, oxygen, oils and greases, as well as enhanced microwave heating performance.

The Company provides a wide range of innovative, paperboard packaging solutions for the following end-use markets:

- Beverage, including beer, seltzer, soft drinks, energy drinks, teas, water and juices;
- Food, including cereal, desserts, frozen, refrigerated and microwavable foods, pet food;
- Prepared food and drinks, including snacks, quick-serve food and drinks for restaurants and food service providers;
- Household products, including dishwasher and laundry detergent, health care and beauty aids, and tissues and papers;
- Air filter frames; and
- Health and beauty.

The Company's packaging applications meet the needs of its customers for:

Strength Packaging. The Company's products provide sturdiness to meet a variety of packaging, handling, and delivery needs, including tear and wet strength, puncture resistance, durability and compression strength (providing the ability to ship products in their own branded carton and stacking strength to meet store display packaging requirements).

Promotional Packaging. The Company offers a broad range of promotional packaging options that help differentiate its customers' products in the marketplace. These promotional enhancements improve brand awareness and visibility on store shelves.

Convenience and Cooking Packaging. These packaging solutions improve package usage and food preparation:

- Beverage multiple-packaging — multi-packs for beer, soft drinks, energy drinks, teas, water and juices;
- Active microwave technologies — packages that improve the heating and browning of foods in the microwave; and
- Easy opening and closing features — dispensing features, pour spouts and sealable liners.

Barrier Packaging. The Company provides packages that protect against moisture, temperature (hot and cold), grease, oil, oxygen, sunlight, insects and other potential product-damaging factors.

Paperboard Mills and Packaging Operations Facilities

The Company produces paperboard at its mills; prints, cuts, folds, and glues ("converts") the paperboard into folding cartons and containers at its converting plants; and designs and manufactures specialized, proprietary packaging machines that package bottles and cans and, to a lesser extent, non-beverage consumer products. The Company also installs its packaging machines at customer plants and provides support, service and advanced performance monitoring of the machines.

The Company offers a variety of laminated, coated and printed packaging structures that are produced from its CRB, CUK and SBS board grades, as well as other grades of paperboard that are purchased from third-party suppliers.

Below is the production at each of the Company's paperboard mills during 2022:

Location	Product	# of Machines	2022 Net Tons Produced
West Monroe, LA	CUK	2	911,919
Macon, GA	CUK	2	729,842
Augusta, GA	SBS	2	605,596
Texarkana, TX	SBS	2	575,011
Kalamazoo, MI	CRB	3	904,790
Middletown, OH	CRB	1	169,407
East Angus, Québec	CRB	1	101,850
Battle Creek, MI ^(a)	CRB	2	77,709

^(a) Closed in the second quarter of 2022.

The Company consumes most of its coated board output in its converting operations, which is an integral part of the customer value proposition. In 2022, approximately 73.4% of combined mill production of CRB, CUK and SBS was consumed internally.

CUK Production. The Company is the largest of four worldwide producers of CUK. CUK is manufactured from pine-based wood fiber and is a specialized high-quality grade of coated paperboard with excellent wet and dry tear strength characteristics and printability for high resolution graphics that make it particularly well-suited for a variety of packaging applications. Both wood and recycled fibers are pulped, formed on paper machines, and clay-coated to provide an excellent printing surface for superior quality graphics and appearance characteristics.

SBS Production. The Company is one of the largest North American producers of SBS. SBS is manufactured from bleached pine and hardwood-based wood fiber and is the highest quality paperboard substrate with excellent wet and dry strength characteristics and superior printability for high-end packaging. Both wood and recycled fibers are pulped, formed on paper machines, and clay-coated to provide an excellent printing surface for superior quality graphics and appearance characteristics. SBS is also coated with resin for wet strength liquid and food packaging end uses.

CRB Production. The Company is the largest North American producer of CRB. CRB is manufactured entirely from recycled fibers, primarily old corrugated containers ("OCC"), doubled-lined kraft cuttings from corrugated box plants ("DLK"), old newspapers ("ONP"), and box cuttings from converting plants, and office and mixed paper bales. The recycled fibers are re-pulped, formed on paper machines, and clay-coated to provide an excellent printing surface for superior quality graphics and appearance characteristics.

The Company converts CRB, CUK and SBS, as well as other grades of paperboard, into cartons and containers at converting plants the Company operates in various locations globally, including a converting plant associated with the Company's joint venture in Japan, and at licensees outside the United States ("U.S."). The converting plants print, cut, fold and glue paperboard into cartons and containers designed to meet customer specifications.

Joint Venture

The Company, through its GPIL subsidiary, is a party to a Japanese joint venture, Rengo Riverwood Packaging, Ltd., in which it holds a 50% ownership interest. The joint venture agreement covers CUK supply, use of proprietary carton designs and marketing and distribution of packaging systems.

Sales and Marketing

The Company markets its products principally to multinational beverage, food, quick-service restaurants ("QSR"), health/beauty and other well-recognized consumer product companies. The beverage companies include Anheuser-Busch, Inc., MillerCoors LLC, PepsiCo, Inc. and The Coca-Cola Company, among others. Consumer product customers include Kraft Heinz Company, General Mills, Inc., Nestlé USA, Inc., Kellogg Company, Kimberly-Clark Corporation, among others. Quick-service restaurants ("QSR") customers include Chick-fil-A, McDonald's, Wendy's, Panda Express, Dairy Queen, Chipotle, Panera and KFC. Health/beauty include GlaxoSmithKline, Bayer, Johnson & Johnson, Abbott, Novartis, L'Oréal S.A., Proctor & Gamble, and Colgate. The Company also sells paperboard in the open market to independent and integrated paperboard converters.

Sales of the Company's principal products is primarily accomplished through sales offices in the U.S., Australia, Brazil, China, France, Germany, Italy, Japan, Mexico, Spain, the Netherlands and the United Kingdom, and, to a lesser degree, through broker arrangements with third parties.

During 2022, 2021 and 2020, the Company did not have any one customer that represented 10% or more of its net sales.

Competition

Although a relatively small number of large competitors hold a significant portion of the paperboard packaging market, the Company's business is subject to strong competition. The Company and WestRock Company ("WestRock") are the two major CUK producers in the U.S. Internationally, The Klabin Company in Brazil and Stora Enso in Sweden produce similar grades of paperboard.

In non-beverage consumer packaging and foodservice, the Company's paperboard competes with WestRock's CUK, as well as CRB and SBS from numerous competitors, and, internationally, folding boxboard and white-lined chip. There are a large number of producers in the paperboard markets. Suppliers of paperboard compete primarily on the basis of price, strength and printability of their paperboard, quality and service.

In beverage packaging, cartons made from CUK compete with substitutes such as plastics and corrugated packaging for packaging glass or plastic bottles, cans and other primary containers. Although plastics and corrugated packaging may be priced lower than CUK, the Company believes that cartons made from CUK offer advantages over these materials in areas such as recyclability (versus plastic alternatives), design flexibility, distribution, brand awareness, carton designs, package performance and package line speed.

Raw Materials

The paperboard packaging produced by the Company comes from pine and hardwood trees and recycled fibers. Pine pulpwood, hardwood pulp, paper and recycled fibers (including DLK, OCC and ONP) and energy used in the manufacture of paperboard, as well as poly sheeting, plastic resins and various chemicals used in the coating of paperboard, represent the largest components of the Company's variable costs of paperboard production.

For the West Monroe, LA, Macon, GA, Texarkana, TX, and Augusta, GA mills, the Company relies on private landowners and the open market for all of its pine and hardwood pulp and recycled fiber requirements, supplemented by clippings that are obtained from its packaging operations. The Company follows a due diligence process to ensure virgin fiber inputs are sourced from sustainability managed forests and do not contribute towards deforestation or habit loss for ecosystems with high conservation value. The Company believes that adequate supplies from both private landowners and open market fiber sellers currently are available in close proximity to meet its fiber needs at these mills.

The paperboard grades produced at the Kalamazoo, MI, Battle Creek, MI, Middletown, OH, and East Angus, Quebec mills are made from 100% recycled fiber. The Company procures its recycled fiber from external suppliers and internal converting operations. The market price of each of the various recycled fiber grades fluctuates with supply and demand. The Company's internal recycled fiber procurement function enables the Company to pay lower prices for its recycled fiber needs given the Company's highly fragmented supplier base. The Company believes there are adequate supplies of recycled fiber to serve its mills.

In North America, the Company also converts a variety of other paperboard grades, in addition to paperboard that is supplied to its packaging operations from its own mills. The Company purchases such paperboard requirements, including additional CRB and SBS, from outside vendors. The majority of external paperboard purchases are acquired through long-term arrangements with other major industry suppliers. The Company's European packaging operations consume CUK supplied from the Company's mills and also convert other paperboard grades such as white-lined chip and folding box board purchased from external suppliers.

Energy

Energy, including natural gas, fuel, oil and electricity, represents a significant portion of the Company's manufacturing and distribution costs. The Company has entered into contracts designed to manage risks associated with future variability in cash flows and price risk related to future energy cost increases for a portion of its natural gas requirements at its U.S. mills. The Company's hedging program for natural gas is discussed in "*Note 10 - Financial Instruments, Derivatives and Hedging Activities*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

Seasonality

The Company's net sales, income from operations and cash flows from operations are subject to moderate seasonality, with demand usually increasing in the late spring through early fall due to increases in demand for beverage and food products.

Research and Development

The Company's research and development team works directly with its sales, marketing and consumer insights personnel to understand long-term consumer and retailer trends and create relevant new packaging. These innovative solutions provide customers with differentiated packaging to meet consumer preferences. The Company's development efforts include, but are not limited to, developing fiber-based packaging alternatives to replace plastic packaging; extending the shelf life of customers' products; reducing production and waste costs; enhancing the heat-managing characteristics of food packaging; improving the sturdiness and compression strength of packaging to allow goods to ship in their own branded container and to meet store display needs; and refining packaging appearance through new printing techniques and materials.

Consumer concerns regarding the growing plastic packaging waste problem represents one of the strongest trends in the packaging industry, and the Company focuses on developing innovative, fiber-based consumer packaging solutions that are recyclable and help customers achieve their packaging sustainability goals. The Company's strategy is to combine functionality and innovative packaging design with a focus on packaging end of life to create circular packaging solutions for customers and consumers.

For more information on research and development expenses see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies* " in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

Patents and Trademarks

As of December 31, 2022, the Company had a large patent portfolio, presently owning, controlling or holding rights to more than 2,600 U.S. and foreign patents, with more than 600 U.S. and foreign patent applications currently pending. The Company's patent portfolio consists primarily of patents relating to packaging machinery, manufacturing methods, structural carton designs, active microwave packaging technology and barrier protection packaging. These patents and processes are significant to the Company's operations and are supported by trademarks such as Fridge Vendor™, IntegraPak™, KeelClip™, MicroFlex-Q™, MicroRite™, Quilt Wave™, Qwik Crisp™, Tite-Pak™, and Z-Flute™. The Company takes significant steps to protect its intellectual property and proprietary rights.

Human Capital

We believe that the Company's greatest asset is our workforce. Solving day-to-day operational and business challenges in order to drive positive results for stakeholders requires attracting, developing, and retaining talented individuals with different skills, ideas, and experiences. Our Vision 2025 outlines how we will be better stewards of our planet, supporters of our people, and allies to our partners, all while generating returns for our stakeholders. Our employees play a crucial role in achieving our Vision 2025 and are guided by our shared values and growth behaviors.

Our people are one of the pillars of our Vision 2025 and we strive to engage employees in a high-performance culture. In order to achieve this, we must attract, develop, and retain our talented workforce by providing opportunities for growth and a conducive atmosphere. Our talent acquisition, development, succession and diversity and inclusion strategies are all critical components of the multi-year plan for our people. We will continue to invest in capability development areas that serve as a competitive advantage for the Company such as GPI University, which launched in 2021 and serves as a platform for employees to access relevant training and development resources on topics related to technical skills and leadership effectiveness. Also, central to capability development and talent management is challenging our team with new experiences that will enhance their leadership skills and technical capabilities. We continuously improve our processes and use technology to promote safety, automate our manufacturing processes, and achieve greater efficiencies utilizing processes such as Lean Six Sigma.

We are enhancing the capabilities of our workforce as our business and strategy evolve. We have invested in innovation, research and development, and digital capabilities to position us to capture organic sales growth supported by consumer preferences for low impact, recyclable packaging. As our business continues to evolve, we will adapt our workforce and invest in employees to ensure that we have the necessary human capital capabilities in place to support our growth strategy.

As of December 31, 2022, the Company had approximately 24,000 employees based in 130 locations in 26 different countries around the world. Approximately 67% of our employees are in the Americas and 33% are in Europe and the rest of the world. Approximately 62% of our employees were represented by labor unions and covered by collective bargaining agreements or covered by works councils in Europe. As of December 31, 2022, 1,194 of the Company's employees were working under expired contracts, which are currently being negotiated, and 2,055 were covered under collective bargaining agreements that expire within one year. The Company considers its employee relations to be satisfactory.

Employee Health and Safety

Maintaining a safe work environment is vital to the Company, and we are committed to the health, safety and wellness of our employees. Our Total Recordable Incident Rate, which is the annual rate of workplace injuries per 100 full-time employees, is 1.0, and we work to maintain a safety performance rating that outperforms the industry average. We strive to achieve an injury-free workplace through various safety initiatives and programs.

Diversity and Inclusion

We believe that a diverse and inclusive working environment encourages creativity, innovation, and collaboration and that a diverse and inclusive culture propels our ability to serve our global customers and communities. Our commitment to diversity and inclusion is reflected in the definitions of our core values, which dictate our behavioral norms. The Compensation and Management Development Committee of our Board of Directors annually reviews the processes and practices related to workforce diversity and inclusion programs to ensure continued equitable treatment of all employees and a culture of inclusion. Our goal moving forward is to not only mirror the diversity of the communities where we operate, but also to excel in unlocking the potential that a diverse workforce can generate.

Community Engagement

Building connections between our employees, their families, and our communities creates a more meaningful, fulfilling and enjoyable workplace. Our employees around the world dedicate their time and talents to improve the communities in which we live and work. Driven by our core values, making a difference for our customers, our consumers, and our community is at the root of our community engagement strategy. The Company focuses on three pillars that guide the strategy for our community service activities and philanthropic commitments: (1) putting food on the table, (2) preserving the environment, and (3) investing in education.

Environmental and Regulatory Matters

The Company is subject to a broad range of foreign, federal, state and local environmental, health and safety, and other governmental regulations and employs a team of professionals in order to maintain compliance at each of its facilities. In 2022, the Company spent \$9 million of capital on projects to maintain compliance with environmental laws, regulations and the Company's permits granted thereunder. In 2023 and 2024, the Company estimates it will spend \$30 million and \$23 million respectively, for such projects, primarily the waste water treatment system upgrades at the Augusta, Georgia mill. For additional information on such regulation and compliance, see "Environmental Matters" in "Item 7., Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Note 14 - Environmental and Legal Matters" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

Climate change presents both challenges and opportunities for the Company and its communities. Climate change challenges for the Company are likely to be driven by changes in the physical climate where our facilities are located, as well as changes in laws and regulations, including restrictions on greenhouse gas ("GHG") emissions, cap and trade systems, and taxes on GHG emissions, fuel, and energy. Climate change also presents opportunities for the Company as it drives growth in demand for lower-carbon footprint products and manufacturing technologies. We believe the Company is well-positioned to take advantage of opportunities that may arise from increased consumer demand for and/or legislation mandating or incentivizing the use of products and technologies necessary to achieve a lower-carbon, lower-waste economy. Our costs of complying with complex environmental laws and regulations, as well as voluntary certification and disclosure programs, are significant and will continue to be significant for the foreseeable future. These laws and regulations and stakeholder driven voluntary certification and disclosure programs could become more stringent over time, which could result in significant additional compliance costs. Additionally, significant national or state differences in the imposition and enforcement of such laws and regulations could present competitive challenges in a global marketplace. By tracking and taking action to reduce our GHG emissions and energy use through efficiency programs and focused GHG management efforts, we can decrease the potential future impact of these regulatory matters.

The Company's Core Values underpin our commitment to our stakeholders and our strategy to deliver sustainable, recyclable packaging solutions. Our Vision 2025 outlines our plans for how we will grow the Company and the returns we expect to generate, all while prioritizing and focusing on our people and the planet. These goals are designed to position us for sustainably-achieved, long-term earnings growth.

Available Information

The Company's website is located at <http://www.graphicpkg.com>. The Company makes available, free of charge through its website, its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after such materials are electronically filed or furnished to the Securities and Exchange Commission (the "SEC"). The Company also makes certain investor presentations and access to analyst conference calls, as well as certain environmental, social, and governance information available through its website. The information contained or incorporated into the Company's website is not a part of this Annual Report on Form 10-K.

The SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers like the Company that file electronically with the SEC at <http://www.SEC.gov>.

ITEM 1A. RISK FACTORS

Our operations and financial results could be affected by various risks, many of which are beyond our control. The following risks could affect (and in some cases have affected) the Company's actual results and could cause such results to differ materially from current estimates or expectations:

Industry Risks

The Company's financial results could be adversely impacted if there are significant increases in prices for raw materials, energy, transportation and other necessary supplies and services, and the Company is unable to raise prices or improve productivity to reduce costs.

Increases in the costs of raw materials, including secondary fiber, petroleum-based materials, energy, wood, transportation and other necessary goods and services, could have an adverse effect on the Company's financial results. Paper manufacturing processes require significant energy and raw materials, the costs of which are subject to worldwide supply and demand factors, supply chain disruptions that can affect availability and result in increased prices, as well as trade regulations and tariffs, GHG emissions-based regulations, and other factors beyond our control. Variations in the cost of energy, which primarily reflect market prices for oil and natural gas, and for raw materials may significantly affect our operating results from period to period. Because negotiated sales contracts and the market largely determine the pricing for its products, the Company is at times limited in its ability to raise prices and pass through to its customers any inflationary or other cost increases that the Company may incur.

The Company uses productivity improvements and other initiatives to reduce costs, offset inflation and maintain adequate raw material supplies. These actions include global continuous improvement initiatives that use best-in-class industry methodologies and statistical process control to help design and manage many types of activities, including planning, procurement, production and maintenance. These efforts result not only in cost reductions, but also build resilience in the overall supply chain. The Company's ability to realize anticipated savings from these improvements is subject to significant operational, economic and competitive uncertainties and contingencies, many of which are beyond the Company's control. If the Company cannot successfully implement cost savings plans, it may not be able to continue to compete successfully against other manufacturers. In addition, any failure to generate the anticipated efficiencies and savings could adversely affect the Company's financial results.

Changes in buying habits and preferences for products by customers and consumers could have an effect on our sales volumes.

Changing dietary habits and preferences have impacted sales growth for many of the food and beverage products the Company packages. Customer and consumer preferences are constantly changing based on, among other factors, the economy, convenience, cost and health considerations, as well as environmental and social concerns, and perceptions, such as pressure to reduce packaging waste by switching to reusable containers versus single-use packaging options. If these trends continue and the Company is unable to adapt to the trends, then the Company's financial results could be adversely affected.

Competition and product substitution could have an adverse effect on the Company's financial results.

The Company competes with other paperboard manufacturers and carton converters, both domestically and internationally. The Company's products compete with those made from other manufacturers' CUK, as well as SBS, FBB, and CRB, and other board substrates. Substitute products include plastic, shrink film, corrugated containers, biobased materials and other packaging options. Product substitution may occur in response to price, quality and service issues, as well as environmental and social concerns, such as pressure to reduce packaging waste by switching to reusable containers versus single-use packaging options and the use of recycled post-consumer plastic and biobased materials in the production process.

In addition, to the extent the Company's operations are subject to labor, safety and climate change regulations and requirements not stringently imposed in the states and countries in which our competitors operate, our competitors could gain cost or other competitive advantages. While the Company has long-term relationships with many of its customers, the underlying contracts may be re-bid or renegotiated from time to time, and the Company may not be successful in renewing such contracts on favorable terms or at all. The Company works to maintain market share through efficiency, product innovations and strategic sourcing to its customers; however pricing and other competitive pressures, such as providing the lowest-carbon footprint packaging solution or delivering on GHG emissions reduction targets, may occasionally result in the loss of a customer relationship.

Operational Risks

The Company could experience material disruptions at our facilities, that could adversely impact the Company's financial results and could increase the cost of insurance and level of deductibles.

Although the Company takes appropriate measures to minimize the risk and effect of material disruptions to the business conducted at our facilities, natural disasters such as hurricanes, tornadoes, heat waves, freezing events, floods, droughts, fires and other extreme weather events, (all of which may be exacerbated by climate change), as well as other unexpected disruptions such as the unavailability of critical raw materials, power outages and equipment breakdowns or failures can reduce production and increase manufacturing costs. These types of disruptions, whether caused by climate change or other events, could materially adversely affect our earnings, depending upon the duration of the disruption and our ability to shift business to other facilities or find other sources of materials or energy. In addition, given the Company's integrated supply chain, managing board supply and properly planning for mill outages and downtime must be integrated with the converting plants' forecasts. Any inability to do so could adversely affect the Company's financial results. Any losses due to these events may not be covered by our existing insurance policies, and insurance coverage may be subject to significant deductibles. The premiums for insurance coverage have recently increased and may continue to increase, along with the level of deductibles.

Preparedness plans have been developed for vulnerable facilities and detail the actions needed in the event of unforeseen events or severe weather. We also obtain insurance coverage to mitigate losses from physical damages and business interruptions. These measures have historically been in place, and such activities and associated costs are driven by normal operational preparedness. However, there can be no assurance that such measures will be effective for a particular event that we may experience.

In addition to the possible disruptions to our facilities' production as discussed above, because approximately 62% of the Company's employees are represented by unions, the Company could experience disruptions such as work slowdowns or strikes from time to time. If the Company is unable to prevent prolonged interruptions of the Company's operations at any of its' facilities due to slowdowns, strikes or other work interruptions, the Company may experience a negative impact to its' financial results.

The Company's information technology systems could suffer interruptions, failures, unauthorized access, or breaches and our business operations could be disrupted, adversely affecting results of operations and the Company's reputation.

The Company's information technology systems, some of which are dependent on services provided by third parties, serve an important role in the operation of the business. These systems could be damaged or cease to function properly due to any number of causes, such as catastrophic events, power outages, security breaches, computer viruses or cyber-based attacks. The Company has contingency plans in place to prevent or mitigate the impact of these events, however, if they are not effective on a timely basis, business interruptions could occur which may adversely impact results of operations.

The Company has been, and likely will continue to be, subject to computer hacking, acts of vandalism or theft, malware, ransomware, computer viruses or other malicious codes, phishing, employee error or malfeasance, catastrophes, unforeseen events or other cyber-attacks. To date, the Company has seen no material impact on our business or operations from these attacks or events. Any future significant compromise or breach of data security, whether external or internal, or misuse of customer, associate, supplier or Company data, could result in significant costs, interrupted operations, lost sales, fines, lawsuits, and damage to the Company's reputation. The ever-evolving threats mean the Company and its third-party service providers and vendors must continually evaluate and adapt their respective systems and processes and overall security environment, as well as those of any companies acquired. There is no guarantee that these measures will be adequate to safeguard against all data security breaches, system compromises or misuses of data and insurance may not fully cover the costs of cyber incidents. In addition, the regulatory environment related to information security, data collection and use, and privacy is becoming increasingly rigorous, with new and requirements applicable to the Company's business. Compliance with such requirements could also result in additional costs.

The Company's operations and financial results could be adversely impacted by events outside the Company's control, such as COVID-19 and military or geopolitical conflicts.

As a result of events such as COVID-19 and regional military and political unrest in Eastern Europe and Africa, there could be unpredictable disruptions to the Company's operations that could limit production, reduce its future revenues and negatively impact the Company's financial condition. These events may result in supply chain and transportation disruptions to and from our facilities and could impact the Company's ability to operate its facilities and distribute products to its customers in a timely fashion. In addition, these events may result in extreme volatility and disruptions in the capital and credit markets as well as widespread furloughs and layoffs for workers in the broader economy. This volatility and loss of employment may negatively impact consumer buying habits, which could adversely affect the Company's financial results.

The Company's future growth and financial results could be adversely impacted if the Company is unable to identify strategic acquisitions and to successfully integrate the acquired businesses.

The Company has made a significant number of acquisitions in recent years, including the AR Packaging acquisition, and expects to make additional strategic acquisitions in the future as part of its overall growth strategy. The Company's ability to continue to make strategic acquisitions from time to time and to integrate the acquired businesses successfully, including obtaining anticipated cost savings or synergies and expected operating results within a reasonable period of time, is an important factor in the Company's future growth. If the Company is unable to properly estimate, account for and realize the expected revenue and cash flow growth and other benefits from its acquisitions, the Company may be required to spend additional time or money on integration efforts that would otherwise have been spent on the development and expansion of its core business.

The Company may not be able to develop and introduce new products and adequately protect its intellectual property and proprietary rights, which could harm its future success and competitive position.

The Company works to increase market share and profitability through product innovation and the introduction of new products. The inability to develop new or better products that satisfy customer and consumer preferences in a timely manner may impact the Company's competitive position. The Company's future success and competitive position also depends, in part, upon its ability to obtain and maintain protection for certain proprietary carton and packaging machine technologies used in its value-added products, particularly those incorporating the Fridge Vendor, IntegraPak, KeelClip, MicroFlex-Q, MicroRite, Opti-Cycle, PaperSeal Slice and PaperSeal Wedge, Produce Pack, Quilt Wave, Qwik Crisp, Tite-Pak, and Z-Flute technologies. Failure to protect the Company's existing intellectual property rights may result in the loss of valuable technologies or may require the Company to license other companies' intellectual property rights. It is possible that any of the patents owned by the Company may be invalidated, rendered unenforceable, circumvented, challenged or licensed to others or any of its pending or future patent applications may not be issued within the scope of the claims sought by the Company, if at all. Further, others may develop technologies that are similar or superior to the Company's technologies, duplicate its technologies or design around its patents, and steps taken by the Company to protect its technologies may not prevent misappropriation of such technologies.

The Company's capital spending may not achieve the desired benefits, which could adversely impact future financial results.

The Company invests significant amounts of cash each year on capital projects which have expected returns to the Company. The Company's ability to execute on these projects in order to achieve planned outcomes, including obtaining expected returns and strategic long-term goals within a reasonable period of time, is an important factor in the Company's financial results and commitments to the market. As these investments start up, the Company may experience unanticipated business disruptions and not achieve the desired benefits or timelines. In addition, the Company's acquisitions may require more capital than expected to achieve synergies or expected operating results. Additional spending and unachieved benefits may adversely affect the Company's cash flow and results of operations.

The Company may face a shortage of skilled workers and key management personnel at its facilities.

The Company's ability to maintain or expand its business depends on attracting, training and retaining a skilled workforce. Changing demographics and workforce trends may result in a loss of knowledge and skills as experienced workers retire or resign. The Company may incur higher costs to hire and retain new workers, and the failure to attract and retain sufficient skilled workers may result in operational inefficiencies or require additional capital investments to reduce reliance on labor, which may adversely impact the Company's results.

The Company is subject to the risks of doing business in foreign countries.

The Company has converting plants and one paper mill in 21 countries outside of the U.S. and sells its products worldwide. For 2022, before intercompany eliminations, net sales from operations outside of the U.S. represented approximately 29% of the Company's net sales. The Company's revenues from foreign sales fluctuate with changes in foreign currency exchange rates. In addition, at December 31, 2022, approximately 29% of the Company's total assets were denominated in currencies other than the U.S. dollar. The Company pursues a currency hedging program in order to reduce the impact of foreign currency exchange fluctuations on financial results.

The Company is also subject to the following significant risks associated with operating in foreign countries:

- Export compliance;
- Compliance with and enforcement of environmental, health and safety, labor laws and data privacy and other regulations of the foreign countries in which the Company operates;
- Difficulties moving funds from certain countries back to the U.S.;
- Imposition or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries; and
- Imposition of new or increases in capital investment requirements and other financing requirements by foreign governments.

Financial Risks

The Company's indebtedness may adversely affect its financial condition and its ability to react to changes in its business.

The Company had an aggregate principal amount of \$5,283 million of outstanding debt as of December 31, 2022.

Because of the Company's debt level, a portion of its cash flows from operations is dedicated to payments on indebtedness and the Company's ability to obtain additional financing for working capital, capital expenditures, acquisitions or general corporate purposes may be restricted in the future.

Additionally, the Company's Fourth Amended and Restated Credit Agreement (as amended, the "Current Credit Agreement") and the indentures governing the 0.821% Senior Notes due 2024, 4.125% Senior Notes due 2024, 1.512% Senior Notes due 2026, 4.75% Senior Notes due 2027, 3.50% Senior Notes due 2028, 3.50% Senior Notes due 2029, 2.625% Senior Notes due 2029 and 3.75% Senior Notes due 2030 (the "Indentures"), limit the Company's ability to incur additional indebtedness. Additional covenants contained in the Current Credit Agreement and the Indentures may, among other things, restrict the ability of the Company to dispose of assets, incur guarantee obligations, prepay other indebtedness, repurchase stock, pay dividends and make other restricted payments, create liens, make equity or debt investments, make acquisitions, modify terms of the Indentures, engage in mergers or consolidations, change the business conducted by the Company and its subsidiaries, and engage in certain transactions with affiliates. Such restrictions could limit the Company's ability to respond to changing market conditions, fund its capital spending program, provide for unexpected capital investments or take advantage of business opportunities. These restrictions could limit the Company's flexibility to respond to changing market conditions and competitive pressures. The debt obligations and restrictions may also leave the Company more vulnerable to a downturn in general economic conditions or its business, or unable to carry out capital expenditures that are necessary or important to its growth strategy and productivity improvement programs.

As of December 31, 2022, approximately 32% of the Company's debt is subject to variable rates of interest and exposes the Company to increased debt service obligations in the event of increased market interest rates.

Legal and Regulatory Risks

The Company is subject to a broad range of foreign, federal, state, and local laws and regulations, including environmental, health and safety, sustainability, data privacy, labor and employment, corruption, tax, and healthcare, and costs to comply with such laws and regulations, or any liability or obligation imposed under new laws or regulations, could negatively impact its financial condition and results of operations.

The Company must comply with a wide variety of environmental, health and safety laws and regulations, including those governing GHG emissions and other discharges to air, soil and water, the management, treatment and disposal of hazardous substances, the investigation and remediation of contamination resulting from releases of hazardous substances, waste disposal, recycling of packaging, extended producer responsibilities, deforestation risks, and the health and safety of employees. These laws and regulations, particularly those that relate to GHG emissions, are evolving and expected to become more stringent over time, which could result in significant additional compliance costs (such as the installation or modification of emission control equipment), increased costs of purchased energy or other raw materials, increased transportation costs, restrictions on our operations, or additional costs associated with air and water emissions. The Company is tracking and taking actions to reduce our GHG and other air and water emissions to decrease the potential future impact of these regulatory matters. However, the Company cannot currently assess the impact that future emission standards, climate control initiatives, regulation changes and enforcement practices will have on the Company's operations and capital expenditure requirements.

Additionally, over the past few years, the number of data privacy laws and regulations has increased and become more complex and stringent in the U.S. and internationally. The improper handling and disclosure of or access to personal data in violation of privacy laws and regulations such as the European Union's General Data Protection Regulation ("GDPR"), the California Privacy Rights Act ("CPRA"), the Virginia Consumer Data Protection Act ("CDPA"), and Canada's Consumer Privacy Protection Act ("CPPA") could cause harm to the Company's reputation, cause loss of consumer confidence, subject the Company to government enforcement actions, or result in private litigation against the Company. Any of these outcomes could negatively impact the Company's financial condition and results of operations. Moreover, with no unifying standards for both U.S. and international data privacy laws and regulations, the Company could incur additional compliance cost in order to comply with the large number of data privacy laws and regulations, which could result in a negative impact to the Company's results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Headquarters

The Company leases its principal executive offices in Atlanta, GA.

Operating Facilities

A listing of the principal properties owned or leased and operated by the Company is set forth below. The Company's buildings are adequate and suitable for the business of the Company and have sufficient capacity to meet current requirements. The Company also leases certain smaller facilities, warehouses and office space throughout the U.S. and in foreign countries from time to time.

Location	Related Products or Use of Facility
Mills:	
Augusta, GA	SBS
Battle Creek, MI ^(a)	CRB
East Angus, Québec	CRB
Kalamazoo, MI	CRB
Macon, GA	CUK
Middletown, OH	CRB
Texarkana, TX	SBS
West Monroe, LA	CUK, Research and Development
Other:	
Atlanta, GA ^(b)	Headquarters, Research and Development, Packaging Machinery and Design
Clemson, SC ^(b)	Research and Development
Concord, NH ^(b)	Research and Development, Design Center
Crosby, MN	Packaging Machinery Engineering, Design and Manufacturing
Louisville, CO ^(b)	Research and Development
Menomonee Falls, WI	Foodservice Rebuild Center

^(a) Closed in the second quarter of 2022.

^(b) Leased facility.

North American Converting Plants:

Auburn, IN
 Carol Stream, IL
 Centralia, IL
 Charlotte, NC
 Chicago, IL^(a)
 Clarksville, TN
 Cobourg, Ontario^(a)
 Elgin, IL
 Elk Grove, IL^{(a)(b)}
 Fort Smith, AR^(b)
 Gordonsville, TN^(a)
 Grand Rapids, MI
 Gresham, OR^(a)
 Hamel, MN
 Irvine, CA
 Kalamazoo, MI
 Kendallville, IN
 Kenton, OH
 Kingston Springs, TN
 Lancaster, TX
 Lawrenceburg, TN
 Lebanon, TN^(a)
 Lowell, MA
 Lumberton, NC
 Marietta, GA
 Marion, OH
 Memphis, TN
 Mississauga, Ontario^{(a)(b)}
 Mitchell, SD
 Monroe, LA^(a)
 Monterrey, Mexico^(a)
 New Albany, IN^(b)
 Newton, IA
 North Portland, OR
 Norwalk, OH^(c)
 Omaha, NE
 Oroville, CA^(a)
 Pacific, MO
 Perry, GA
 Pineville, NC
 Pittston, PA
 Prosperity, SC
 Querétaro, Mexico^(a)
 Randleman, NC
 Shelbyville, IL
 Solon, OH
 St.-Hyacinthe, Québec^(a)
 St. Paul, MN
 Staunton, VA
 Stone Mountain, GA^(a)
 Sturgis, MI
 Tijuana, Mexico^(a)
 Tuscaloosa, AL
 Valley Forge, PA
 Vancouver, WA^(a)
 Visalia, CA
 Wausau, WI
 Wayne, NJ
 West Monroe, LA^(b)
 Winnipeg, Manitoba
 Winston Salem, NC
 Xenia, OH^(a)

International Converting Plants:

Aachen, Germany
 Auckland, New Zealand^(a)
 Augsburg, Germany
 Bardonia, United Kingdom
 Bawen, Indonesia
 Bekasi, Indonesia
 Berlin, Germany^(b)
 Bremen, Germany^(b)
 Bristol, United Kingdom
 Cambridge, United Kingdom^(a)
 Cholet, France^(a)
 Coalville, United Kingdom^(a)
 Frankfurt, Germany^(a)
 Gateshead, United Kingdom^(a)
 Graz, Austria
 Halmstad, Sweden^(a)
 Hannover, Germany
 Highbridge, United Kingdom^(a)
 Hoogerheide, Netherlands
 Ibadan, Nigeria
 Igualada, Spain
 Ingerois, Finland^(a)
 Jundiai, Sao Paulo, Brazil
 Kanfanar, Croatia
 Krakow, Poland
 Leeds, United Kingdom
 Lund, Sweden^{(a)(b)}
 Magdeburg, Germany^(a)
 Maliaño, Spain
 Masnières, France^(a)
 Melbourne, Australia^(a)
 Munich, Germany^(a)
 Newcastle Upon Tyne, United Kingdom^(a)
 Perth, Australia
 Portlaoise, Ireland^(a)
 Poznan, Poland^(b)
 Requejada, Spain
 Rotherham, United Kingdom^(a)
 Sneek, Netherlands
 St. Gallen, Switzerland^(a)
 St. Petersburg, Russia^{(a)(d)}
 Sydney, Australia^(a)
 Tabasalu, Estonia
 Tibro, Sweden
 Timashevsk, Russia^{(a)(d)}
 Winsford, United Kingdom^(a)

^(a) Leased facility.^(b) Multiple facilities in this location.^(c) Closed in the third quarter of 2022.^(d) Location classified as held-for-sale.

ITEM 3. LEGAL PROCEEDINGS

The Company is a party to a number of lawsuits arising in the ordinary conduct of its business. Although the timing and outcome of these lawsuits cannot be predicted with certainty, the Company does not believe that disposition of these lawsuits will have a material adverse effect on the Company's consolidated financial position, results of operations or cash flows. See "Note 14 - Environmental and Legal Matters" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Pursuant to General Instruction G.(3) of Form 10-K, the following list is included as an unnumbered item in Part I of this Report in lieu of being included in the definitive proxy statement that will be filed within 120 days after December 31, 2022.

Michael P. Doss, 56, is the President and Chief Executive Officer of Graphic Packaging Holding Company. He was elected to the Board of Directors on May 20, 2015. Prior to January 1, 2016, Mr. Doss held the position of President and Chief Operating Officer from May 20, 2015 through December 31, 2015 and Chief Operating Officer from January 1, 2014 until May 19, 2015. Prior to these positions he served as the Executive Vice President, Commercial Operations of Graphic Packaging Holding Company. Prior to this Mr. Doss held the position of Senior Vice President, Consumer Packaging Division. Prior to March 2008, he had served as Senior Vice President, Consumer Products Packaging of Graphic Packaging Corporation since September 2006. From July 2000 until September 2006, he was the Vice President of Operations, Universal Packaging Division. Mr. Doss was Director of Web Systems for the Universal Packaging Division prior to his promotion to Vice President of Operations. Since joining Graphic Packaging International Corporation in 1990, Mr. Doss has held positions of increasing management responsibility, including Plant Manager at the Gordonsville, TN and Wausau, WI plants.

Mr. Doss serves on the Board of Directors for the American Forest & Paper Association, the Sustainable Forest Initiative, the Paper Recycling Coalition, the Atlanta Area Council of the Boy Scouts of America, Metro Atlanta Chamber of Commerce, the Woodruff Art Center, American Bird Conservancy and Regal Rexnord Corporation (RRX).

Stephen R. Scherger, 58, is the Executive Vice President and Chief Financial Officer of Graphic Packaging Holding Company. From October 1, 2014 through December 31, 2014, Mr. Scherger was the Senior Vice President – Finance. From April 2012 through September 2014, Mr. Scherger served as Senior Vice President, Consumer Packaging Division. Mr. Scherger joined Graphic Packaging Holding Company in April of 2012 from MeadWestvaco Corporation, where he served as President, Beverage and Consumer Electronics. Mr. Scherger was with MeadWestvaco Corporation from 1986 to 2012 and held positions including Vice President, Corporate Strategy; Vice President and General Manager, Beverage Packaging; Vice President and Chief Financial Officer, Papers Group, Vice President Asia Pacific and Latin America, Beverage Packaging, Chief Financial Officer Beverage Packaging and other executive-level positions.

Maggie Bidlingmaier, 52, joined Graphic Packaging Holding Company as the Executive Vice President and President, Americas business unit on January 28, 2022. Maggie was most recently President, Performance Solutions for Invista, a subsidiary of Koch Industries, Inc., where she led numerous multimillion-dollar global businesses within the flooring, apparel and airbag fiber segments. Prior to that, she was Vice President, Surfaces at Invista, following a successful career with Avery Dennison in global sales and marketing roles of increasing responsibility.

Michael Farrell, 56, became the Executive Vice President, Mills Division of Graphic Packaging Holding Company in September 2018. Prior to that, he served as the Senior Vice President, Supply Chain from January to September 2018. Prior to January 2018, Mr. Farrell served as Vice President, Recycled Board Mills of Graphic Packaging International, LLC and its predecessor companies ("GPI") from January 1, 2013; and Senior Manufacturing Manager of GPI from October 28, 2009 until December 31, 2012. From December 11, 2008 until October 27, 2009, Mr. Farrell was the Manufacturing Manager of the West Monroe, Louisiana mill and from September 1, 2006 until December 10, 2008 he was the General Manager of the Middletown, Ohio mill of GPI.

Elizabeth Spence, 43, is the Executive Vice President, Human Resources. She joined the Company on April 1, 2022. Prior to this she was Vice President and Chief Human Resources Officer at Gypsum Management and Supply, following her role as Vice President of Human Resources at Assurant. Ms. Spence is a seasoned human resources executive, having also spent time at BellSouth/AT&T and The Coca-Cola Company.

Lauren S. Tashma, 56, is the Executive Vice President, General Counsel and Secretary of Graphic Packaging Holding Company. She joined the Company in February 2014. Previously, Ms. Tashma served as Senior Vice President, General Counsel and Secretary of Fortune Brands Home & Security, Inc., where she led the legal, compliance and EHS functions. Prior to that, Ms. Tashma had various roles with Fortune Brands, Inc., including Vice President and Associate General Counsel.

Joseph P. Yost, 55, is the Executive Vice President and President, International of Graphic Packaging Holding Company. Prior to January 5, 2022, he served as Executive Vice President and President, Americas. Prior to January 5, 2017, Mr. Yost served as Senior Vice President, Global Beverage and Europe from September 1, 2015 to January 4, 2017, Senior Vice President, Europe from March 1, 2014 to August 31, 2015 and Senior Vice President, European Chief Integration Officer/Chief Financial Officer from February 2013 until February 2014. From 2009 until February 2013, Mr. Yost was the Senior Vice President, Supply Chain of Graphic Packaging Holding Company. From 2006 to 2009, he served as Vice President, Operations Support – Consumer Packaging for Graphic Packaging International, Inc. Mr. Yost has also served in the following positions: Director, Finance and Centralized Services from 2003 to 2006 with Graphic Packaging International, Inc. and from 2000 to 2003 with Graphic Packaging Corporation; Manager, Operations Planning and Analysis – Consumer Products Division from 1999 to 2000 with Graphic Packaging Corporation; and other management positions from 1997 to 1999 with Fort James Corporation.

PART II

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

GPHC's common stock is traded on the New York Stock Exchange under the symbol "GPK."

On February 8, 2023, there were approximately 955 stockholders of record and approximately 100,738 beneficial holders of GPHC's common stock.

During 2022 and 2021, GPHC paid cash dividends of \$92 million and \$87 million, respectively.

On January 28, 2019, the Company's board of directors authorized a share repurchase program to allow the Company to purchase up to \$500 million of the Company's issued and outstanding shares of common stock through open market purchases, privately negotiated transactions and Rule 10b5-1 plans (the "2019 share repurchase program").

Share repurchases are reflected as a reduction of common stock for the par value of the shares, with any excess of share repurchase price over par value allocated between capital in excess of par value and retained earnings.

The following presents the Company's share repurchases for the years ended December 31, 2022, 2021, and 2020:

<i>Amount repurchased in millions, except share and per share amounts</i>	Amount Repurchased	Number of Shares Repurchased	Average Price per Share
2022	\$ 28	1,315,839	\$ 20.91
2021	\$ —	—	\$ —
2020	\$ 316	23,420,010	\$ 13.48

At December 31, 2022, the Company had \$119 million available for additional repurchases under the 2019 share purchase program.

2022

On November 4, 2022, GPIL entered into Amendment No. 2 to the Fourth Amended and Restated Credit Agreement (the "Second Amendment"). The Second Amendment provided for a change in the floating interest rate benchmark for the domestic revolving credit facility and the USD denominated term loans from LIBOR-based to Term SOFR plus 10bps. The Second Amendment also added JSC AR Packaging to the Schedule of Permitted Asset Sales to facilitate the sale of the Company's Russian operations.

On November 15, 2022, the Company drew \$250 million from the senior secured domestic revolving credit facilities and used the proceeds, together with cash on hand, to redeem its 4.875% Senior Notes due in 2022.

2021

On January 14, 2021, the Company drew the \$425 million Incremental Term A-2 Facility (as hereinafter defined) and used the proceeds, together with cash on hand, to redeem its 4.75% Senior Notes due in 2021.

On March 8, 2021, GPIL completed a private offering of \$400 million aggregate principal amount of its 0.821% Senior Secured Notes due 2024 and \$400 million aggregate principal amount of its 1.512% Senior Secured Notes due 2026. The net proceeds were used by the Company to repay a portion of the outstanding borrowings under GPIL's term loan credit facilities, which is under its senior secured credit facility.

On April 1, 2021, GPIL entered into the Fourth Amended and Restated Credit Agreement (the "Fourth Amended and Restated Credit Agreement") to extend the maturity date of certain of its senior secured term loan facilities and senior secured revolving credit facilities and to amend certain other terms of the agreement, including revised debt covenants and collateral requirements. Under the terms of the agreement, \$975 million of the Company's senior secured term loan facilities remains outstanding. The Company added approximately \$400 million to its senior secured revolving credit facilities. \$550 million of the senior secured term loan facilities and all of the senior secured revolving credit facility loans continue to bear interest at a floating rate per annum ranging from LIBOR plus 1.25% to LIBOR plus 2.00%, determined using a pricing grid based upon the Company's consolidated total leverage ratio from time to time, and the maturity for these loans were extended from January 1, 2023 to April 1, 2026. \$425 million of the senior secured term loan facilities is a Farm Credit System incremental term loan (the "Incremental Term A-2 Facility") that bears interest at a fixed rate per annum equal to 2.67% and matures on its originally scheduled maturity date of January 14, 2028. As long as the Incremental Term A-2 Facility is outstanding, GPIL will be eligible to receive an annual patronage credit from the participating banks, which will be paid in cash and stock in the lead member bank. Patronage payable each year is variable and based on the individual financial performance of each of the member banks then participating in the loan.

On July 22, 2021, GPIL entered into an Incremental Facility Amendment to the Fourth Amended and Restated Credit Agreement for a second Farm Credit System incremental term loan (the "Incremental Term A-3 Facility"). The Incremental Term A-3 Facility is a senior secured term loan in the aggregate principal amount of \$250 million maturing on July 22, 2028. The Incremental Term A-3 Facility bears interest at a floating rate ranging from LIBOR plus 1.50% to LIBOR plus 2.25%, determined using a pricing grid based upon GPIL's consolidated leverage ratio. As long as the Incremental Term A-3 Facility is outstanding, GPIL will be eligible to receive an annual patronage credit from the participating banks, which will be paid in cash and stock in the lead member bank. Patronage payable each year is variable and based on the individual financial performance of each of the member banks then participating in the loan. The Incremental Term A-3 Facility is governed by the same covenants as are set forth in the Fourth Amended and Restated Credit Agreement and is secured by a first priority lien and security interest in certain assets of GPIL.

On July 23, 2021, GPIL entered into Amendment No. 1 to the Fourth Amended and Restated Credit Agreement and the Fourth Amended and Restated Guarantee and Collateral Agreement and Incremental Facility Amendment (the "First Amendment"). The First Amendment provided for a delayed draw term loan facility in an aggregate amount of €210 million and a €25 million increase to the existing Euro-denominated revolving credit facility. The new term loan facility was drawn on October 29, 2021, and bears interest at a floating rate ranging from EURIBOR plus 1.125% to EURIBOR plus 1.75%, determined using a pricing grid based upon GPIL's consolidated total leverage ratio from time to time. The Company designated this Euro-denominated debt as a non-derivative net investment hedge of a portion of our net investment in Euro functional currency denominated subsidiaries to offset currency fluctuations. The new term loan facility is governed by the same covenants as set forth in the Fourth Amended and Restated Credit Agreement and is secured by a first priority lien and security interest in certain assets of GPIL.

On September 29, 2021, GPIL completed a \$100 million tax-exempt green bond transaction through the Michigan Strategic Fund's Private Activity Bond Program (the "Green Bonds"). The Green Bonds are special limited obligations of the Michigan Strategic Fund, as issuer, payable from and secured by a pledge of payments to be made by GPIL under a loan agreement between the Michigan Strategic Fund and GPIL. The Green Bonds mature in 2061 and include a mandatory purchase on October 1, 2026. The Green Bonds were issued at a price of 110.99% and bear interest at an annual rate of 4.0%. The equivalent yield is 1.70%. The net proceeds of \$109.5 million were used to fund a portion of its spend on the CRB platform optimization project that includes the construction of a new CRB machine at its Kalamazoo, Michigan mill. The bonds have been designated as Green Bonds primarily because the proceeds were used to finance a solid waste disposal/recycling facility resulting in diversion of waste from landfills. In addition to the solid waste recycling aspect, the project improves the environmental footprint of its CRB mill system through expected reductions in water usage, energy consumption and GHG emissions.

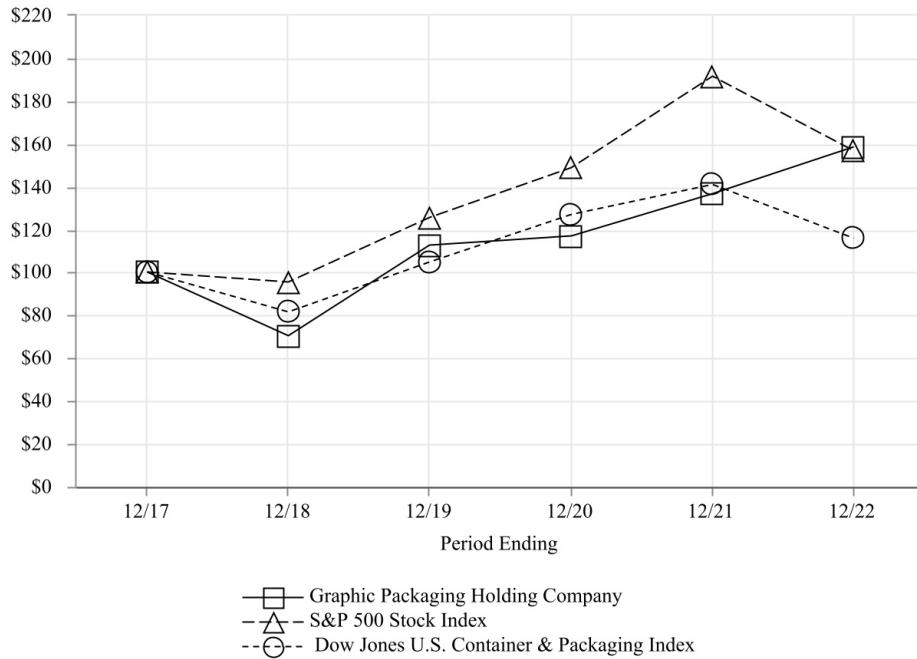
On October 6, 2021, GPIL entered into a \$400 million Incremental Facility Amendment to the Fourth Amended and Restated Credit Agreement (the "Incremental Term A-4 Facility"). The Incremental Term A-4 Facility has a delayed draw feature, and the Company funded the new term loan on October 29, 2021. The Incremental Term A-4 Facility was collateralized by the same assets as GPIL's Senior Secured Facilities on a pari passu basis. The Incremental Term A-4 Facility bore interest at a floating rate per annum equal to the Base Rate, the Euro currency Rate plus 0.875%, or the Daily Floating LIBOR Rate plus 0.875%, as selected by the Company. The loan was repaid on November 19, 2021 with the proceeds from the 3.75% senior unsecured notes due 2030.

On November 19, 2021, GPIL completed a private offering of \$400 million aggregate principal amount of 3.750% senior unsecured notes due 2030 (the "Dollar Notes") and €290 million aggregate principal amount of 2.625% senior unsecured notes due 2029 (the "Euro Notes"). The net proceeds of the Dollar Notes were used to repay in full the term loan borrowed under the Incremental Term A-4 Loan, which was under its senior secured credit facility. The net proceeds of the Euro Notes were used to repay revolver borrowings outstanding under its senior secured credit facility. The Company designated this Euro-denominated debt as a non-derivative net investment hedge of a portion of our net investment in Euro functional currency denominated subsidiaries to offset currency fluctuations.

Total Return to Stockholders

The following graph compares the total returns (assuming reinvestment of dividends) of the common stock of Graphic Packaging Holding Company, the Standard & Poor's ("S&P") 500 Stock Index and the Dow Jones ("DJ") U.S. Container & Packaging Index. The graph assumes \$100 invested on December 31, 2017 in GPHC's common stock and each of the indices. The stock price performance on the following graph is not necessarily indicative of future stock price performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN



	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Graphic Packaging Holding Company	\$ 100.00	\$ 70.41	\$ 112.53	\$ 116.97	\$ 136.83	\$ 158.54
S&P 500 Stock Index	100.00	95.62	125.72	148.85	191.58	156.89
Dow Jones U.S. Container & Packaging Index	100.00	81.55	104.86	127.03	140.95	115.86

ITEM 6. [RESERVED]

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

INTRODUCTION

This management's discussion and analysis of financial conditions and results of operations is intended to provide investors with an understanding of the Company's past performance, financial condition and prospects. The following will be discussed and analyzed:

- Overview of Business
- Overview of 2022 Results
- Results of Operations
- Financial Condition, Liquidity and Capital Resources
- Critical Accounting Policies
- New Accounting Standards
- Business Outlook

A detailed discussion of the fiscal 2022 year-over-year changes can be found below and a detailed discussion of fiscal 2021 year-over-year changes can be found in Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

OVERVIEW OF BUSINESS

The Company's objective is to strengthen its position as a leading provider of recyclable, fiber-based consumer packaging solutions. To achieve this objective, the Company offers customers its paperboard, cartons, cups, lids, foodservice containers and packaging machines, either as an integrated solution or separately. Cartons, carriers and containers are designed to protect and hold products. Product offerings include a variety of laminated, coated and printed packaging structures that are produced from the Company's coated recycled paperboard ("CRB"), coated unbleached kraft paperboard ("CUK") and solid bleached sulfate paperboard ("SBS"). Innovative designs and combinations of paperboard, films, foils, metallization, holographic and embossing are customized to the individual needs of the customers.

The Company is implementing strategies (i) to expand market share in its current markets and to identify and penetrate new markets; (ii) to capitalize on the Company's customer relationships, business competencies, and mills and folding carton assets; (iii) to develop and market innovative, packaging products and applications that benefit from consumer-led sustainability trends; and (iv) to continue to reduce costs by focusing on operational improvements. The Company's ability to fully implement its strategies and achieve its objectives may be influenced by a variety of factors, many of which are beyond its control, such as inflation of raw material and other costs, which the Company cannot always pass through to its customers, and the effect of overcapacity in the worldwide paperboard packaging industry.

Significant Factors That Impact the Company's Business and Results of Operations

Impact of Inflation/Deflation. The Company's cost of sales consists primarily of energy (including natural gas, fuel oil and electricity), pine and hardwood fiber, chemicals, secondary fibers, purchased paperboard, aluminum foil, ink, plastic films and resins, depreciation expense and labor. Costs increased year over year by \$710 million in 2022. The higher costs in 2022 were due to higher commodity inflation costs (\$598 million), labor and benefits (\$50 million), and other costs, net (\$62 million). Commodity inflation was primarily due to external board (\$173 million), mill chemicals (\$128 million), energy (\$110 million), wood (\$55 million), freight (\$44 million), converting chemicals (\$40 million) secondary fiber (\$31 million), and other costs (\$17 million). Because the price of natural gas experiences significant volatility, the Company has entered into contracts designed to manage risks associated with future variability in cash flows caused by changes in the price of natural gas. The Company has entered into natural gas swap contracts to hedge prices for a portion of its expected usage for 2022 and 2023. Since negotiated sales contracts and the market largely determine the pricing for its products, the Company is at times limited in its ability to raise prices and pass through to its customers any inflationary or other cost increases that the Company may incur.

The Company's operations and financial results could be adversely impacted by global events outside of the Company's control. The Company's operations and financial results could be adversely impacted by global events outside of the Company's control, such as the COVID-19 pandemic and the conflict between Russia and Ukraine. As a result of such global events, there could be unpredictable disruptions to the Company's operations that could limit production, reduce its future revenues and negatively impact the Company's financial condition. These global events may result in supply chain and transportation disruptions to and from our facilities and affected employees could impact the Company's ability to operate its facilities and distribute products to its customers in a timely fashion. In addition, these global events may result in extreme volatility and disruptions in the capital and credit markets as well as widespread furloughs and layoffs for workers in the broader economy. During the second quarter of 2022, the Company began the process of selling its interests in its two folding carton plants in Russia (the "Russian Operations"), which it expects to complete within the next six months. The Company is adhering to all U.S., U.K., and EU sanctions. In 2022, the Company's Russian Operations provided approximately 1% of the Company's Net Sales and approximately 1% of the Company's EBITDA. Refer to "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Consolidated Financial Statements for additional information.

Commitment to Cost Reduction. In light of continuing margin pressure throughout the packaging industry, the Company has programs in place that are designed to reduce costs, improve productivity and increase profitability. The Company utilizes a global continuous improvement initiative that uses statistical process control to help design and manage many types of activities, including production and maintenance. This includes a Six Sigma process focused on reducing variable and fixed manufacturing and administrative costs and the use of Lean Sigma principles in manufacturing and supply chain processes.

The Company's ability to continue to successfully implement its business strategies and to realize anticipated savings and operating efficiencies is subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond the Company's control. If the Company cannot successfully implement the strategic cost reductions or other cost savings plans it may not be able to continue to compete successfully against other manufacturers. In addition, any failure to generate the anticipated efficiencies and savings could adversely affect the Company's financial results.

Competition and Market Factors. As some products can be packaged in different types of materials, the Company's sales are affected by competition from other manufacturers' CRB, CUK, SBS, folding box board, and recycled clay-coated news. Additional substitute products also include plastic, shrink film and corrugated containers. In addition, while the Company has long-term relationships with many of its customers, the underlying contracts may be re-bid or renegotiated from time to time, and the Company may not be successful in renewing on favorable terms or at all. The Company works to maintain market share through efficiency, product innovation, service and strategic sourcing to its customers; however, pricing and other competitive pressures may occasionally result in the loss of a customer relationship.

In addition, the Company's sales are driven by consumer buying habits in the markets its customers serve. Recently, the Company has seen net organic sales growth driven by the consumers' desire for recyclable, fiber-based packaging solutions. Changes in consumer dietary habits and preferences, increases in the costs of living, unemployment rates, access to credit markets, as well as other macroeconomic factors, may negatively affect consumer spending behavior. New product introductions and promotional activity by the Company's customers and the Company's introduction of new packaging products also impact its sales.

Debt Obligations. The Company had an aggregate principal amount of \$5,283 million of outstanding debt obligations as of December 31, 2022. This debt has consequences for the Company, as it requires a portion of cash flow from operations to be used for the payment of principal and interest, exposes the Company to the risk of increased interest rates and may restrict the Company's ability to obtain additional financing. Covenants in the Company's Fourth Amended and Restated Credit Agreement (as amended, the "Current Credit Agreement") and the indentures governing the 0.821% Senior Notes due 2024, 4.125% Senior Notes due 2024, 1.512% Senior Notes due 2026, 4.75% Senior Notes due 2027, 3.50% Senior Notes due 2028, 3.50% Senior Notes due 2029, 2.625% Senior Notes due 2029 and 3.75% Senior Notes due 2030 (the "Indentures") may, among other things, restrict the ability of the Company to dispose of assets, incur guarantee obligations, prepay other indebtedness, repurchase stock, pay dividends, make other restricted payments and make acquisitions or other investments. The Current Credit Agreement also requires compliance with a maximum consolidated leverage ratio and a minimum consolidated interest coverage ratio. The Company's ability to comply in future periods with the financial covenants will depend on its ongoing financial and operating performance, which in turn will be subject to many other factors, many of which are beyond the Company's control. See "Covenant Restrictions" in "Financial Condition, Liquidity and Capital Resources" for additional information regarding the Company's debt obligations.

The debt and the restrictions under the Current Credit Agreement and the Indentures could limit the Company's flexibility to respond to changing market conditions and competitive pressures. The outstanding debt obligations and the restrictions may also leave the Company more vulnerable to a downturn in general economic conditions or its business, or unable to carry out capital expenditures that are necessary or important to its growth strategy and productivity improvement programs.

OVERVIEW OF RESULTS

This management's discussion and analysis contains an analysis of Net Sales, Income from Operations and other information relevant to an understanding of the Company's results of operations. On a Consolidated basis:

- Net Sales in 2022 increased by \$2,284 million or 32%, to \$9,440 million from \$7,156 million in 2021 due to the acquisitions of Americraft and AR Packaging in 2021, higher selling prices, increased volume from conversions to fiber-based packaging solutions and higher volume of open market sales, and partially offset by unfavorable foreign exchange.
- Income from Operations in 2022 increased by \$499 million or 123%, to \$906 million from \$407 million in 2021 due to higher pricing, higher volumes from organic sales growth and acquisitions, higher volume of open market sales, the positive contribution to volume and performance of the new CRB machine in Kalamazoo, Michigan and product mix, partially offset by unfavorable commodity inflation and other inflation (primarily labor and benefits), higher variable incentives, unfavorable foreign exchange, and higher depreciation and amortization.

Acquisitions and Dispositions

- On July 1, 2021, the Company acquired substantially all the assets of Americraft, the largest independent folding carton converter in North America. The acquisition included seven converting plants across the United States and is reported within the Americas Paperboard Packaging reportable segment.
- On November 1, 2021, the Company acquired all the shares of AR Packaging, Europe's second largest producer of fiber-based consumer packaging. The acquisition included 30 converting plants in 13 countries and is reported within the Europe Paperboard Packaging reportable segment.
- In May 2022, the Company closed the Battle Creek, MI CRB mill.
- In May 2022, the Company committed to sell its two folding carton plants in Russia and classified the facilities as held for sale, resulting in impairment charges of \$96 million, including \$12 million of goodwill impairment in 2022.
- In September 2022, the Company closed its Norwalk, Ohio carton facility, which it had announced to close in March 2022.

Share Repurchases and Dividends

- During 2022, the Company repurchased 1,315,839 shares of its common stock at an average price of \$20.91 under the 2019 share repurchase program. As of December 31, 2022, the Company has \$119 million available for additional repurchases under the 2019 share repurchase program.
- During 2022, the Company declared cash dividends of \$99 million and paid cash dividends of \$92 million.
- On September 22, 2022 the Company's board of directors voted to increase the quarterly dividend to \$0.10 per share of common stock, a 33% increase from the prior quarterly dividend of \$0.075. The dividend was paid on January 5, 2023, to common stockholders of record at the close of business on December 15, 2022.

RESULTS OF OPERATIONS

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
Net Sales	\$ 9,440	\$ 7,156	\$ 6,560
Income from Operations	\$ 906	\$ 407	\$ 524
Nonoperating Pension and Postretirement Benefit Income (Expense)	7	5	(151)
Interest Expense, Net	(197)	(123)	(129)
Income before Income Taxes and Equity Income of Unconsolidated Entity	\$ 716	\$ 289	\$ 244
Income Tax Expense	(194)	(74)	(42)
Income before Equity Income of Unconsolidated Entity	\$ 522	\$ 215	\$ 202
Equity Income of Unconsolidated Entity	—	1	1
Net Income	\$ 522	\$ 216	\$ 203

2022 COMPARED WITH 2021

Net Sales

The components of the change in Net Sales are as follows:

<i>In millions</i>	Year Ended December 31,						2022	Increase	Percent Change
	2021	Variances			2022				
		Price	Volume/Mix	Foreign Exchange					
Consolidated	\$ 7,156	\$ 1,131	\$ 1,283	\$ (130)	\$ 9,440	\$ 2,284	32 %		

The Company's Net Sales in 2022 increased by \$2,284 million or 32%, to \$9,440 million from \$7,156 million for the same period in 2021, due to \$1,088 million of net sales related to the acquisitions of Americraft in Q3 2021 and AR Packaging in Q4 2021, higher selling prices, increased volume from conversions to fiber-based packaging solutions, new product introductions and higher volume of open market sales, partially offset by unfavorable foreign exchange rates, primarily the Euro, British Pound, Canadian dollar, Australian dollar, Japanese Yen, and Mexican Peso. Core converting volumes were up driven by cereal, dry foods, and frozen pizza, and partially offset by lower volumes in beverage, frozen foods, and bakery.

Income from Operations

The components of the change in Income from Operations are as follows:

<i>In millions</i>	Year Ended December 31,						2022	Increase	Percent Change
	2021	Variances			2022				
		Price	Volume/Mix	Inflation	Foreign Exchange	Other ^(a)			
Consolidated	\$ 407	\$ 1,131	\$ 173	\$ (710)	\$ (37)	\$ (58)	\$ 906	\$ 499	123 %

^(a) Includes the Company's cost reduction initiatives, planned mill maintenance costs, expenses related to acquisitions and integration activities, exit activities, and shutdown and other special charges.

The Company's Income from Operations for 2022 increased \$499 million or 123%, to \$906 million from \$407 million for the same period in 2021 due to higher pricing, higher volumes from organic sales growth and acquisitions, higher volume of open market sales, the positive contribution to volume and performance of the new CRB machine in Kalamazoo, Michigan and mix, partially offset by unfavorable commodity inflation and other inflation (primarily labor and benefits), unfavorable foreign exchange, higher variable incentives, and higher depreciation and amortization.

Inflation in 2022 increased due to higher commodity inflation costs (\$598 million), labor and benefits (\$50 million), and other costs, net (\$62 million). Commodity inflation was primarily due to external board (\$173 million), mill chemicals (\$128 million), energy (\$110 million), wood (\$55 million), freight (\$44 million), converting chemicals (\$40 million) secondary fiber (\$31 million), and other costs (\$17 million).

Interest Expense, Net

Interest Expense, Net was \$197 million and \$123 million in 2022 and 2021, respectively. Interest Expense, Net increased due to higher debt balances and interest rates. As of December 31, 2022, approximately 32% of the Company's total debt was subject to floating interest rates.

Income Tax Expense

During 2022 and 2021, the Company recognized Income Tax Expense of \$194 million and \$74 million, on Income before Income Taxes of \$716 million and \$289 million, respectively.

The effective tax rate for 2022 is different from the statutory rate primarily due to impairment charges from the planned sale of the Company's Russian business that resulted in no corresponding tax benefit in addition to the mix of earnings between foreign and domestic jurisdictions, including those with and without valuation allowances. The Company also recognized \$10 million of tax expense to release the tax expense remaining in Other Comprehensive Income after the settlement of certain swaps during the period, which increased the effective tax rate.

The effective tax rate for 2021 is different from the statutory rate due to the tax effect of income attributable to noncontrolling interests as well as the mix of earnings between foreign and domestic jurisdictions. In addition, during 2021, the Company recorded discrete tax expense to recognize tax rate increases in the United Kingdom as well as discrete tax expense to recognize the effects of the Tax Cuts and Jobs Act on executive compensation as a result of IP's exit from the partnership.

The Company utilized its remaining U.S. federal net operating loss carryforwards during 2020. However, as a result of deductions associated with the step-up in tax basis of certain assets as a result of IP's exit from the GPIL partnership, the Company generated a taxable loss of \$564 million during 2021 that can be carried forward for U.S. federal income tax purposes indefinitely. As of December 31, 2022, the Company's remaining U.S. federal net operating loss carryforward is approximately \$238 million. As such, based on the remaining net operating loss carryforward and tax credit carryforwards, which are available to offset future U.S. federal income tax, the Company expects its U.S. federal cash tax liability in 2023 to be reduced by approximately \$100 million.

Equity Income of Unconsolidated Entity

Equity Income of Unconsolidated Entity was less than \$1 million in 2022 and \$1 million in 2021 and is related to the Company's equity investment through its GPIL subsidiary, in the Rengo Riverwood Packaging, Ltd. joint venture.

Segment Reporting

The Company has three reportable segments as follows:

Paperboard Mills includes the seven North American paperboard mills that produce primarily CRB, CUK, and SBS, which is consumed internally to produce paperboard packaging for the Americas and Europe Packaging segments. Paperboard not consumed internally is sold externally to a wide variety of paperboard packaging converters and brokers. The Paperboard Mills segment Net Sales represent the sale of paperboard only to external customers. The effect of intercompany transfers to the paperboard packaging segments has been eliminated from the Paperboard Mills segment to reflect the economics of the integration of these segments.

Americas Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to consumer packaged goods ("CPG") companies, and cups, lids and food containers sold primarily to foodservice companies and quick-service restaurants ("QSR"), serving the food, beverage, and consumer product markets in the Americas.

Europe Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to CPG companies serving the food, beverage and consumer product markets including healthcare and beauty primarily in Europe.

The Company allocates certain mill and corporate costs to the reportable segments to appropriately represent the economics of these segments. The Corporate and Other caption includes the Pacific Rim and Australia operating segments and unallocated corporate and one-time costs.

These segments are evaluated by the chief operating decision maker based primarily on Income from Operations, as adjusted for depreciation and amortization. The accounting policies of the reportable segments are the same as those described in "Note 1 - Nature of Business and Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements included herein under "Item 8. Financial Statements and Supplementary Data."

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
NET SALES:			
Paperboard Mills	\$ 1,290	\$ 1,007	\$ 988
Americas Paperboard Packaging	6,015	4,996	4,650
Europe Paperboard Packaging	1,973	992	765
Corporate/Other/Eliminations ^(a)	162	161	157
Total	\$ 9,440	\$ 7,156	\$ 6,560
INCOME (LOSS) FROM OPERATIONS:			
Paperboard Mills ^{(b)(d)}	\$ 45	\$ (10)	\$ (110)
Americas Paperboard Packaging	800	456	639
Europe Paperboard Packaging ^(c)	59	82	66
Corporate and Other ^(d)	2	(121)	(71)
Total	\$ 906	\$ 407	\$ 524

^(a) Includes revenue from contracts with customers for the Australia and Pacific Rim operating segments.

^(b) Includes accelerated depreciation related to exit activities in 2022, 2021, and 2020.

^(c) Includes impairment charges of \$96 million related to Russia incurred in 2022. See "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Condensed Consolidated Financial Statements for further information.

^(d) Includes expenses related to business combinations, shutdown and other special charges, and exit activities.

2022 COMPARED WITH 2021

Paperboard Mills

Net Sales increased from prior year due to higher selling prices, mix and higher open market volume. The Company also internalized more paperboard tons.

Income from Operations increased due to higher pricing, higher open market volume, the positive contribution to volume and performance of the new CRB paper machine in Kalamazoo, Michigan and, downtime and mitigation costs related to Winter Storm Uri in Q1 2021, partially offset by the winter weather in Q4 2022 and commodity inflation. The commodity inflation was primarily due to higher prices for chemicals, energy, wood, secondary fiber, and freight.

Americas Paperboard Packaging

Net Sales increased due to higher pricing, the acquisition of Americraft in Q3 2021, organic sales growth, including conversions to our fiber-based packaging solutions, mix and new product introductions, partially offset by unfavorable foreign currency exchange rates. Higher volumes in cereal, dry foods, frozen pizza and tissue were partially offset by lower volumes in beverage, bakery, frozen foods and pet food. In beverage, volumes decreased primarily in craft beer and specialty beverages offset by soft drinks.

Income from Operations increased due to higher pricing, higher core converting volume and increased volume from conversions to our fiber based packaging solutions, mix, and cost savings from continuous improvement and other programs, partially offset by commodity inflation and other inflation (primarily labor and benefits). The commodity inflation was primarily due to higher prices for external board, chemicals, freight, and energy.

Europe Paperboard Packaging

Net Sales increased due to the acquisition of AR Packaging on November 1, 2021 as well as higher pricing, mix, organic sales growth at AR Packaging and new product introductions, partially offset by lower core converting volumes in certain market segments, and unfavorable foreign currency exchange rates.

Income from Operations decreased primarily due to impairment charges of \$96 million related to the Company's classification of its Russian operations as held for sale in the second quarter. Refer to "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Condensed Consolidated Financial Statements for additional information. Excluding these impairment charges, Income from Operations increased due to the acquisition of AR Packaging on November 1, 2021, higher pricing, mix, and cost savings through continuous improvement and other programs, partially offset by commodity inflation primarily related to external board and labor and benefits, lower core converting volumes in certain market segments and unfavorable foreign currency exchange rates.

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

The Company broadly defines liquidity as its ability to generate sufficient funds from both internal and external sources to meet its obligations and commitments. In addition, liquidity includes the ability to obtain appropriate debt and equity financing and to convert into cash those assets that are no longer required to meet existing strategic and financial objectives. Therefore, liquidity cannot be considered separately from capital resources that consist of current or potentially available funds for use in achieving long-range business objectives and meeting debt service commitments.

Liquidity and Capital Resources

The Company expects its material cash requirements for the next twelve months will be for: capital expenditures, periodic required estimated income tax payments, periodic interest and debt service payments on associated debt, as discussed in Note 5, lease agreements which have fixed lease payment obligations, as discussed in Note 6, and minimum purchase commitments as discussed in Note 13 along with ongoing operating costs, working capital, share repurchases and dividend payments. The Company expects its primary sources of liquidity to be cash flows from sales and operating activities in the normal course of operations and availability from its revolving credit facilities, as needed. The Company expects that these sources will be sufficient to fund our ongoing cash requirements for the foreseeable future, including at least the next twelve months.

Principal and interest payments under the term loan facilities and the revolving credit facilities, together with principal and interest payments on the Company's 0.821% Senior Notes due 2024, 4.125% Senior Notes due 2024, 1.512% Senior Notes due 2026, 4.75% Senior Notes due 2027, 3.50% Senior Notes due 2028, 3.50% Senior Notes due 2029, 2.625% Senior Notes due 2029 and 3.75% Senior Notes due 2030 (the "Notes"), represent liquidity requirements for the Company. Based upon current levels of operations, anticipated cost savings and expectations as to future growth, the Company believes that cash generated from operations, together with amounts available under its revolving credit facilities and other available financing sources, will be adequate to permit the Company to meet its debt service obligations, necessary capital expenditure program requirements and ongoing operating costs and working capital needs, although no assurance can be given in this regard. The Company's future financial and operating performance, ability to service or refinance its debt and ability to comply with the covenants and restrictions contained in its debt agreements (see "Covenant Restrictions" below) will be subject to future economic conditions, including conditions in the credit markets, and to financial, business and other factors, many of which are beyond the Company's control, and will be substantially dependent on the selling prices and demand for the Company's products, raw material and energy costs, and the Company's ability to successfully implement its overall business and profitability strategies.

Accounts receivable are stated at the amount owed by the customer, net of an allowance for estimated uncollectible accounts, returns and allowances, and cash discounts. The allowance for doubtful accounts is estimated based on historical experience, current economic conditions and the creditworthiness of customers. Receivables are charged to the allowance when determined to be no longer collectible.

The Company has entered into agreements to sell, on a revolving basis, certain trade accounts receivable to third party financial institutions. Transfers under these agreements meet the requirements to be accounted for as sales in accordance with the *Transfers and Servicing* topic of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification (the "Codification"). The loss on sale is not material and is included in Other Expense, Net line item on the Consolidated Statement of Operations. The following table summarizes the activity under these programs for the year ended December 31, 2022 and 2021, respectively:

<i>In millions</i>	Year Ended December 31,	
	2022	2021
Receivables Sold and Derecognized	\$ 3,299	\$ 2,947
Proceeds Collected on Behalf of Financial Institutions	3,179	2,970
Net Proceeds Received From (Paid to) Financial Institutions	152	(6)
Deferred Purchase Price at December 31 ^(a)	—	4
Pledged Receivables at December 31	197	180

^(a) Included in Other Current Assets on the Consolidated Balance Sheets and represents a beneficial interest in the receivables sold to the financial institutions, which is a Level 3 fair value measure.

Receivables sold under all programs subject to continuing involvement, which consist principally of collection services, were approximately \$753 million and \$613 million as of December 31, 2022 and 2021, respectively.

The Company also participates in supply chain financing arrangements offered by certain customers that qualify for sale accounting in accordance with the *Transfers and Servicing* topic of the FASB Codification. As of December 31, 2022 and 2021, the Company sold receivables of \$1,124 million and \$693 million, respectively, related to these arrangements.

Cash Flows

In millions	Years Ended December 31,	
	2022	2021
Net Cash Provided by Operating Activities	\$ 1,090	\$ 609
Net Cash Used in Investing Activities	\$ (435)	\$ (2,392)
Net Cash Provided by (Used in) Financing Activities	\$ (666)	\$ 1,778

Net cash provided by operating activities in 2022 totaled \$1,090 million, compared to \$609 million in 2021. The favorable increase was mainly due to improved income from operations. Pension contributions in 2022 and 2021 were \$24 million and \$33 million, respectively. In the first quarter of 2022 and 2021, the Company made a \$6 million and \$14 million contribution respectively to its remaining U.S. defined benefit plan by effectively utilizing the excess balance related to its U.S. defined benefit plan terminated in 2020.

Net cash used in investing activities in 2022 totaled \$435 million, compared to \$2,392 million in 2021. Capital spending was \$549 million and \$802 million in 2022 and 2021, respectively. In the prior year, the Company paid \$292 million and \$1,412 million, net of cash acquired, for the Americraft and AR Packaging acquisitions, respectively. Net cash receipts related to the accounts receivable securitization and sale programs were \$119 million in 2022 and 2021.

Net cash used in financing activities in 2022 totaled \$666 million, compared to \$1,778 million provided by financing activities in 2021. As further discussed in "Note 5 – Debt" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data," current year activities included the redemption of the 4.875% Senior Notes due 2022 of \$250 million. Other current year activities included borrowings under revolving credit facilities primarily for capital spending, repurchase of common stock of \$28 million and payments on debt of \$14 million. The Company also paid dividends of \$92 million and withheld \$18 million of shares to satisfy tax withholding obligations related to the payout of restricted stock units. During 2021, the Company issued debt of \$2,386 million and €500 million consisting of Senior Notes of \$1,200 million and €290 million, incremental term facilities of \$1,075 million and €210 million, and an offering of \$100 million aggregate principal amount of tax-exempt green bonds with net proceeds of \$111 million used to reimburse GPIL for a portion of its CRB platform optimization project. Debt proceeds associated with the term loans and Senior Notes were used to redeem the 4.75 % Senior Notes due 2021 of \$425 million, and borrowings under GPIL's senior secured credit facility of \$1,200 million. The Company also paid \$150 million toward the redemption of IP's ownership interest in GPIIP, and \$109 million Tax Receivable Agreement (TRA) payment related to the IP exit. Additionally, the Company made borrowings under revolving credit facilities primarily for capital spending, redemption of IP's ownership interest, and payments on debt of \$16 million. The Company also paid dividends and distributions of \$92 million and withheld \$15 million of restricted stock units to satisfy tax withholding obligations related to the payout of restricted stock units.

Supplemental Guarantor Financial Information

As discussed in "Note 1 - Nature of Business and Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data," as a result of IP's final exchange in 2021, the Company currently owns 100% of the outstanding interests in GPIIP. GPIIP continued to be treated as a partnership for U.S. federal and state income tax purposes despite IP's exit as a minority partner until September 1, 2022, when, due to an internal restructuring, GPIIP became a single member limited liability company, terminating the partnership for income tax purposes. Therefore, GPIL is no longer subject to separate SEC filing requirements. As such, the Company has included Supplemental Guarantor disclosures herein that were previously included in the GPIL SEC filings.

As further discussed in "Note 5 – Debt" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data," the Senior Notes issued by GPIL (the "Issuer") are guaranteed by certain domestic subsidiaries (the "Subsidiary Guarantors"), which consist of all material 100% owned subsidiaries of GPIL, other than its foreign subsidiary holding companies, domestic subsidiaries and in certain instances by the Company (a Parent guarantee) (collectively "the Guarantors"). GPIL's remaining subsidiaries (the "Nonguarantor Subsidiaries") include all of GPIL's foreign subsidiary holding companies, foreign subsidiaries and immaterial domestic subsidiaries. The Subsidiary Guarantors are jointly and severally, fully and unconditionally liable under the guarantees.

Other than tax related items, the results of operations, assets, and liabilities for GPHC and GPIL are substantially the same. Therefore, the summarized financial information below is presented on a combined basis, consisting of GPIL and Subsidiary Guarantors (collectively, the "Obligor Group"), and is presented after the elimination of: (i) intercompany transactions and balances among GPIL and Subsidiary Guarantors, and (ii) equity in earnings from and investments in the Nonguarantor Subsidiaries.

<i>In millions</i>	Twelve Months Ended December 31, 2022	
SUMMARIZED STATEMENTS OF OPERATIONS		
Net Sales ^(a)	\$	7,274
Cost of Sales		5,878
Income from Operations		829
Net Income		655

^(a) Includes Net Sales to Nonguarantor Subsidiaries of \$534 million.

<i>In millions</i>	December 31, 2022	
SUMMARIZED BALANCE SHEET		
Current assets (excluding intercompany receivable from Nonguarantor)	\$	1,386
Noncurrent assets		5,852
Intercompany receivables from Nonguarantors		1,399
Current liabilities		1,355
Noncurrent liabilities		5,360

Covenant Restrictions

Covenants contained in the Current Credit Agreement and the Indentures may, among other things, limit the ability to incur additional indebtedness, restrict the ability of the Company to dispose of assets, incur guarantee obligations, prepay other indebtedness, repurchase shares, pay dividends and make other restricted payments, create liens, make equity or debt investments, make acquisitions, modify terms of the indentures under which the Notes are issued, engage in mergers or consolidations, change the business conducted by the Company and its subsidiaries, and engage in certain transactions with affiliates. Such restrictions, together with disruptions in the credit markets, could limit the Company's ability to respond to changing market conditions, fund its capital spending program, provide for unexpected capital investments or take advantage of business opportunities.

Under the terms of the Current Credit Agreement, the Company must comply with a maximum Consolidated Total Leverage Ratio covenant and a minimum Consolidated Interest Expense Ratio covenant. The Current Credit Agreement, which contains the definitions of these covenants, was filed as an exhibit to the Company's Form 8-K filed on April 1, 2021.

Due to the completion of a material acquisition, the Current Credit Agreement requires that the Company maintain a maximum Consolidated Total Leverage Ratio of less than 5.00 to 1.00. At December 31, 2022, the Company was in compliance with such covenant and the ratio was 3.04 to 1.00.

The Company must also comply with a minimum Consolidated Interest Expense Ratio of 3.00 to 1.00. At December 31, 2022, the Company was in compliance with such covenant and the ratio was 8.44 to 1.00.

As of December 31, 2022, the Company's credit was rated BB+ by Standard & Poor's and Ba1 by Moody's Investor Services. Standard & Poor's and Moody's Investor Services' ratings on the Company included a stable outlook.

Capital Investment

The Company's capital investments in 2022 were \$430 million (\$549 million was paid), compared to \$899 million (\$802 million was paid) in 2021. During 2022, the Company had capital spending of \$386 million for adding capacity and improving process capabilities, \$17 million for capital spares and \$27 million for manufacturing packaging machinery.

Interest is capitalized on assets under construction for one year or longer with an estimated spending of \$1 million or more. The capitalized interest is recorded as part of the asset to which it relates and is amortized over the asset's estimated useful life. Capitalized interest was \$5 million and \$14 million as of December 31, 2022 and 2021, respectively.

Environmental Matters

Some of the Company's current and former facilities are the subject of environmental investigations and remediations resulting from historical operations and the release of hazardous substances or other constituents. Some current and former facilities have a history of industrial usage for which investigation and remediation obligations may be imposed in the future or for which indemnification claims may be asserted against the Company. Also, closures or sales of facilities may necessitate further investigation and may result in remediation at those facilities. The Company has established reserves for those facilities or issues where liability is probable and the costs are reasonably estimable.

For further discussion of the Company's environmental matters, see " *Note 14 - Environmental and Legal Matters*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

International Operations

The Company has converting plants and one paper mill in 21 countries outside of the U.S. and sells its products worldwide. For 2022, before intercompany eliminations, net sales from operations outside of the U.S. represented approximately 29% of the Company's net sales. The Company's revenues from export sales fluctuate with changes in foreign currency exchange rates. In addition, at December 31, 2022, approximately 29% of the Company's total assets were denominated in currencies other than the U.S. dollar. The Company has significant operations in countries that use the Euro, British pound sterling, Swedish krona, Polish zloty, the Australian dollar, the Canadian dollar, the Mexico peso or the Japanese yen as their functional currencies. The effect of changes in the U.S. dollar exchange rate against these currencies produced a net currency translation adjustment loss of \$148 million, which was recorded in Other Comprehensive (Loss) Income for the year ended December 31, 2022. The magnitude and direction of this adjustment in the future depends on the relationship of the U.S. dollar to other currencies. The Company pursues a currency hedging program in order to reduce the impact of foreign currency exchange fluctuations on financial results. See "Financial Instruments" below.

Financial Instruments

The Company pursues a currency hedging program which utilizes derivatives to reduce the impact of foreign currency exchange fluctuations on its consolidated financial results. Under this program, the Company has previously entered into forward exchange contracts in the normal course of business to hedge certain foreign currency denominated transactions. Realized and unrealized gains and losses on these forward contracts are included in the measurement of the basis of the related foreign currency transaction when recorded. The Company also pursues a hedging program that utilizes derivatives designed to manage risks associated with future variability in cash flows and price risk related to future energy cost increases. Under this program, the Company has entered into natural gas swap contracts to hedge a portion of its forecasted natural gas usage for 2023. Realized gains and losses on these contracts are included in the financial results concurrently with the recognition of the commodity consumed. In addition, the Company has previously used interest rate swaps to manage interest rate risks on future interest payments caused by interest rate changes on its variable rate term loan facility. The Company does not hold or issue financial instruments for trading purposes. See "Item 7A., Quantitative and Qualitative Disclosure About Market Risk."

Off-Balance Sheet Arrangements

The Company does not have any off-balance sheet arrangements.

CRITICAL ACCOUNTING JUDGEMENTS AND ESTIMATES

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. Actual results could differ from these estimates, and changes in these estimates are recorded when known. The critical accounting policies used by management in the preparation of the Company's consolidated financial statements are those that are important both to the presentation of the Company's financial condition and results of operations and require significant judgments by management with regard to estimates used. The critical judgments by management relate to acquisitions, pension benefits, future cash flows associated with impairment testing for goodwill and long-lived assets, and deferred income taxes.

Acquisitions

The Company uses the acquisition method of accounting for acquired businesses. Under the acquisition method of accounting, the Company allocated the purchase consideration to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values on the date of the acquisition. Any excess of the purchase price over the estimated fair values of the identifiable net assets acquired is recorded as goodwill. Any excess of the estimated fair values of the identifiable net assets over the purchase price is recorded as a gain on bargain purchase. The estimates used to determine the fair value of long-lived assets, such as intangible assets, can be complex and require significant judgments. Therefore, we use information available to us to make fair value determinations and often engage independent valuation specialists, when necessary, to assist in the fair value determination of significant, acquired long-lived assets. The determination of fair value requires estimates about discount rates, growth and retention rates, royalty rates, expected future cash flows and other future events that are judgmental in nature. While we use our best estimates and assumptions as a part of the purchase price allocation process, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we are permitted to record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of income. The Company is also required to estimate the useful lives of intangible assets to determine the amount of acquisition-related intangible asset amortization expense to record in future periods. Such useful lives are determined based upon the expected period of future cash flows to be generated by the intangible asset. The Company periodically reviews the estimated useful lives assigned to our intangible assets to determine whether such estimated useful lives continue to be appropriate.

On November 1, 2021, the Company completed its acquisition of AR Packaging (the "Transaction"), through the acquisition of all of the shares of AR Packaging for cash of \$1,412 million, net of cash acquired of \$75 million. AR Packaging's results of operations have been included in the Company's financial results since the acquisition date. The Company allocated the fair value of purchase consideration transferred to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values on the date of the acquisition. The Company identified that the acquired assets included customer relationships, which were assigned a fair value of \$439 million using a discounted cash flow analysis. During the fourth quarter of 2022, the Company finalized acquisition accounting, which resulted in a decrease of \$38 million to customer relationships. Significant assumptions in valuing this asset included the discount rate, annual revenue growth rates, customer attrition rates, projected operating expenses, projected earnings before interest, taxes, depreciation, and amortization ("EBITDA") margins, tax rate, depreciation, contributory asset charge, and future earnings projections among others. The Company believes the estimates applied to be based on reasonable assumptions, but which are inherently uncertain. As a result, actual results may differ from the assumptions and judgments used to determine fair value of the assets acquired, which could result in material impairment losses in the future. Additional information regarding our acquisitions is included in "Note 4 - Business Combinations" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

Goodwill

The Company evaluates goodwill for potential impairment annually as of October 1, as well as whenever events or changes in circumstances suggest that the fair value of a reporting unit may no longer exceed its carrying amount. Potential impairment of goodwill is measured at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the estimated fair value of the reporting unit. As of October 1, 2022, the Company had seven reporting units, five of which had goodwill.

Periodically, the Company may perform a qualitative impairment analysis of goodwill associated with each of its reporting units to determine if it is more likely than not that the carrying value of a reporting unit exceeded its fair value. If the results of the qualitative analysis of any of the reporting units is inconclusive, or if significant changes in the business have occurred since the last quantitative impairment assessment, the Company will perform a quantitative analysis for those reporting units.

As of October 1, 2022, the Company performed a quantitative impairment test. The quantitative analysis involves calculating the fair value of each reporting unit by utilizing a discounted cash flow analysis based on the Company's business plans, discounted using a weighted average cost of capital and market indicators of terminal year cash flows based upon a multiple of earnings before interest, taxes, depreciation and amortization ("EBITDA").

Estimating the fair value of the reporting unit involves uncertainties as it requires management to consider a number of factors, including but not limited to, future operating results, business plans, economic projections of revenues and operating margins, estimated future cash flows, and market data and analysis, including market capitalization. Fair value determinations are sensitive to changes in the factors described above. There are inherent uncertainties related to these factors and judgments used to estimate reporting unit fair value and the related analysis of potential goodwill impairment.

The variability of the assumptions that management uses to perform the goodwill impairment test depends on a number of conditions, including uncertainty about future events and cash flows. Accordingly, the Company's accounting estimates may materially change from period to period due to changing market factors. If the Company had used other assumptions and estimates or if different conditions occur in future periods, future operating results and cash flows could be materially impacted, and judgments and conclusions about the recoverability of goodwill could change. The assumptions used in the goodwill impairment testing process could also be adversely impacted by certain of the risks discussed in "Item 1A., Risk Factors" and thus could result in future goodwill impairment charges.

The Company performed its annual goodwill impairment tests as of October 1, 2022. The Company concluded that all reporting units with goodwill have a fair value that exceeds their carrying value, and thus goodwill was not impaired. The discount rate used for each reporting unit ranged from 7.5% to 9.0%, and we utilized a transaction multiple of 9.1 times to calculate terminal period cash flows. The Foodservice and Europe reporting units had fair values that exceed their respective carrying values by 83% and 42%, respectively, whereas all other reporting units exceeded by more than 50%. If we had concluded that it was appropriate to increase the discount rate we used by 100 basis points to estimate the fair value of our respective reporting units, the fair value of each reporting unit would have continued to exceed its carrying amount. The Foodservice and Europe reporting units had goodwill totaling \$43 million and \$481 million, respectively. The Company does not believe it is likely that there will be material changes in the assumptions or estimates used to calculate the reporting unit fair values.

In the second quarter of 2022, the Company began the process of divesting its interests in its two folding carton plants in Russia. The Company reviewed the goodwill assigned to these facilities for impairment and recorded a \$12 million non-cash impairment charge, thereby reducing the carrying value of goodwill for these facilities to zero. This charge was recorded within Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net in the Company's Consolidated Statements of Operations within its European Paperboard Packaging reporting unit. Refer to "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Consolidated Financial Statements for additional information.

Assets Held for Sale

When assets are identified by management as held for sale, the Company discontinues depreciating the assets and estimates the sales price, net of expected selling costs, of such assets. The Company generally considers assets (as identified by their disposal groups) to be held for sale when the transaction has received appropriate corporate authority, they are probable of being sold within the next twelve months, and there are no significant contingencies relating to a sale. If, in management's opinion, the estimated net sales price, net of expected selling costs, of the disposal groups which have been identified as held for sale is less than the carrying value of the assets, a valuation allowance (which is recorded as unrealized losses on the disposition) is established. In the absence of an executed sales agreement with a set sales price, management's estimate of the net sales price may be based on a number of assumptions, including but not limited to the Company's estimates of future cash flows, market capitalization rates and discount rates, if applicable. In accordance with the held for sale criteria, the Company classified its two folding carton plants in Russia as held for sale in the second quarter of 2022 and recorded a non-cash impairment charge of \$84 million in 2022 in addition to the goodwill impairment of \$12 million. This charge was recorded within Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net in the Company's Consolidated Statements of Operations within its European Paperboard Packaging reporting unit. The Company expects to complete the sale of its Russian operations within the next six months and will continue to evaluate the valuation until the sale is completed. Refer to "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Consolidated Financial Statements for additional information.

Recovery of Long-Lived Assets

The Company evaluates the recovery of its long-lived assets by analyzing operating results and considering significant events or changes in the business environment that may have triggered impairment. The Company reviews long-lived assets (including property, plant and equipment and intangible assets) for impairment whenever events or changes in circumstances indicate that the carrying amount of such long-lived assets may not be fully recoverable by undiscounted cash flows. Measurement of the impairment loss, if any, is based on the fair value of the asset, which is determined by an income, cost or market approach.

Deferred Income Taxes and Potential Assessments

According to the Income Taxes topic of the FASB Codification, a valuation allowance is required to be established or maintained when, based on currently available information and other factors, it is more likely than not that all or a portion of a deferred tax asset will not be realized. The FASB Codification provides important factors in determining whether a deferred tax asset will be realized, including whether there has been sufficient taxable income in recent years and whether sufficient income can reasonably be expected in future years in order to utilize the deferred tax asset. The Company has evaluated the need to maintain a valuation allowance for deferred tax assets based on its assessment of whether it is more likely than not that deferred tax benefits would be realized through the generation of future taxable income. Appropriate consideration was given to all available evidence, both positive and negative, in assessing the need for a valuation allowance. In determining whether a valuation allowance is required, many factors are considered, including the specific taxing jurisdiction, the carryforward period, reversals of existing taxable temporary differences, cumulative pretax book earnings, income tax strategies and forecasted earnings for the entities in each jurisdiction.

As of December 31, 2022, the Company has a valuation allowance of \$57 million against its net deferred tax assets in certain foreign jurisdictions and against domestic deferred tax assets related to certain federal tax credit carryforwards, certain state net operating loss carryforwards and certain state tax credit carryforwards. As of December 31, 2021, a total valuation allowance of \$38 million was recorded.

As of December 31, 2022, the Company has provided for deferred U.S. income taxes attributable to future withholding tax expense related to the Company's equity investment in the joint venture, Rengo Riverwood Packaging, Ltd. In addition, the Company provided deferred income taxes for future Canadian withholding tax to the extent of excess cash available for distribution after consideration of working capital needs and other debt settlement of its Canadian subsidiary, Graphic Packaging International Canada, ULC. The Company continues to assert that it is permanently reinvested in the cumulative earnings of its Canadian subsidiary in excess of the amount of cash that is on hand and available for distribution after consideration of working capital needs and other debt settlement. The Company determined that no deferred tax liability should be recorded related to the outside basis difference of its Canadian subsidiary as of December 31, 2022.

The Company has not provided for deferred U.S. income taxes on outside basis differences of approximately \$44 million in its other international subsidiaries because of the Company's intention to indefinitely reinvest these earnings outside the U.S. The determination of the amount of the unrecognized deferred income tax liability (primarily withholding tax in certain jurisdictions) on the unremitted earnings or any other associated outside basis differences is not practicable because of the complexities associated with the calculation.

The Company has elected to recognize global intangible low-taxed income ("GILTI") as a period cost as incurred, therefore there are no deferred taxes recognized for basis differences that are expected to impact the amount of the GILTI inclusion upon reversal.

NEW ACCOUNTING STANDARDS

For a discussion of recent accounting pronouncements impacting the Company, see " *Note 1 - Nature of Business and Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements included herein under "Item 8., Financial Statements and Supplementary Data."

BUSINESS OUTLOOK

Total capital investment for 2023 is expected to be in the range of 7% to 8% of sales.

The Company also expects the following in 2023:

- Depreciation and amortization expense, including pension amortization, of approximately \$570 million.
- Pension plan contributions between \$15 million and \$25 million.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

The Company does not trade or use derivative instruments with the objective of earning financial gains on interest or currency rates, nor does it use leveraged instruments or instruments where there are no underlying exposures identified.

Interest Rates

The Company is exposed to changes in interest rates, primarily as a result of its short-term and long-term debt, which include both fixed and floating rate debt. The Company has previously used interest rate swap agreements effectively to fix the LIBOR rate on certain variable rate borrowings. At December 31, 2022, the Company had no outstanding interest rate swaps.

The table below sets forth interest rate sensitivity information related to the Company's debt.

Long-Term Debt Principal Amount by Maturity-Average Interest Rate
Expected Maturity Date

<i>In millions</i>	2023	2024	2025	2026	2027	Thereafter	Total	Fair Value
Total Debt								
Fixed Rate	\$—	\$713	\$—	\$509	\$300	\$1,936	\$ 3,458	\$ 3,140
Average Interest Rate	—%	2.41%	2.25%	2.04%	4.75%	3.23%		
Variable Rate	\$26	\$39	\$39	\$1,285	\$—	\$250	\$ 1,639	\$ 1,609
	SOFR+Spread	SOFR+Spread	SOFR+Spread	SOFR+Spread		SOFR+ Spread	—	—

Foreign Exchange Rates

The Company has previously entered into forward exchange contracts to manage risks associated with foreign currency transactions and future variability of cash flows arising from those transactions that may be adversely affected by changes in exchange rates. The contracts are carried at fair value with changes in fair value recognized in Accumulated Other Comprehensive Loss and gains/losses related to these contracts are recognized in Other Expense (Income), Net or Net Sales, when appropriate.

As of December 31, 2022 and 2021, the Company had no outstanding forward exchange contracts. As of December 31, 2020, multiple forward exchange contracts existed that expired on various dates throughout the following year

No amounts were reclassified to earnings during 2022, 2021 or 2020 in connection with forecasted transactions that were considered probable of not occurring and there was no amount of ineffectiveness related to changes in the fair value of foreign currency forward contracts. Additionally, there were no amounts excluded from the measure of effectiveness during 2022, 2021 or 2020.

The Company has not entered into any foreign exchange contracts in 2022.

Net Investment Hedge

On October 29, 2021 and November 19, 2021, the Company drew the full amount of the €210 million delayed draw term loan facility and completed a private offering of €290 million aggregate principal amount of the 2.625% senior unsecured notes due 2029, respectively. The Company designated this Euro-denominated debt as a non-derivative net investment hedge of a portion of our net investment in Euro functional currency denominated subsidiaries to offset currency fluctuations.

Derivatives not Designated as Hedges

The Company enters into forward exchange contracts to effectively hedge substantially all receivables resulting from transactions denominated in foreign currencies. The purpose of these forward exchange contracts is to protect the Company from the risk that the eventual functional currency cash flows resulting from the collection of these receivables will be adversely affected by changes in exchange rates. At December 31, 2022, multiple foreign currency forward exchange contracts existed, with maturities ranging up to three months. Those forward currency exchange contracts outstanding at December 31, 2022, when aggregated and measured in U.S. dollars at December 31, 2022 contractual rates, had net notional amounts totaling \$111 million. The Company continuously monitors these forward exchange contracts and adjusts accordingly to minimize the exposure.

Deal Contingent Hedge

On May 14, 2021, in connection with the AR Packaging acquisition, the Company entered into deal contingent foreign exchange forward contracts, with no upfront cash cost, to hedge €700 million of the acquisition price. These forward contracts settled October 29, 2021, immediately prior to the acquisition of AR Packaging and are accounted for as derivatives under ASC 815, Derivatives and Hedging. Realized losses of \$48 million for the year ended December 31, 2021 resulting from these contracts are recognized in Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net on the Company's Consolidated Statements of Operations. For more information, see "Note 1 - General Information" of the Company's 2021 Annual Report on Form 10-K for the year ended December 31, 2021.

Natural Gas Contracts

The Company has hedged a portion of its expected natural gas usage for 2023. The carrying amount and fair value of the natural gas swap contracts is a net liability of \$12 million as of December 31, 2022. Such contracts are designated as cash flow hedges and are accounted for by deferring the quarterly change in fair value of the outstanding contracts in Accumulated Other Comprehensive Loss in Shareholders' Equity. The resulting gain or loss is reclassified into Cost of Sales concurrently with the recognition of the commodity consumed.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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**GRAPHIC PACKAGING HOLDING COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS**

<i>In millions, except per share amounts</i>	Year Ended December 31,		
	2022	2021	2020
Net Sales	\$ 9,440	\$ 7,156	\$ 6,560
Cost of Sales	7,610	6,085	5,460
Selling, General and Administrative	774	528	513
Other (Income) Expense, Net	19	(2)	2
Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net	131	138	61
Income from Operations	906	407	524
Nonoperating Pension and Postretirement Benefit Income (Expense)	7	5	(151)
Interest Expense, Net	(197)	(123)	(129)
Income before Income Taxes and Equity Income of Unconsolidated Entity	716	289	244
Income Tax Expense	(194)	(74)	(42)
Income before Equity Income of Unconsolidated Entity	522	215	202
Equity Income of Unconsolidated Entity	—	1	1
Net Income	\$ 522	\$ 216	\$ 203
Net Income Attributable to Noncontrolling Interest	—	(12)	(36)
Net Income Attributable to Graphic Packaging Holding Company	\$ 522	\$ 204	\$ 167
Net Income Per Share Attributable to Graphic Packaging Holding Company — Basic	\$ 1.69	\$ 0.69	\$ 0.60
Net Income Per Share Attributable to Graphic Packaging Holding Company — Diluted	\$ 1.69	\$ 0.68	\$ 0.60

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

GRAPHIC PACKAGING HOLDING COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year Ended December 31,
2022

<i>In millions</i>	Graphic Packaging Holding Company	Noncontrolling Interest	Total
Net Income	\$ 522	\$ —	\$ 522
Other Comprehensive Income (Loss), Net of Tax:			
Derivative Instruments	4	—	4
Pension and Postretirement Benefit Plans	(9)	—	(9)
Currency Translation Adjustment	(148)	(1)	(149)
Total Other Comprehensive Loss, Net of Tax	(153)	(1)	(154)
Total Comprehensive Income (Loss)	\$ 369	\$ (1)	\$ 368

Year Ended December 31,
2021

Net Income	\$ 204	\$ 12	\$ 216
Other Comprehensive Income (Loss), Net of Tax:			
Derivative Instruments	5	1	6
Pension and Postretirement Benefit Plans	45	—	45
Currency Translation Adjustment	(28)	—	(28)
Total Other Comprehensive Income, Net of Tax	22	1	23
Total Comprehensive Income	\$ 226	\$ 13	\$ 239

Year Ended December 31,
2020

<i>In millions</i>	Graphic Packaging Holding Company	Noncontrolling Interest	Redeemable Noncontrolling Interest	Total
Net Income (Loss)	\$ 167	\$ 39	\$ (3)	\$ 203
Other Comprehensive (Loss) Income, Net of Tax:				
Derivative Instruments	4	1	—	5
Pension and Postretirement Benefit Plans	100	29	10	139
Currency Translation Adjustment	17	2	(1)	18
Total Other Comprehensive Income, Net of Tax	121	32	9	162
Total Comprehensive Income	\$ 288	\$ 71	\$ 6	\$ 365

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

**GRAPHIC PACKAGING HOLDING COMPANY
CONSOLIDATED BALANCE SHEETS**

<i>In millions, except share and per share amounts</i>	December 31,	
	2022	2021
ASSETS		
Current Assets:		
Cash and Cash Equivalents	\$ 150	\$ 172
Receivables, Net	879	859
Inventories, Net	1,606	1,387
Other Current Assets	71	84
Total Current Assets	2,706	2,502
Property, Plant and Equipment, Net	4,579	4,677
Goodwill	1,979	2,015
Intangible Assets, Net	717	868
Other Assets	347	395
Total Assets	\$ 10,328	\$ 10,457
LIABILITIES		
Current Liabilities:		
Short-Term Debt and Current Portion of Long-Term Debt	\$ 53	\$ 279
Accounts Payable	1,123	1,125
Compensation and Employee Benefits	295	211
Interest Payable	51	35
Other Accrued Liabilities	411	399
Total Current Liabilities	1,933	2,049
Long-Term Debt	5,200	5,515
Deferred Income Tax Liabilities	668	579
Accrued Pension and Postretirement Benefits	111	139
Other Noncurrent Liabilities	266	282
Commitments (Note 13)		
SHAREHOLDERS' EQUITY		
Preferred Stock, par value \$.01 per share; 100,000,000 shares authorized; no shares issued or outstanding	—	—
Common Stock, par value \$.01 per share; 1,000,000,000 shares authorized; 307,116,089 and 307,103,551 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	3	3
Capital in Excess of Par Value	2,054	2,046
Retained Earnings	469	66
Accumulated Other Comprehensive Loss	(377)	(224)
Total Graphic Packaging Holding Company Shareholders' Equity	2,149	1,891
Noncontrolling Interest	1	2
Total Equity	2,150	1,893
Total Liabilities and Shareholders' Equity	\$ 10,328	\$ 10,457

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

GRAPHIC PACKAGING HOLDING COMPANY
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

<i>In millions, except share amounts</i>	Common Stock		Capital in Excess of Par Value	(Accumulated Deficit) Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interest
	Shares	Amount						
Balances at December 31, 2019	290,246,907	\$ 3	\$ 1,877	\$ 56	\$ (367)	488	\$ 2,057	\$ 304
Net Income	—	—	—	167	—	39	206	(3)
Redeemable Noncontrolling Interest Redemption Value Adjustment	—	—	12	—	—	—	12	(12)
Distribution of Membership Interest	—	—	—	—	—	(19)	(19)	(2)
Other Comprehensive (Loss) Income, Net of Tax:								
Derivative Instruments	—	—	—	—	4	1	5	—
Pension and Postretirement Benefit Plans	—	—	—	—	100	29	129	10
Currency Translation Adjustment	—	—	—	—	17	2	19	(1)
Repurchase of Common Stock	(23,420,010)	—	(128)	(188)	—	—	(316)	—
Redemption of IP's Ownership Interest	—	—	(87)	—	—	(124)	(211)	(296)
Tax Effect IP Redemption	—	—	16	—	—	—	16	—
Dividends Declared	—	—	—	(83)	—	—	(83)	—
Recognition of Stock-Based Compensation	—	—	25	—	—	—	25	—
Issuance of Shares for Stock-Based Awards	899,476	—	—	—	—	—	—	—
Balances at December 31, 2020	267,726,373	\$ 3	\$ 1,715	\$ (48)	\$ (246)	416	\$ 1,840	\$ —
Net Income (Loss)	—	—	—	204	—	12	216	—
Distribution of Membership Interest	—	—	—	—	—	(6)	(6)	—
Other Comprehensive Income, Net of Tax:								
Derivative Instruments	—	—	—	—	5	1	6	—
Pension and Postretirement Benefit Plans	—	—	—	—	45	—	45	—
Currency Translation Adjustment	—	—	—	—	(28)	—	(28)	—
Redemption of IP's Ownership Interest	38,080,072	—	319	—	—	(423)	(104)	—
Dividends Declared	—	—	—	(90)	—	—	(90)	—
Investment in Subsidiaries	—	—	—	—	—	2	2	—
Recognition of Stock-Based Compensation	—	—	12	—	—	—	12	—
Issuance of Shares for Stock-Based Awards	1,297,106	—	—	—	—	—	—	—
Balances at December 31, 2021	307,103,551	\$ 3	\$ 2,046	\$ 66	\$ (224)	2	\$ 1,893	\$ —
Net Income	—	—	—	522	—	—	522	—
Other Comprehensive Income, Net of Tax:								
Derivative Instruments	—	—	—	—	4	—	4	—
Pension and Postretirement Benefit Plans	—	—	—	—	(9)	—	(9)	—
Currency Translation Adjustment	—	—	—	—	(148)	(1)	(149)	—
Repurchase of Common Stock	(1,315,839)	—	(8)	(20)	—	—	(28)	—
Dividends Declared	—	—	—	(99)	—	—	(99)	—
Recognition of Stock-Based Compensation	—	—	16	—	—	—	16	—
Issuance of Shares for Stock-Based Awards	1,328,377	—	—	—	—	—	—	—
Balances at December 31, 2022	307,116,089	\$ 3	\$ 2,054	\$ 469	\$ (377)	1	\$ 2,150	\$ —

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

**GRAPHIC PACKAGING HOLDING COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS**

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net Income	\$ 522	\$ 216	\$ 203
Adjustments to Reconcile Net Income to Net Cash Provided by (Used in) Operating Activities:			
Depreciation and Amortization	553	489	476
Amortization of Deferred Debt Issuance Costs	9	9	6
Deferred Income Taxes	131	55	(1)
Amount of Postretirement Expense (Less) Greater Than Funding	(18)	(24)	147
Impairment Charges related to Divestiture	96	—	—
Other, Net	15	93	13
Changes in Operating Assets and Liabilities, Net of Acquisitions (See Note 3)	(218)	(229)	(19)
Net Cash Provided by Operating Activities	1,090	609	825
CASH FLOWS FROM INVESTING ACTIVITIES:			
Capital Spending	(522)	(775)	(616)
Packaging Machinery Spending	(27)	(27)	(30)
Acquisition of Businesses, Net of Cash Acquired	—	(1,704)	(121)
Beneficial Interest on Sold Receivables	125	130	136
Beneficial Interest Obtained in Exchange for Proceeds	(6)	(11)	(9)
Other, Net	(5)	(5)	(8)
Net Cash Used in Investing Activities	(435)	(2,392)	(648)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Repurchase of Common Stock	(28)	—	(316)
Payments on Debt	(14)	(16)	(37)
Proceeds from Issuance of Debt	—	2,965	800
Retirement of Long-Term Debt	(250)	(1,626)	—
Redemption of Noncontrolling Interest	—	(150)	(500)
Borrowings under Revolving Credit Facilities	3,929	4,485	2,614
Payments on Revolving Credit Facilities	(4,195)	(3,649)	(2,597)
IP Tax Receivable Agreement Payment	—	(109)	—
Debt Issuance Costs	—	(27)	(14)
Repurchase of Common Stock related to Share-Based Payments	(18)	(15)	(9)
Dividends and Distributions Paid to GPIP Partner	(92)	(92)	(103)
Other, Net	2	12	10
Net Cash Provided by (Used in) Financing Activities	(666)	1,778	(152)
Effect of Exchange Rate Changes on Cash	(6)	(2)	1
Net (Decrease) Increase in Cash and Cash Equivalents	(17)	(7)	26
Cash and Cash Equivalents at Beginning of Year	172	179	153
Cash and Cash Equivalents at End of Year (includes \$5 million classified as held for sale as of December 31, 2022)	\$ 155	\$ 172	\$ 179
Non-cash Investing Activities:			
Beneficial Interest Obtained (Sold) in Exchange for Trade Receivables	\$ 118	\$ 121	\$ 135
Right-of-Use Assets Obtained in Exchange for New Operating Lease Liabilities	\$ 52	\$ 118	\$ 71
Non-cash Financing Activities:			
Right-of-Use Assets Obtained in Exchange for New Finance Lease Liabilities	\$ 42	\$ 11	\$ —
Non-cash Exchange of Stock Issuance for Redemption of Noncontrolling Interest	\$ —	\$ (652)	\$ —

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

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

Graphic Packaging Holding Company ("GPHC" and, together with its subsidiaries, the "Company") is committed to providing consumer packaging that makes a world of difference. The Company, a leading fiber-based consumer packaging provider, serves the world's most widely-recognized food, beverage, foodservice and other consumer products companies and brands. The Company operates on a global basis, is one of the largest producers of folding cartons and fiber-based foodservice products in the United States ("U.S.") and Europe, and holds leading market positions in coated-recycled paperboard ("CRB"), coated unbleached kraft paperboard ("CUK") and solid bleached sulfate paperboard ("SBS").

The Company's customers include many of the world's most widely recognized companies and brands with prominent market positions in beverage, food, foodservice and other consumer products. The Company strives to provide its customers with innovative, fiber-based packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and global packaging network, its proprietary carton and packaging designs, and its commitment to quality, service, and environmental stewardship.

On January 1, 2018, GPHC, a Delaware corporation, International Paper Company, a New York corporation ("IP"), Graphic Packaging International Partners, LLC, a Delaware limited liability company formerly known as Gazelle Newco LLC and a wholly-owned subsidiary of the Company ("GPIP"), and Graphic Packaging International, LLC, a Delaware limited liability company formerly known as Graphic Packaging International, Inc. and a direct subsidiary of GPIP ("GPIL"), completed a series of transactions pursuant to an agreement dated October 23, 2017, among the foregoing parties (the "Transaction Agreement"). Pursuant to the Transaction Agreement (i) a wholly-owned subsidiary of the Company transferred its ownership interest in GPIL to GPIP; (ii) IP transferred its North America Consumer Packaging ("NACP") business to GPIP, which was then subsequently transferred to GPIL; (iii) GPIP issued membership interests to IP, and IP was admitted as a member of GPIP; and (iv) GPIL assumed certain indebtedness of IP (the "NACP Combination").

During 2020, GPIP purchased 32.5 million partnership units from IP for \$500 million in cash, fully redeeming the 18.2 million partnership units that were required to be redeemed in cash. On February 16, 2021, the Company announced that IP had notified the Company of its intent to exchange additional partnership units. Per an agreement between the parties, on February 19, 2021, GPIP purchased 9.3 million partnership units from IP for \$150 million in cash, and IP exchanged 15.3 million partnership units for an equivalent number of shares of GPHC common stock. On May 21, 2021, IP exchanged its remaining 22.8 million partnership units for an equivalent number of shares of GPHC common stock. As required by the parties' agreement, these shares were immediately sold by IP. As a result, IP had no ownership interest remaining in GPIP as of May 21, 2021.

As a result of IP's final exchange in 2021, the Company currently owns 100% of the outstanding interests in GPIP. GPIP continued to be treated as a partnership for U.S. federal and state income tax purposes despite IP's exit as a minority partner until September 1, 2022, when, due to an internal restructuring, GPIP became a single member limited liability company, terminating the partnership for income tax purposes.

Basis of Presentation and Principles of Consolidation

The Company's Consolidated Financial Statements include all subsidiaries in which the Company has the ability to exercise direct or indirect control over operating and financial policies. Intercompany transactions and balances are eliminated in consolidation.

The Company, through its GPIL subsidiary, is a party to a Japanese joint venture, Rengo Riverwood Packaging, Ltd. in which it holds a 50% ownership interest that is accounted for using the equity method.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting periods. Actual results could differ from these estimates, and changes in these estimates are recorded when known. Estimates are used in accounting for, among other things, pension benefits, retained insurable risks, slow-moving and obsolete inventory, allowance for doubtful accounts, useful lives for depreciation and amortization, impairment testing of goodwill and long-lived assets, fair values related to acquisition accounting, fair value of derivative financial instruments, share based compensation, deferred income tax assets and potential income tax assessments, and loss contingencies.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Cash and Cash Equivalents

Cash and cash equivalents include bank deposits and other marketable securities that are highly liquid with maturities of three months or less.

Accounts Receivable and Allowances

Accounts receivable are stated at the amount owed by the customer, net of an allowance for estimated uncollectible accounts, returns and allowances, and cash discounts. The allowance for doubtful accounts is estimated based on historical experience, current economic conditions and the creditworthiness of customers. Receivables are charged to the allowance when determined to be no longer collectible.

The Company has entered into agreements to sell, on a revolving basis, certain trade accounts receivable to third party financial institutions. Transfers under these agreements meet the requirements to be accounted for as sales in accordance with the *Transfers and Servicing* topic of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification (the "Codification"). The loss on sale is not material and is included in Other Expense (Income), Net line item on the Consolidated Statements of Operations. The following table summarizes the activity under these programs for the year ended December 31, 2022 and 2021, respectively:

<i>In millions</i>	Year Ended December 31,	
	2022	2021
Receivables Sold and Derecognized	\$ 3,299	\$ 2,947
Proceeds Collected on Behalf of Financial Institutions	3,179	2,970
Net Proceeds Received From (Paid to) Financial Institutions	152	(6)
Deferred Purchase Price at December 31 ^(a)	—	4
Pledged Receivables at December 31	197	180

^(a) Included in Other Current Assets on the Consolidated Balance Sheets and represents a beneficial interest in the receivables sold to the financial institutions, which is a Level 3 fair value measure.

Receivables sold under all programs subject to continuing involvement, which consists principally of collection services, were \$ 753 million and \$613 million as of December 31, 2022 and 2021, respectively.

The Company also participates in supply chain financing arrangements offered by certain customers that qualify for sale accounting in accordance with the *Transfers and Servicing* topic of the FASB Codification. As of December 31, 2022 and 2021, the Company sold receivables of \$ 1,124 million and \$693 million, respectively, related to these arrangements.

Concentration of Credit Risk

The Company's cash, cash equivalents, and accounts receivable are potentially subject to concentration of credit risk. Cash and cash equivalents are placed with financial institutions that management believes are of high credit quality. Accounts receivable are derived from revenue earned from customers located in the U.S. and internationally and generally do not require collateral. For the years ended December 31, 2022, 2021, and 2020, no customer accounted for more than 10% of net sales.

Inventories

Inventories are stated at the lower of cost and net realizable value with cost determined based on standard (which approximates actual), average or actual cost. Work in progress and finished goods inventories are valued at the cost of raw material consumed plus direct manufacturing costs (such as labor, utilities and supplies) as incurred and an applicable portion of manufacturing overhead. Inventories are stated net of an allowance for slow-moving and obsolete inventory.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Betterments, renewals and extraordinary repairs that extend the life of the asset are capitalized; other repairs and maintenance charges are expensed as incurred. The Company's cost and related accumulated depreciation applicable to assets retired or sold are removed from the accounts and the gain or loss on disposition is included in income from operations.

Interest is capitalized on assets under construction for one year or longer with an estimated spending of \$ 1 million or more. The capitalized interest is recorded as part of the asset to which it relates and is amortized over the asset's estimated useful life. Capitalized interest was \$5 million, \$14 million and \$7 million for the years ended December 31, 2022, 2021 and 2020, respectively.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The Company assesses its long-lived assets, including certain identifiable intangibles, for impairment whenever events or circumstances indicate that the carrying value of an asset may not be recoverable. To analyze recoverability, the Company projects future cash flows, undiscounted and before interest, over the remaining life of such assets. If these projected cash flows are less than the carrying amount, an impairment would be recognized, resulting in a write-down of assets with a corresponding charge to earnings. The impairment loss is measured based upon the difference between the carrying amount and the fair value of the assets. The Company assesses the appropriateness of the useful life of its long-lived assets periodically.

Depreciation and Amortization

Depreciation is computed using the straight-line method based on the following estimated useful lives of the related assets:

Buildings	40 years
Land improvements	15 years
Machinery and equipment	3 to 40 years
Furniture and fixtures	10 years
Automobiles, trucks and tractors	3 to 5 years

Depreciation expense, including the depreciation expense of assets under finance leases, for 2022, 2021 and 2020 was \$ 463 million, \$420 million and \$414 million, respectively.

Intangible Assets

Intangible assets with a determinable life are amortized on a straight-line or accelerated basis over their useful lives. The amortization expense for each intangible asset is recorded in the Consolidated Statements of Operations according to the nature of that asset.

Goodwill is the Company's only intangible asset not subject to amortization. The following table displays the intangible assets that continue to be subject to amortization and accumulated amortization expense as of December 31, 2022 and 2021:

<i>In millions</i>	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizable Intangible Assets:						
Customer Relationships ^(a)	\$ 1,382	\$ (706)	\$ 676	\$ 1,462	\$ (621)	\$ 841
Patents, Trademarks, Licenses, Leases and Developed Technology	152	(111)	41	140	(113)	27
Total	\$ 1,534	\$ (817)	\$ 717	\$ 1,602	\$ (734)	\$ 868

^(a) Please see "Note 4 - Business Combinations" for the intangibles acquired with the AR Packaging and Americraft acquisitions.

The Company recorded amortization expense for the years ended December 31, 2022, 2021 and 2020 of \$ 90 million, \$69 million and \$62 million, respectively. The Company expects amortization expense for the next five consecutive years to be approximately as follows: \$88 million, \$87 million, \$61 million, \$56 million, and \$55 million.

Goodwill

The Company tests goodwill for impairment annually as of October 1, as well as whenever events or changes in circumstances suggest that the estimated fair value of a reporting unit may no longer exceed its carrying amount.

The Company tests goodwill for impairment at the reporting unit level, which is an operating segment or a level below an operating segment, which is referred to as a component. A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and management regularly reviews the operating results of that component. Two or more components of an operating segment are aggregated and deemed a single reporting unit if the components have similar economic characteristics.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Potential goodwill impairment is measured at the reporting unit level by comparing the reporting unit's carrying amount (including goodwill), to the fair value of the reporting unit. When performing the quantitative analysis, the estimated fair value of each reporting unit is determined by utilizing a discounted cash flow analysis based on the Company's forecasts, discounted using a weighted average cost of capital and market indicators of terminal year cash flows based upon a multiple of EBITDA. If the carrying amount of a reporting unit exceeds its estimated fair value, goodwill is considered impaired. In determining fair value, management relies on and considers a number of factors, including but not limited to, future operating results, business plans, economic projections of revenues and operating margins, forecasts including future cash flows, and market data and analysis, including market capitalization. The assumptions used are based on what a hypothetical market participant would use in estimating fair value. Fair value determinations are sensitive to changes in the factors described above. There are inherent uncertainties related to these factors and judgments in applying them to the analysis of goodwill impairment.

Periodically, the Company may perform a qualitative impairment analysis of goodwill associated with each of its reporting units to determine if it is more likely than not that the carrying value of a reporting unit exceeded its fair value. However, the Company performed a quantitative impairment test as of October 1, 2022, and concluded goodwill was not impaired for any of its reporting units.

The following is a rollforward of goodwill by reportable segment:

<i>In millions</i>	Paperboard Mills	Americas Paperboard Packaging	Europe Paperboard Packaging	Corporate/Other ^(a)	Total
Balance at December 31, 2020	\$ 506	\$ 900	\$ 59	\$ 13	\$ 1,478
Acquisition of Businesses	—	68	475	—	543
Foreign Currency Effects	—	—	(6)	—	(6)
Balance at December 31, 2021	\$ 506	\$ 968	\$ 528	\$ 13	\$ 2,015
Acquisition of Businesses ^(b)	—	10	11	—	21
Impairment of Russian Business ^(c)	—	—	(12)	—	(12)
Foreign Currency Effects	—	2	(46)	(1)	(45)
Balance at December 31, 2022	\$ 506	\$ 980	\$ 481	\$ 12	\$ 1,979

^(a) Includes Australia operating segment.

^(b) The increases are related to the final purchase accounting adjustments recorded for Americraft and AR Packaging, respectively.

^(c) Relates to the Company's planned divestiture of its Russian business (see "Note 19 - Impairment and Divestiture of Russian Business").

Retained Insurable Risks

It is the Company's policy to self-insure or fund a portion of certain expected losses related to group health benefits and workers' compensation claims. Provisions for expected losses are recorded based on the Company's estimates, on an undiscounted basis, of the aggregate liabilities for known claims and estimated claims incurred but not reported.

Asset Retirement Obligations

Asset retirement obligations are accounted for in accordance with the provisions of the *Asset Retirement and Environmental Obligations* topic of the FASB Codification. A liability and asset are recorded equal to the present value of the estimated costs associated with the retirement of long-lived assets where a legal or contractual obligation exists and the liability can be reasonably estimated. The liability is accreted over time and the asset is depreciated over the remaining life of the asset. Upon settlement of the liability, the Company will recognize a gain or loss for any difference between the settlement amount and the liability recorded. Asset retirement obligations with indeterminate settlement dates are not recorded until such time that a reasonable estimate may be made. The Company's asset retirement obligations consist primarily of landfill closure and post-closure costs at certain of our mills. At December 31, 2022 and 2021, the Company had liabilities of \$13 million and \$12 million, respectively. The liabilities are primarily reflected as Other Noncurrent Liabilities in the Company's Consolidated Balance Sheets.

International Currency

The functional currency of the international subsidiaries is usually the local currency for the country in which the subsidiaries own their primary assets. The translation of the applicable currencies into U.S. dollars is performed for balance sheet accounts using current exchange rates in effect at the balance sheet date and for revenue and expense accounts using an average exchange rate during the period. Any related translation adjustments are recorded directly to a separate component of Shareholders' Equity, unless there is a sale or substantially complete liquidation of the underlying foreign investments. Gains and losses on foreign currency transactions are included in Other Expense, Net for the period in which the exchange rate changes.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The Company pursues a currency hedging program which utilizes derivatives to reduce the impact of foreign currency exchange fluctuations on its consolidated financial results. Under this program, the Company has entered into forward exchange contracts in the normal course of business to hedge certain foreign currency denominated transactions. Realized and unrealized gains and losses on these forward contracts are included in the measurement of the basis of the related foreign currency transaction when recorded.

Revenue Recognition

The Company has two primary activities, manufacturing and converting paperboard, from which it generates revenue from contracts with customers. Revenue is disaggregated primarily by geography and type of activity as further explained in "Note 15 - Business Segment and Geographic Area Information." All reportable segments and the Australia and Pacific Rim operating segments recognize revenue under the same method, allocate transaction price using similar methods, and have similar economic factors impacting the uncertainty of revenue and related cash flows.

Revenue is recognized on the Company's annual and multi-year supply contracts when the Company satisfies the performance obligation by transferring control over the product or service to a customer, which is generally based on shipping terms and passage of title under the point-in-time method of recognition. For the years ended December 31, 2022, 2021 and 2020, the Company recognized \$9,410 million, \$7,131 million and \$6,537 million, respectively, of revenue from contracts with customers.

The transaction price allocated to each performance obligation consists of the stand-alone selling price, estimates of rebates and other sales or contract renewal incentives, and cash discounts and sales returns ("Variable Consideration") and excludes sales tax. Estimates are made for Variable Consideration based on contract terms and historical experience of actual results and are applied to the performance obligations as they are satisfied. Purchases by the Company's principal customers are manufactured and shipped with minimal lead time, therefore performance obligations are generally satisfied shortly after manufacturing and shipment. The Company uses standard payment terms that are consistent with industry practice.

The Company's contract assets consist primarily of contract renewal incentive payments to customers which are amortized over the period in which performance obligations related to the contract renewal are satisfied. As of December 31, 2022 and 2021, contract assets were \$ 8 million and \$17 million, respectively. The Company's contract liabilities consist principally of rebates, and as of December 31, 2022 and 2021 were \$65 million and \$61 million, respectively.

Shipping and Handling

The Company includes shipping and handling costs in Cost of Sales.

Research and Development

Research and development costs, which relate primarily to the development and design of new packaging machines and products and are recorded as a component of Selling, General and Administrative expenses, are expensed as incurred. Expenses for the years ended December 31, 2022, 2021 and 2020 were \$14 million, \$10 million, and \$10 million, respectively.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net

The following table summarizes the transactions recorded in Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net in the Consolidated Statements of Operations for the year ended December 31:

<i>In millions</i>	2022		2021		2020	
Charges Associated with Business Combinations ^(a)	\$	23	\$	84	\$	(2)
Shutdown and Other Special Charges		2		33		38
Exit Activities ^(b)		10		21		25
Charges Associated with a Divestiture ^(c)		96		—		—
Total	\$	131	\$	138	\$	61

^(a) These costs relate to the Americraft Carton, Inc. and AR Packaging Group AB acquisitions (see "Note 4 - Business Combinations").

^(b) Relates to the Company's CRB mill and folding carton facility closures.

^(c) Relates to the Company's planned divestiture of its Russian business (see "Note 19 - Impairment and Divestiture of Russian Business").

2022

In the second quarter of 2022, the Company began the process of divesting its interests in its two folding carton plants in Russia. Impairment charges associated with this divestiture are included in Charges Associated with a Divestiture in the table above. For more information, see "Note 19 - Impairment and Divestiture of Russian Business."

In March 2022, the Company announced its decision to close the Norwalk, Ohio folding carton facility and closed the facility in September 2022. Severance charges associated with this project are included in Exit Activities in the table above. For more information, see "Note 18 - Exit Activities."

2021

During 2019, the Company announced its plans to invest in a new CRB paper machine in Kalamazoo, Michigan. At the time of the announcement, the Company expected to close two of its smaller CRB Mills in 2022 in order to remain capacity neutral. During the third quarter of 2021, the Company decided to continue to operate one of the two original smaller CRB mills. In the second quarter 2022, the Company closed the Battle Creek, MI CRB mill. Severance, retention, start-up costs, and other charges associated with this project are included in Exit Activities in the table above. For more information, see "Note 18 - Exit Activities."

On May 14, 2021, in connection with the AR Packaging acquisition, the Company entered into deal contingent foreign exchange forward contracts, with no upfront cash cost, to hedge €700 million of the acquisition price. These forward contracts settled October 29, 2021, immediately prior to the acquisition of AR Packaging and are accounted for as derivatives under ASC 815, Derivatives and Hedging. Unrealized losses of \$48 million for the year ended December 31, 2021 resulting from these contracts are recognized in Charges Associated with Business Combinations in the table above. For more information, see "Note 11 - Fair Value Measurement."

On July 1, 2021, the Company acquired substantially all the assets of Americraft Carton Inc. ("Americraft"), the largest remaining independent folding carton converter in North America for \$292 million. The acquisition included seven converting plants across the United States and is reported within the Americas Paperboard Packaging reportable segment. Charges associated with this acquisition are included in Charges Associated with Business Combinations in the table above. For more information, see "Note 4 - Business Combinations."

On November 1, 2021, the Company acquired all the shares of AR Packaging Group AB ("AR Packaging"), Europe's second largest producer of fiber-based consumer packaging, for \$1,412 million in cash, net of cash acquired of \$75 million, subject to customary adjustments. The acquisition included 30 converting plants in 13 countries and is reported within the Europe Paperboard Packaging reportable segment. The costs associated with this acquisition are included in Charges Associated with Business Combinations in the table above. For more information, see "Note 4 - Business Combinations."

2020

On January 31, 2020, the Company acquired a folding carton facility from Quad/Graphics, Inc. ("Quad"), a commercial printing company. The converting facility is located in Omaha, Nebraska and is included in the Americas Paperboard Packaging reportable segment. The Company paid \$41 million using existing cash and borrowings under its revolving credit facility. The costs associated with this acquisition are included in Charges Associated with Business Combinations in the table above. During the first quarter of 2021, the acquisition accounting for Quad was finalized.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

In March 2020, the Company made the decision to close the White Pigeon, Michigan CRB mill and shut down the PM1 containerboard machine in West Monroe, Louisiana. Charges associated with these projects are included in Exit Activities in the table above. For more information, see "Note 18 - Exit Activities."

On April 1, 2020, the Company acquired the Consumer Packaging Group business from Greif, Inc. ("Greif"), a leader in industrial packaging products and services. The acquisition included seven converting plants across the United States and will allow the company to increase its mill-to-converting plant integration over time. The Company paid approximately \$80 million using existing cash and borrowings under its revolving credit facility. The costs associated with this acquisition are included in Charges Associated with Business Combinations in the table above. During the second quarter of 2021, the acquisition accounting for Greif was finalized.

In June 2020, the Company made the decision to close certain converting plants that were acquired from Greif. The Burlington, North Carolina converting facility and the Los Angeles, California converting facility were closed during 2020. Charges associated with these projects are included in Exit Activities in the table above.

The Company has established estimated liabilities related to the partial or complete withdrawal from certain multi-employment benefit plans for facilities which have been closed. During the second quarter of 2020, the Company increased its estimated withdrawal liability for these plans by \$12 million. During the fourth quarter of 2020, the Company entered into a settlement agreement with one of its closed multi-employment benefit plans and recorded a \$4 million reduction in its estimated withdrawal liability for this plan. These items were recorded in Shutdown and Other Special Charges in the table above. For more information, see "Note 8 - Pensions and Other Postretirement Benefits."

During 2020, the Company incurred incremental costs associated with paying payroll to employees during necessary quarantines due to COVID-19. In addition, the Company made one-time payments to front-line production employees and made contributions to local food banks in the communities where our manufacturing operations are located. The charges associated with these costs and payments were recorded in Shutdown and Other Special Charges in the table above.

Share Repurchases and Dividends

On January 28, 2019, the Company's board of directors authorized a share repurchase program to allow the Company to purchase up to \$ 500 million of the Company's issued and outstanding shares of common stock through open market purchases, privately negotiated transactions and Rule 10b5-1 plans (the "2019 share repurchase program").

Share repurchases are reflected as a reduction of common stock for the par value of the shares, with any excess of share repurchase price over par value allocated between capital in excess of par value and retained earnings.

The following presents the Company's share repurchases for the years ended December 31, 2022, 2021, and 2020:

<i>Amount repurchased in millions, except share and per share amounts</i>	Amount Repurchased	Number of Shares Repurchased	Average Price, per Share
2022	\$ 28	1,315,839	\$ 20.91
2021	\$ —	—	\$ —
2020	\$ 316	23,420,010	\$ 13.48

At December 31, 2022, the Company had \$ 119 million available for additional repurchases under the 2019 share purchase program.

During 2022 and 2021, the Company paid cash dividends of \$ 92 million and \$87 million, respectively.

On September 22, 2022, the Company's board of directors voted to increase the quarterly dividend to \$ 0.10 per share of common stock, a 33% increase from the prior quarterly dividend of \$0.075. The dividend was paid on January 5, 2023, to common stockholders of record at the close of business on December 15, 2022.

Adoption of New Accounting Standards

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. This standard provides temporary optional expedients and exceptions for applying GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens of the expected market transition from the LIBOR and other interbank offered rates to alternative reference rates, such as the Secured Overnight Financing Rate ("SOFR"). The ASU can be adopted after its issuance date through December 31, 2022. The Company adopted this standard in the first quarter of fiscal 2022 with no material impact on the Company's financial position and results of operations.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Accounting Standards Not Yet Adopted

In September 2022, the FASB issued ASU 2022-04, *Liabilities - Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*, which is intended to enhance the transparency surrounding the use of supplier finance programs. Supplier finance programs may also be referred to as reverse factoring, payables finance, or structured payables arrangements. The amendments require a buyer that uses supplier finance programs to make annual disclosures about the program's key terms, the balance sheet presentation of related amounts, the confirmed amount outstanding at the end of the period, and associated rollforward information. Only the amount outstanding at the end of the period must be disclosed in interim periods. The amendments are effective for all entities for fiscal years beginning after December 15, 2022 on a retrospective basis, including interim periods with those fiscal years, except for the requirement to disclose rollforward information, which is effective prospectively for fiscal years beginning after December 15, 2023. Early adoption is permitted. The Company will continue evaluating the impact of this ASU.

In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. This ASU clarifies that contractual sale restrictions should not be considered in measuring the fair value of equity securities. This ASU is effective for fiscal years beginning after December 15, 2023, including interim periods therein, with early adoption permitted. The Company will continue evaluating the impact of this ASU.

In March 2022, the FASB issued ASU 2022-01, *Derivatives and Hedging (Topic 815): Fair Value Hedging – Portfolio Layer Method*. This ASU expands and clarifies the portfolio layer method for fair value hedges of interest rate risk. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods therein, with early adoption permitted. The Company will continue evaluating the impact of this ASU.

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Acquired Contract Assets and Contract Liabilities*. Under the new guidance, the acquirer should determine what contract assets and/or contract liabilities it would have recorded under ASC 606 as of the acquisition date, as if the acquirer had entered into the original contract at the same date and on the same terms as the acquiree. The recognition and measurement of those contract assets and contract liabilities will likely be comparable to what the acquiree has recorded on its books under ASC 606 as of the acquisition date. ASU 2021-08 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted, including in an interim period, for any period for which financial statements have not yet been issued. However, adoption in an interim period other than the first fiscal quarter requires an entity to apply the new guidance to all prior business combinations that have occurred since the beginning of the annual period in which the new guidance is adopted. The Company will continue evaluating the impact of this ASU.

NOTE 2. SUPPLEMENTAL BALANCE SHEET DATA

The following tables provide disclosure related to the components of certain line items included in our consolidated balance sheets.

Receivables, Net:

<i>In millions</i>	2022	2021
Trade	\$ 825	\$ 803
Less: Allowance	(21)	(18)
	804	785
Other	75	74
Total	\$ 879	\$ 859

Inventories, Net by major class:

<i>In millions</i>	2022	2021
Finished Goods	\$ 515	\$ 528
Work in Progress	218	194
Raw Materials	645	473
Supplies	228	192
Total	\$ 1,606	\$ 1,387

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Property, Plant and Equipment, Net:

<i>In millions</i>	2022	2021
Property, Plant and Equipment, at Cost:		
Land and Improvements	\$ 187	\$ 175
Buildings ^(a)	1,067	908
Machinery and Equipment ^(b)	7,383	6,753
Construction-in-Progress	234	882
	8,871	8,718
Less: Accumulated Depreciation ^{(a)(b)}	(4,292)	(4,041)
Total	\$ 4,579	\$ 4,677

^(a) Includes gross assets under finance lease of \$ 146 million and related accumulated depreciation of \$ 22 million as of December 31, 2022, and gross assets under finance lease of \$114 million and related accumulated depreciation of \$ 13 million as of December 31, 2021.

^(b) Includes gross assets under finance lease of \$ 51 million and related accumulated depreciation of \$ 16 million as of December 31, 2022, and gross assets under finance lease of \$39 million and related accumulated depreciation of \$ 15 million as of December 31, 2021.

Other Accrued Liabilities:

<i>In millions</i>	2022	2021
Fair Value of Derivatives, current portion	\$ 12	\$ —
Unfavorable Supply Agreement	2	7
Accrued Severance	3	10
Dividends Payable	31	23
Deferred Revenue	32	29
Accrued Customer Rebates	44	41
Other Accrued Taxes	51	50
Accrued Payables	66	56
Operating Lease Liabilities, current portion	66	73
Other ^(a)	104	110
Total	\$ 411	\$ 399

^(a) Other accrued expenses include several types of expenses such as accrued bonus, external outside services and production costs.

Other Noncurrent Liabilities:

<i>In millions</i>	2022	2021
Deferred Revenue	\$ 8	\$ 8
Workers Compensation Reserve	8	8
Unfavorable Supply Agreement	3	8
Multi-employer Plans	18	19
Deferred Compensation	19	21
Operating Lease Liabilities, noncurrent portion	184	193
Other	26	25
Total	\$ 266	\$ 282

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 3. SUPPLEMENTAL CASH FLOW INFORMATION

Cash Flow (Used In) Provided by Operations Due to Changes in Operating Assets and Liabilities, net of acquisitions:

<i>In millions</i>	2022	2021	2020
Receivables, Net	\$ (184)	\$ (106)	\$ (216)
Inventories, Net	(268)	(80)	35
Other Current Assets	2	(12)	(5)
Other Assets	(1)	(22)	(22)
Accounts Payable	132	77	71
Compensation and Employee Benefits	87	(15)	40
Income Taxes	(2)	(6)	7
Interest Payable	16	4	6
Other Accrued Liabilities	(11)	3	31
Other Noncurrent Liabilities	11	(72)	34
Total	\$ (218)	\$ (229)	(19)

Cash paid for interest and cash paid, net of refunds, for income taxes was as follows:

<i>In millions</i>	2022	2021	2020
Interest	\$ 176	\$ 116	\$ 120
Income Taxes	\$ 43	\$ 25	\$ 27

NOTE 4. BUSINESS COMBINATIONS

The Company accounts for acquisitions as business combinations using the acquisition method of accounting in accordance with ASC 805, Business Combinations ("ASC 805").

Americraft

On July 1, 2021, the Company acquired substantially all of the assets of Americraft Carton Inc. ("Americraft"). The Company paid approximately \$ 292 million, using existing cash and borrowings under its revolving credit facility. The acquisition included seven converting plants across the United States.

The purchase price for Americraft was allocated to assets acquired and liabilities assumed based on the fair values as of the acquisition date. Tangible assets and liabilities were valued as of the acquisition date using the indirect and direct methods of the cost approach and intangible assets were valued using a discounted cash flow analysis, which represents a Level 3 measurement. The assigned goodwill, which is deductible for tax purposes, is reported within the Americas Paperboard Packaging reportable segment.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The final purchase price allocation is as follows:

<i>In millions</i>	Amounts Recognized as of Acquisition Date	Measurement Period Adjustments	Amounts Recognized as of Acquisition Date (as adjusted)
	\$ 292	\$ —	\$ 292
Receivables, Net	22	—	22
Inventories, Net	37	(1)	36
Property, Plant and Equipment, Net	122	(28)	94
Intangible Assets, Net ^(a)	54	20	74
Other Assets	1	—	1
Total Assets Acquired	236	(9)	227
Current Liabilities	12	1	13
Total Liabilities Assumed	12	1	13
Net Assets Acquired	224	(10)	214
Goodwill	68	10	78
Total Estimated Fair Value of Net Assets Acquired	\$ 292	\$ —	\$ 292

^(a) Intangible Assets, Net, consists of Customer Relationships with a weighted average life of approximately 15 years.

During the second quarter of 2022, the Company finalized the acquisition accounting for Americraft.

AR Packaging

On November 1, 2021, the Company completed the acquisition of AR Packaging, Europe's second largest producer of fiber-based consumer packaging, by acquiring all the AR Packaging Group AB shares that were issued and outstanding as of the date of acquisition. The acquisition included 30 converting plants in 13 countries and enhances the Company's global scale, innovation capabilities, and value proposition for customers throughout Europe and bordering regions.

The total cash consideration for the AR Packaging acquisition was \$ 1,412 million net of cash acquired of \$75 million, paid in Euros through the use of deal contingent, foreign exchange forward contracts, purchased through the use of available borrowing capacity on the Company's Senior Secured Revolving Credit Facilities and the \$400 million Incremental Facility Amendment to the Fourth Amended and Restated Credit Agreement. For more information, see "Note 5 - Debt."

The purchase price was allocated to the assets acquired and liabilities assumed based on the estimated fair values as of the date of acquisition. The fair values of the tangible assets acquired and liabilities assumed were determined using the income and cost approaches. In many cases, the determination of the fair values required estimates about discount rates, future expected cash flows and other future events that are judgmental and subject to change. The fair value measurements were primarily based on significant inputs that are not observable in the market and thus represent a Level 3 measurement of the fair value hierarchy as defined in ASC 820, Fair Value Measurements ("ASC 820"). Intangible assets consisting of customer relationships, technology, and trade names were valued using a discounted cash flow analysis. The significant assumptions used to estimate the value of the customer relationships intangible assets included the discount rate, annual revenue growth rates, customer attrition rates, projected operating expenses, projected EBITDA margins, tax rate, depreciation, and contributory asset charge. Management believes that the purchase price attributable to goodwill represents the benefits expected, including enhanced revenue growth from expanded capabilities and geographic presence as well as substantial cost savings from reduction of duplicative overhead, streamlined operations and enhanced operational efficiency. The assigned goodwill, which is not deductible for tax purposes, is reported within the Europe Paperboard Packaging reportable segment.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The final purchase price allocation is as follows:

<i>In millions</i>	Amounts Recognized as of Acquisition Date ^(a)	Measurement Period Adjustments	Amounts Recognized as of Acquisition Date (as adjusted)
Total Purchase Consideration	\$ 1,487	—	\$ 1,487
Cash Acquired	75	—	75
Receivables, Net	206	—	206
Inventories	166	—	166
Other Current Assets	12	—	12
Property, Plant and Equipment ^(b)	529	27	556
Intangible Assets ^(c)	447	(38)	409
Other Assets	76	(14)	62
Total Assets Acquired	1,511	(25)	1,486
Accounts Payable	109	—	109
Compensation and Employee Benefits	12	—	12
Other Accrued Liabilities	95	4	99
Short-Term Debt and Current Portion of Long-Term Debt	9	—	9
Long-Term Debt	17	—	17
Deferred Income Tax Liabilities	164	(25)	139
Accrued Pension and Postretirement Benefits	50	5	55
Other Noncurrent Liabilities	41	2	43
Noncontrolling Interests	2	—	2
Total Liabilities Assumed	499	(14)	485
Net Assets Acquired	1,012	(11)	1,001
Goodwill	475	11	486
Total Estimated Fair Value of Net Assets Acquired	\$ 1,487	—	\$ 1,487

^(a) The amounts were translated from Euro to USD using the rate at the acquisition date of 1.1539.

^(b) Property, Plant and Equipment primarily consists of Machinery and Equipment of \$ 374 million with a weighted average life of approximately 13 years.

^(c) Intangible Assets primarily consists of Customer Relationships of \$ 401 million with a weighted average life of approximately 15 years.

During the fourth quarter of 2022, the Company finalized the acquisition accounting for AR Packaging, which included valuation adjustments to Property, Plant and Equipment, Net, Intangible Assets, Other Assets, Deferred Income Tax Liabilities, Accrued Pension and Postretirement Benefits and Other Noncurrent Liabilities.

The Consolidated Statements of Operations include \$ 1,135 million of Net Sales and \$ 17 million of Loss from Operations for AR Packaging for the year ended December 31, 2022 and \$176 million of Net Sales and \$8 million of Loss from Operations for the year ended December 31, 2021. The year ended December 31, 2022 included \$96 million of impairment charges related to the divestiture of its two folding carton plants in Russia. See "Note 19 - Impairment and Divestiture of Russian business" for further information.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 5. DEBT

Short-Term Debt is comprised of the following:

<i>In millions</i>	2022	2021
Short Term Borrowings	\$ 16	\$ 9
Current Portion of Finance Lease Obligations	11	7
Current Portion of Long-Term Debt	26	263
Total Short-Term Debt and Current Portion of Long-Term Debt	\$ 53	\$ 279

Short-term borrowings are principally at the Company's international subsidiaries. The weighted average interest rate on short-term borrowings as of December 31, 2022 and 2021 was 6.2% and 6.5%, respectively.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Long-Term Debt is comprised of the following:

<i>In millions</i>	2022	2021
Senior Notes with interest payable semi-annually at 4.875%, effective rate of 4.88%, payable in 2022 ^(a)	\$ —	\$ 250
Senior Notes with interest payable semi-annually at 0.821%, effective rate of 0.82%, payable in 2024 ^(b)	400	400
Senior Notes with interest payable semi-annually at 4.125%, effective rate of 4.14%, payable in 2024 ^(a)	300	300
Senior Notes with interest payable semi-annually at 1.512%, effective rate of 1.52%, payable in 2026 ^(b)	400	400
Senior Notes with interest payable semi-annually at 4.75%, effective rate of 4.79%, payable in 2027 ^(b)	300	300
Senior Notes with interest payable semi-annually at 3.50%, effective rate of 3.54%, payable in 2028 ^(b)	450	450
Senior Notes with interest payable semi-annually at 3.50%, effective rate of 3.54%, payable in 2029 ^(b)	350	350
Senior Notes (€290 million) with interest payable semi-annually at 2.625% , effective rate of 2.66%, payable in 2029 ^(b)	311	330
Senior Notes with interest payable semi-annually at 3.75% , effective rate of 3.80%, payable in 2030 ^(b)	400	400
Green Bond, net of unamortized premium with interest payable at 4.00%, effective rate of 1.72%, payable in 2026 ^(b)	108	110
Senior Secured Term Loan A-2 Facility with interest payable quarterly at 2.67%, effective rate of 2.68% payable in 2028 ^(b)	425	425
Senior Secured Term Loan A-3 Facility with interest payable monthly payable at floating rates (5.87% at December 31, 2022), effective rate of 5.90%, payable in 2028 ^(b)	250	250
Senior Secured Term Loan Facilities with interest payable at various dates at floating rates (5.62% at December 31, 2022) payable through 2026 ^(b)	529	543
Senior Secured Term Loan Facility (€210 million) with interest payable at various dates at floating rates (2.87% at December 31, 2022) payable through 2026 ^(b)	225	239
Senior Secured Revolving Credit Facilities with interest payable at floating rates (5.72% at December 31, 2022) payable in 2026 ^{(b)(c)}	634	920
Finance Leases and Financing Obligations	170	146
Other	15	9
Total Long-Term Debt Including Current Portion	5,267	5,822
Less: Current Portion	37	270
Total Long-Term Debt Excluding Current Portion	5,230	5,552
Less: Unamortized Deferred Debt Issuance Costs	30	37
Total Long-Term Debt	\$ 5,200	\$ 5,515

^(a) Guaranteed by GPHC and certain domestic subsidiaries.

^(b) Guaranteed by GPIP and certain domestic subsidiaries.

^(c) The weighted average effective interest rates for the Company's Senior Secured Revolving Credit Facilities were 3.52% and 1.63% as of December 31, 2022 and 2021, respectively.

2022

On November 4, 2022, GPIL entered into Amendment No. 2 to the Fourth Amended and Restated Credit Agreement (the "Second Amendment"). The Second Amendment provided for a change in the floating interest rate benchmark for the domestic revolving credit facility and the USD denominated term loans, from LIBOR-based to Term SOFR plus 10bps. The Second Amendment also added JSC AR Packaging to the Schedule of Permitted Asset Sales to facilitate the sale of the Company's Russian operations.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

On November 15, 2022, the Company drew \$250 million from the senior secured domestic revolving credit facilities and used the proceeds, together with cash on hand, to redeem its 4.875% Senior Notes due in 2022.

2021

On January 14, 2021, the Company drew the \$425 million Incremental Term A-2 Facility (as hereinafter defined) and used the proceeds, together with cash on hand, to redeem its 4.75% Senior Notes due in 2021.

On March 8, 2021, GPIL completed a private offering of \$400 million aggregate principal amount of its 0.821% Senior Secured Notes due 2024 and \$400 million aggregate principal amount of its 1.512% Senior Secured Notes due 2026. The net proceeds were used by the Company to repay a portion of the outstanding borrowings under GPIL's term loan credit facilities, which is under its senior secured credit facility.

On April 1, 2021, GPIL entered into a Fourth Amended and Restated Credit Agreement (the "Fourth Amended and Restated Credit Agreement") to extend the maturity date of certain of its senior secured term loan facilities and senior secured revolving credit facilities and to amend certain other terms of the agreement, including revised debt covenants and collateral requirements. Under the terms of the agreement, \$975 million of the Company's senior secured term loan facilities remains outstanding. The Company added approximately \$400 million to its senior secured revolving credit facilities. \$550 million of the senior secured term loan facilities and all of the senior secured revolving credit facility loans continue to bear interest at a floating rate per annum ranging from LIBOR plus 1.25% to LIBOR plus 2.00%, determined using a pricing grid based upon the Company's consolidated total leverage ratio from time to time, and the maturity for these loans were extended from January 1, 2023 to April 1, 2026. \$425 million of the senior secured term loan facilities, which is a Farm Credit System incremental term loan (the "Incremental Term A-2 Facility Amendment") continue to bear interest at a fixed rate per annum equal to 2.67% and matures on their originally scheduled maturity date of January 14, 2028. As long as the Incremental Term A-2 Facility Amendment is outstanding, GPIL will be eligible to receive an annual patronage credit from the participating banks, which will be paid in cash and stock in the lead member bank. Patronage payable each year is variable and based on the individual financial performance of each of the member banks then participating in the loan.

On July 22, 2021, GPIL entered into an Incremental Facility Amendment to the Fourth Amended and Restated Credit Agreement for a second Farm Credit System incremental term loan (the "Incremental Term A-3 Facility"). The Incremental Term A-3 Facility is a senior secured term loan in the aggregate principal amount of \$250 million maturing on July 22, 2028. The Incremental Term A-3 Facility bears interest at a floating rate ranging from LIBOR plus 1.50% to LIBOR plus 2.25%, determined using a pricing grid based upon GPIL's consolidated leverage ratio. As long as the Incremental Term A-3 Facility is outstanding, GPIL will be eligible to receive an annual patronage credit from the participating banks, which will be paid in cash and stock in the lead member bank. Patronage payable each year is variable and based on the individual financial performance of each of the member banks then participating in the loan. The Incremental Term A-3 Facility is governed by the same covenants as are set forth in the Fourth Amended and Restated Credit Agreement and is secured by a first priority lien and security interest in certain assets of GPIL.

On July 23, 2021, GPIL entered into Amendment No. 1 to the Fourth Amended and Restated Credit Agreement and the Fourth Amended and Restated Guarantee and Collateral Agreement and Incremental Facility Amendment (the "First Amendment"). The First Amendment provided for a delayed draw term loan facility in an aggregate amount of €210 million and a €25 million increase to the existing Euro-denominated revolving credit facility. The new term loan facility was drawn on October 29, 2021, and bears interest at a floating rate ranging from EURIBOR plus 1.125% to EURIBOR plus 1.75%, determined using a pricing grid based upon GPIL's consolidated total leverage ratio from time to time. The Company designated this Euro-denominated debt as a non-derivative net investment hedge of a portion of our net investment in Euro functional currency denominated subsidiaries to offset currency fluctuations. The new term loan facility is governed by the same covenants as set forth in the Fourth Amended and Restated Credit Agreement and is secured by a first priority lien and security interest in certain assets of GPIL.

On September 29, 2021, GPIL completed a \$100 million tax-exempt green bond transaction through the Michigan Strategic Fund's Private Activity Bond Program (the "Green Bonds"). The Green Bonds are special limited obligations of the Michigan Strategic Fund, as issuer, payable from and secured by a pledge of payments to be made by GPIL under a loan agreement between the Michigan Strategic Fund and GPIL. The Green Bonds mature in 2061 and include a mandatory purchase on October 1, 2026. The Green Bonds were issued at a price of 110.99% and bear interest at an annual rate of 4.0%. The equivalent yield is 1.70%. The net proceeds of \$109.5 million were used to fund a portion of its spend on the CRB platform optimization project that includes the construction of a new CRB machine at its Kalamazoo, Michigan mill. The bonds have been designated as Green Bonds primarily because the proceeds were used to finance a solid waste disposal/recycling facility resulting in diversion of waste from landfills. In addition to the solid waste recycling aspect, the project improves the environmental footprint of its CRB mill system through expected reductions in water usage, energy consumption and GHG emissions.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

On October 6, 2021, GPIL entered into a \$400 million Incremental Facility Amendment to the Fourth Amended and Restated Credit Agreement (the "Incremental Term A-4 Facility"). The Incremental Term A-4 Facility has a delayed draw feature, and the Company funded the new term loan on October 29, 2021. The Incremental Term A-4 Facility was collateralized by the same assets as GPIL's Senior Secured Facilities on a pari passu basis. The Incremental Term A-4 Facility bore interest at a floating rate per annum equal to the Base Rate, the Euro currency Rate plus 0.875%, or the Daily Floating LIBOR Rate plus 0.875%, as selected by the Company. The loan was repaid on November 19, 2021 with the proceeds from the 3.75% senior unsecured notes due 2030.

On November 19, 2021, GPIL completed a private offering of \$400 million aggregate principal amount of 3.750% senior unsecured notes due 2030 (the "Dollar Notes") and €290 million aggregate principal amount of 2.625% senior unsecured notes due 2029 (the "Euro Notes"). The net proceeds of the Dollar Notes were used to repay in full the term loan borrowed under the Incremental Term A-4 Loan, which was under its senior secured credit facility. The net proceeds of the Euro Notes were used to repay revolver borrowings outstanding under its senior secured credit facility. The Company designated this Euro-denominated debt as a non-derivative net investment hedge of a portion of our net investment in Euro functional -currency denominated subsidiaries to offset currency fluctuations.

The following describes the Company's senior secured term loans and revolving credit facilities within the Fourth Amended and Restated Credit Agreement:

Document ^(a)	Provision	Expiration
Fourth Amended and Restated Credit Agreement	<ul style="list-style-type: none"> • Increased the domestic revolving credit facility by \$400 million to \$1,850 million. • Increased the European revolving credit facility by €7 million to €145 million. • Decreased the Japanese revolving credit facility by ¥650 million to ¥1,650 million, and • Reduced the term loan by approximately \$5 million to \$550 million. LIBOR plus variable spread (between 125 basis points and 200 basis points) depending on consolidated total leverage ratio. 	April 2026
Amendment 1	Increased the European revolving credit facility by €25 million to €170 million. Added Incremental EUR Term Loan Facility of €210 million.	April 2026
Incremental Term A-2 Facility Amendment	Incremental \$425 million term loan facility under the Fourth Amended and Restated Credit Agreement with a delayed draw feature, which was exercised in January 2021.	January 2028
Incremental Term A-3 Facility Amendment	Incremental \$250 million term loan facility under the Fourth Amended and Restated Credit Agreement, which was exercised in July 2021.	July 2028
Second Incremental Term A-4 Facility Amendment	Incremental \$400 million term loan facility under the Fourth Amended and Restated Credit Agreement, which was funded in October 2021, and settled in November 2021.	November 2021

^(a) The Company's obligations under the Fourth Amended and Restated Credit Agreement (as amended by the Incremental Term A-3 Facility Amendment, the First Amendment, the Incremental Term A-4 Facility Amendment and the Second Amendment (collectively, the "Current Credit Agreement") are secured by substantially all of the Company's domestic assets.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

At December 31, 2022, the Company and its U.S. and international subsidiaries had the following commitments, amounts outstanding and amounts available under revolving credit facilities:

<i>In millions</i>	Total Commitments	Total Outstanding	Total Available
Senior Secured Domestic Revolving Credit Facility ^(a)	\$ 1,850	\$ 565	\$ 1,262
Senior Secured International Revolving Credit Facilities	195	69	126
Other International Facilities	75	31	44
Total	\$ 2,120	\$ 665	\$ 1,432

^(a) In accordance with its debt agreements, the Company's availability under its revolving credit facilities has been reduced by the amount of standby letters of credit issued of \$23 million as of December 31, 2022. These letters of credit are primarily used as security against its self-insurance obligations and workers' compensation obligations. These letters of credit expire at various dates throughout 2023 unless extended.

Long-Term Debt maturities (excluding finance leases and finance obligations) are as follows:

<i>In millions</i>	
2023	\$ 26
2024	752
2025	39
2026	1,794
2027	300
After 2027	2,186
Total	\$ 5,097

Covenant Agreements

The Covenants in the Company's Fourth Amended and Restated Credit Agreement (the "Current Credit Agreement") and the indentures governing the 0.821% Senior Notes due 2024, 4.125% Senior Notes due 2024, 1.512% Senior Notes due 2026, 4.75% Senior Notes due 2027, 3.50% Senior Notes due 2028, 3.50% Senior Notes due 2029, 2.625% Senior Notes due 2029 and 3.75% Senior Notes due 2030 (the "Indentures"), limit the Company's ability to incur additional indebtedness. Additional covenants contained in the Current Credit Agreement and the Indentures may, among other things, restrict the ability of the Company to dispose of assets, incur guarantee obligations, prepay other indebtedness, repurchase stock, pay dividends and make other restricted payments, create liens, make equity or debt investments, make acquisitions, modify terms of the Indentures, engage in mergers or consolidations, change the business conducted by the Company and its subsidiaries, and engage in certain transactions with affiliates. Such restrictions could limit the Company's ability to respond to changing market conditions, fund its capital spending program, provide for unexpected capital investments or take advantage of business opportunities.

As of December 31, 2022, the Company was in compliance with the covenants in the Current Credit Agreement and the Indentures.

NOTE 6. LEASES

The Company determines if a contract is or contains a lease at inception. The Company has operating and finance leases for warehouses, corporate and regional offices, and machinery and equipment. The Company enters into lease contracts ranging from one to 25 years with the majority of leases having terms of three to seven years, many of which include options to extend in various increments. Variable lease costs consist primarily of variable warehousing costs, common area maintenance, taxes, and insurance. The Company's leases do not have any significant residual value guarantees or restrictive covenants.

As the implicit rate is not readily determinable for most of the Company's leases agreements, the Company uses an estimated incremental borrowing rate to determine the initial present value of lease payments. These discount rates for leases are calculated using the Company's credit spread adjusted for current market factors, including fixed rate swaps, EURIBOR, and foreign currency rates.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The components of lease costs are as follows:

<i>In millions</i>	Year Ended December 31,	
	2022	2021
Finance lease costs:		
Amortization of right-of-use asset	\$ 11	\$ 8
Interest on lease liabilities	8	8
Operating lease costs	82	75
Short-term lease costs	21	23
Variable lease costs	16	10
Total lease costs, net	\$ 138	\$ 124

Supplemental cash flow information related to leases was as follows:

<i>In millions</i>	Year Ended December 31,	
	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 83	\$ 76
Operating cash flows from finance leases	8	8
Financing cash flows from finance leases	9	6
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	52	118
Finance leases	42	11

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Supplemental balance sheet information related to leases was as follows:

<i>In millions, except lease term and discount rate</i>	Balance Sheet Classification	December 31,	
		2022	2021
Operating Leases:			
Operating lease right-of-use asset	Other Assets	\$ 245	\$ 258
Current operating lease liabilities	Other Accrued Liabilities	\$ 66	\$ 73
Noncurrent operating lease liabilities	Other Noncurrent Liabilities	184	193
Total operating lease liabilities		\$ 250	\$ 266
Finance Leases and Financing Obligations:			
Property, Plant and Equipment		\$ 197	\$ 153
Accumulated depreciation		(38)	(28)
Property, Plant and Equipment, net		\$ 159	\$ 125
Current finance lease liabilities	Short-Term Debt and Current Portion of Long-Term Debt	\$ 11	\$ 7
Noncurrent finance lease liabilities and financing obligations	Long-Term Debt	159	139
Total finance lease liabilities and financing obligations		\$ 170	\$ 146
Weighted Average Remaining Lease Term (Years)			
Operating leases		7	6
Finance leases		16	15
Weighted Average Discount Rate			
Operating leases		3.76 %	2.74 %
Finance leases		5.31 %	5.91 %

Maturities of lease liabilities are as follows:

<i>In millions</i>	Year ending December 31,	
	Operating Leases	Finance Leases
2023	\$ 73	\$ 19
2024	54	16
2025	41	15
2026	28	14
2027	21	15
Thereafter	64	178
Total lease payments	\$ 281	\$ 257
Less imputed interest	(31)	(87)
Total	\$ 250	\$ 170

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 7. STOCK INCENTIVE PLANS

The Company has one active equity compensation plan from which new grants may be made, the Graphic Packaging Holding Company 2014 Omnibus Stock and Incentive Compensation Plan (the "2014 Plan"). The 2014 Plan allows for granting shares of stock, options, stock appreciation rights, restricted stock, restricted stock units ("RSUs"), restricted stock awards ("RSAs"), and other types of stock-based and cash awards. Awards under the 2014 Plan vest and expire in accordance with terms established at the time of grant. Shares issued pursuant to awards under the 2014 Plan are from GPHC's authorized but unissued shares. Compensation costs are recognized on a straight-line basis over the requisite service period of the award and are adjusted for actual performance for performance-based awards. As of December 31, 2022, there were 10.0 million shares remaining available to be granted under the 2014 Plan.

Stock Awards, Restricted Stock and Restricted Stock Units

Under the 2014 Plan and related RSU grant agreements, RSUs granted to employees generally vest and become payable in three years from date of grant. RSUs granted to employees generally contain some combination of service and performance objectives based on various financial targets and relative total shareholder return that must be met for the RSUs to vest. RSUs granted as deferred compensation for non-employee directors are fully vested but not payable until the distribution date elected by the director. Stock awards issued to non-employee directors as part of their compensation for service on the Board are unrestricted on the grant date.

Data concerning RSUs and Stock Awards granted in the years ended December 31 is as follows:

	2022	2021	2020
RSUs — Employees	1,943,769	1,680,997	1,655,854
Weighted-average grant date fair value	\$ 20.19	\$ 16.14	\$ 15.40
Stock Awards — Board of Directors	34,160	55,055	71,160
Weighted-average grant date fair value	\$ 20.49	\$ 17.80	\$ 13.49

A summary of the changes in the number of unvested RSUs from December 31, 2019 to December 31, 2022 is presented below:

	RSUs	Weighted Average Grant Date Fair Value
Outstanding — December 31, 2019	5,059,690	\$ 13.27
Granted ^(a)	1,655,854	16.14
Released	(1,415,365)	12.91
Forfeited	(158,473)	14.25
Performance adjustment ^(b)	—	—
Outstanding — December 31, 2020	5,141,706	\$ 14.02
Granted ^(a)	1,680,997	16.14
Released	(2,121,203)	14.88
Forfeited	(359,100)	14.39
Performance adjustment ^(b)	587,461	15.09
Outstanding — December 31, 2021	4,929,861	\$ 14.47
Granted ^(a)	1,943,769	20.19
Released	(2,180,435)	12.34
Forfeited	(193,145)	17.59
Performance adjustment ^(b)	324,814	12.52
Outstanding — December 31, 2022	4,824,864	\$ 17.48

^(a) Grant activity for all performance-based RSUs is disclosed at target.

^(b) Reflects the number of RSUs above and below target levels based on actual performance measured at the end of the performance period.

The initial value of the service-based RSUs is based on the closing market value of GPHC's common stock on the date of grant. The 2022 performance-based RSU grants were valued using a Monte Carlo simulation as the total shareholder return contains a market condition. RSUs are recorded in Shareholders' Equity. The unrecognized expense at December 31, 2022 is approximately \$40 million and is expected to be recognized over a weighted average period of 2 years.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The value of stock awards granted to the Company's directors as compensation are based on the market value of GPHC's common stock on the date of grant. These awards are unrestricted on the date of grant.

During 2022, 2021, and 2020, \$34 million, \$27 million and \$34 million, respectively, were charged to compensation expense for stock incentive plans and such amounts are included in Selling, General and Administrative expenses in the Consolidated Statements of Operations.

During 2022, 2021, and 2020, RSUs with an aggregate fair value of \$44 million, \$35 million and \$23 million, respectively, vested and were paid out. The RSUs vested and paid out in 2022 were granted primarily during 2019.

NOTE 8. PENSIONS AND OTHER POSTRETIREMENT BENEFITS

DEFINED BENEFIT PLANS

The Company maintains both defined benefit pension plans and postretirement health care plans that provide medical and life insurance coverage to eligible salaried and hourly retired employees in North America and their dependents. The Company maintains international defined benefit pension plans which are either noncontributory or contributory and are funded in accordance with applicable local laws. Pension or termination benefits are based primarily on years of service and the employee's compensation.

Currently, the North American plans are closed to newly-hired employees except as noted below. Effective July 1, 2011, the North American plans were frozen for most salaried and non-union hourly employees and replaced with a defined contribution plan.

During 2018, the Company began the process of terminating its largest U.S. pension plan (the "U.S. Plan"). This included freezing the plan as of December 31, 2018 and spinning off the active participants to the plan established as part of the NACP Combination (the "NACP Plan"). The NACP Plan is open for union and non-union hourly employees of locations that were part of the NACP Combination. In the first quarter of 2020, the Company, using the assets held within the pension trust, purchased a group annuity contract that transferred the remaining pension obligation under the U.S. Plan to an insurance company. The Company incurred a non-cash settlement charge of \$154 million related to this transfer. These non-cash settlement charges relate to Net Actuarial Loss previously recognized in Accumulated Other Comprehensive Loss.

During the fourth quarter of 2021, the Company acquired substantially all the shares of AR Packaging. The business combination led to the Company acquiring approximately \$53 million in pension benefit obligations at December 31, 2021.

Pension and Postretirement Expense

The pension and postretirement expenses related to the Company's plans consisted of the following:

<i>In millions</i>	Pension Benefits			Postretirement Benefits		
	Year Ended December 31,					
	2022	2021	2020	2022	2021	2020
Components of Net Periodic Cost:						
Service Cost	\$ 14	\$ 15	\$ 15	\$ —	\$ —	1
Interest Cost	12	10	14	1	1	1
Expected Return on Plan Assets	(21)	(19)	(21)	—	—	—
Amortization of Actuarial Loss (Gain)	3	5	5	(2)	(2)	(2)
Net Curtailment/Settlement Loss	—	—	154	—	—	—
Net Periodic Cost (Benefit)	\$ 8	\$ 11	\$ 167	\$ (1)	\$ (1)	\$ —

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Certain assumptions used in determining the pension and postretirement expenses were as follows:

	Pension Benefits			Postretirement Benefits		
	Year Ended December 31,					
	2022	2021	2020	2022	2021	2020
Weighted Average Assumptions:						
Discount Rate	2.46 %	2.11 %	2.69 %	2.92 %	2.52 %	3.22 %
Rate of Increase in Future Compensation Levels	1.80 %	3.62 %	2.36 %	—	—	—
Expected Long-Term Rate of Return on Plan Assets	3.86 %	3.59 %	4.12 %	—	—	—
Initial Health Care Cost Trend Rate	—	—	—	6.15 %	6.40 %	6.65 %
Ultimate Health Care Cost Trend Rate	—	—	—	4.50 %	4.50 %	4.50 %
Ultimate Year	—	—	—	2031	2028	2028

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Funded Status

The following table sets forth the funded status of the Company's pension and postretirement plans as of December 31:

<i>In millions</i>	Pension Benefits		Postretirement Benefits	
	2022	2021	2022	2021
Change in Benefit Obligation:				
Benefit Obligation at Beginning of Year	\$ 627	\$ 593	\$ 33	\$ 36
Service Cost	14	15	—	—
Interest Cost	12	10	1	1
Net Actuarial Gain	(152)	(21)	(7)	(3)
Foreign Currency Exchange	(27)	(4)	—	—
Benefits Paid	(24)	(19)	(1)	(1)
Acquisition	12	53	—	—
Other	9	—	—	—
Benefit Obligation at End of Year	\$ 471	\$ 627	\$ 26	\$ 33
Change in Plan Assets:				
Fair Value of Plan Assets at Beginning of Year	\$ 557	\$ 516	\$ —	\$ —
Actual Return on Plan Assets	(149)	28	—	—
Employer Contributions	24	33	1	1
Foreign Currency Exchange	(27)	(2)	—	—
Benefits Paid	(24)	(19)	(1)	(1)
Acquisition	7	1	—	—
Other	9	—	—	—
Fair Value of Plan Assets at End of Year	\$ 397	\$ 557	\$ —	\$ —
Plan Assets Less than Projected Benefit Obligation	\$ (74)	\$ (70)	\$ (26)	\$ (33)
Amounts Recognized in the Consolidated Balance Sheets Consist of:				
Pension Assets	\$ 19	\$ 43	\$ —	\$ —
Accrued Pension and Postretirement Benefits Liability — Current	\$ (5)	\$ (4)	\$ (3)	\$ (3)
Accrued Pension and Postretirement Benefits Liability — Noncurrent	\$ (88)	\$ (109)	\$ (23)	\$ (30)
Accumulated Other Comprehensive Income:				
Net Actuarial Loss (Gain)	\$ 82	\$ 71	\$ (1)	\$ (1)
Prior Service Cost (Credit)	\$ 3	\$ 4	\$ (21)	\$ (16)
Weighted Average Calculations:				
Discount Rate	4.86 %	2.46 %	5.12 %	2.92 %
Rates of Increase in Future Compensation Levels	3.16 %	1.80 %	—	—
Initial Health Care Cost Trend Rate	—	—	7.25 %	6.15 %
Ultimate Health Care Cost Trend Rate	—	—	4.50 %	4.50 %
Ultimate Year	—	—	2032	2031

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The Company determined pension expense using both the fair value of assets and a calculated value that averages gains and losses over a period of years. Investment gains or losses represent the difference between the expected and actual return on assets. As of December 31, 2022, the net actuarial loss was \$82 million. These net losses may increase future pension expense if not offset by (i) actual investment returns that exceed the assumed investment returns, or (ii) other factors, including reduced pension liabilities arising from higher discount rates used to calculate pension obligations, or (iii) other actuarial gains, including whether such accumulated actuarial losses at each measurement date exceed the "corridor" determined under the *Compensation — Retirement Benefits* topic of the FASB Codification. For the largest plan, the actuarial loss is amortized over the average remaining service period of employees expected to receive benefits.

The discount rate used to determine the present value of future pension obligations at December 31, 2022 was based on a yield curve constructed from a portfolio of high-quality corporate debt securities with maturities ranging from 1 year to 30 years. Each year's expected future benefit payments were discounted to their present value at the spot yield curve rate thereby generating the overall discount rate for the Company's pension obligations. The weighted average discount rate used to determine the pension obligations was 4.86% and 2.46% in 2022 and 2021, respectively.

The pension net actuarial gain of \$152 million was primarily due to changes in the discount rate. The weighted average discount rate at December 31, 2022 was 4.86% compared to 2.46% at December 31, 2021.

Accumulated Benefit Obligation

The accumulated benefit obligation, ("ABO"), for all defined benefit pension plans was \$ 465 million and \$621 million at December 31, 2022 and 2021, respectively. The projected benefit obligation ("PBO") and fair value of plan assets where the PBO exceeded plan assets were \$311 million and \$383 million, respectively. The ABO and fair value of plan assets where the ABO exceeded plan assets were \$304 million and \$378 million, respectively.

Employer Contributions

The Company made \$24 million and \$33 million of contributions to its pension plans during 2022 and 2021, respectively. During 2022 and 2021, the Company made a \$6 million and a \$14 million contribution, respectively, to the remaining U.S. defined benefit plan by effectively utilizing the excess balance related to the U.S. defined benefit plan terminated in 2020. The Company expects to make contributions in the range of \$15 million to \$25 million in 2023.

The Company also made postretirement health care benefit payments of \$1 million during 2022 and 2021. For 2023, the Company expects to make approximately \$2 million contributions to its postretirement health care plans.

Pension Assets

The Company's overall investment strategy is to achieve a mix of investments for long-term growth and near-term benefit payments through diversification of asset types, fund strategies and fund managers. Investment risk is measured on an on-going basis through annual liability measurements, periodic asset/liability studies, and quarterly investment portfolio reviews. The plans invest in the following major asset categories: cash, equity securities, fixed income securities, real estate and diversified growth funds. At December 31, 2022 and 2021, pension investments did not include any direct investments in the Company's stock or the Company's debt.

The Company implemented a de-risking or liability driven investment strategy for its U.S. and U.K. pension plans. This strategy moved assets from return seeking (equities) to investments that mirror the underlying benefit obligations (fixed income).

The weighted average allocation of plan assets and the target allocation by asset category is as follows:

	Target	2022	2021
Cash	1 %	4 %	3 %
Equity Securities	21	26	26
Fixed Income Securities	55	45	46
Other Investments	23	25	25
Total	100 %	100 %	100 %

The plans' investment in equity securities primarily includes investments in U.S. and international companies of varying sizes and industries. The strategy of these investments is to 1) exceed the return of an appropriate benchmark for such equity classes and 2) through diversification, reduce volatility while enhancing long term real growth.

The plans' investment in fixed income securities includes government bonds, investment grade bonds and non-investment grade bonds across a broad and diverse issuer base. The strategy of these investments is to provide income and stability and to diversify the fixed income exposure of the plan assets, thereby reducing volatility.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The Company's approach to developing the expected long-term rate of return on pension plan assets is based on fair values and combines an analysis of historical investment performance by asset class, the Company's investment guidelines and current and expected economic fundamentals.

The following tables set forth, by category and within the fair value hierarchy, the fair value of the Company's pension assets at December 31, 2022 and 2021:

Fair Value Measurements at December 31, 2022					
<i>In millions</i>	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value at December 31, 2022^(b)
Asset Category:					
Cash	\$ 15	\$ 10	\$ 2	\$ —	\$ 3
Equity Securities:					
Domestic	94	5	1	—	88
Foreign	7	7	—	—	—
Fixed Income Securities	180	15	165	—	—
Other Investments:					
Real estate	4	—	4	—	—
Liability Driven Investment	56	35	21	—	—
Diversified growth fund ^(a)	32	—	8	24	—
Insurance Contracts	9	—	—	9	—
Total	\$ 397	\$ 72	\$ 201	\$ 33	\$ 91

Fair Value Measurements at December 31, 2021					
<i>In millions</i>	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value at December 31, 2021^(b)
Asset Category:					
Cash	\$ 19	\$ 17	\$ 1	\$ —	\$ 1
Equity Securities:					
Domestic	140	5	13	—	122
Foreign	8	8	—	—	—
Fixed Income Securities	254	19	234	1	—
Other Investments:					
Real estate	7	—	7	—	—
Liability Driven Investment	90	31	59	—	—
Diversified growth fund ^(a)	39	—	7	32	—
Total	\$ 557	\$ 80	\$ 321	\$ 33	\$ 123

^(a) The fund invests in a combination of traditional investments (equities, bonds, and foreign exchange), seeking to achieve returns through active asset allocation over a three to five-year horizon.

^(b) Investments that are measured at net asset value (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

A reconciliation of fair value measurements of plan assets using significant unobservable inputs (Level 3) is as follows:

<i>In millions</i>	2022	2021
Balance at January 1,	\$ 33	\$ 14
Return on Assets, Net	—	2
Purchases	11	24
Transfers Out, Net	(7)	(7)
Foreign Currency Exchange	(4)	—
Balance at December 31,	\$ 33	\$ 33

Estimated Future Benefit Payments

The following represents the Company's estimated future pension and postretirement health care benefit payments through the year 2032:

<i>In millions</i>	Pension Plans	Postretirement Health Care Benefits
2023	\$ 28	\$ 3
2024	30	2
2025	32	2
2026	33	2
2027	35	2
2028— 2032	186	10

Multi-Employer Plans

Certain of the Company's employees participate in multi-employer plans that provide both pension and other postretirement health care benefits to employees under union-employer organization agreements.

Estimated liabilities have been established related to the partial or complete withdrawal from certain multi-employment benefit plans for facilities that have been closed. During 2020, the Company entered into a settlement agreement with one of its closed multi-employment benefit plans and recorded an \$8 million increase in its estimated withdrawal liability for this plan. Under the terms of this settlement agreement, the Company paid \$17 million in 2021. At December 31, 2022 and December 31, 2021, the Company has withdrawal liabilities of \$18 million and \$19 million, respectively, related to these plans, which is recorded as Compensation and Employee Benefits and Other Noncurrent Liabilities in the Company's Consolidated Balance Sheets, which represents the Company's best estimate of the expected withdrawal liability.

DEFINED CONTRIBUTION PLANS

The Company provides defined contribution plans for certain eligible employees. The Company's contributions to the plans are based upon employee contributions, a percentage of eligible compensation, and the Company's annual operating results. Contributions to these plans for the years ended December 31, 2022, 2021 and 2020 were \$73 million, \$69 million and \$62 million, respectively.

NOTE 9. INCOME TAXES

The U.S. and international components of Income before Income Taxes and Equity Income of Unconsolidated Entity consisted of the following:

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
U.S.	\$ 683	\$ 237	\$ 181
International	33	52	63
Income before Income Taxes and Equity Income of Unconsolidated Entity	\$ 716	\$ 289	\$ 244

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The provisions for Income Tax (Expense) Benefit on Income before Income Taxes and Equity Income of Unconsolidated Entity consisted of the following:

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
Current Expense:			
U.S.	\$ (25)	\$ (2)	\$ (23)
International	(38)	(17)	(20)
Total Current	\$ (63)	\$ (19)	\$ (43)
Deferred (Expense) Benefit:			
U.S.	(137)	(57)	(8)
International	6	2	9
Total Deferred	\$ (131)	\$ (55)	\$ 1
Income Tax Expense	\$ (194)	\$ (74)	\$ (42)

A reconciliation of Income Tax (Expense) Benefit on Income before Income Taxes and Equity Income of Unconsolidated Entity at the federal statutory rate of 21.0% compared with the Company's actual Income Tax (Expense) Benefit is as follows:

<i>In millions</i>	Year Ended December 31,					
	2022	Percent	2021	Percent	2020	Percent
Income Tax Expense at U.S. Statutory Rate	\$ (150)	21.0 %	\$ (61)	21.0 %	\$ (51)	21.0 %
U.S. State and Local Tax Expense	(29)	4.1	(12)	4.1	(8)	3.2
Permanent Items	2	(0.3)	(9)	3.2	(1)	0.4
Provision to Return Adjustments	4	(0.5)	4	(1.4)	2	(0.9)
Change in Valuation Allowance	(21)	2.9	(1)	0.4	7	(2.9)
Unrealized Foreign Exchange	22	(3.1)	5	(1.7)	—	—
International Tax Rate Differences	(6)	0.8	(3)	1.0	(3)	1.2
U.S. Federal & State Tax Credits	9	(1.3)	13	(4.5)	10	(4.0)
Domestic Minority Interest	—	—	2	(0.7)	5	(2.2)
Deferred Adjustment due to IP Exit	—	—	(4)	1.5	—	—
Russia Impairment	(20)	2.8	—	—	—	—
Tax Effects Released from OCI	(10)	1.4	—	—	—	—
Other	5	(0.6)	(8)	2.8	(3)	1.2
Income Tax Expense	\$ (194)	27.2 %	\$ (74)	25.7 %	\$ (42)	17.0 %

During 2022, tax expense differs from the amount at the statutory rate by \$20 million due to impairment charges from the planned sale of the Company's Russian business that resulted in no corresponding tax benefit and due to the recording of \$10 million of tax expense to release the tax expense remaining in Other Comprehensive Income after the settlement of certain swaps. The Company also recognized tax benefits of approximately \$22 million related to deferred tax assets and liabilities recognized on unrealized foreign currency activity for intercompany loans where the entity's functional currency and the loan denomination currency are different than the tax reporting currency (primarily in Sweden). However, a valuation allowance of approximately \$25 million was recorded during the year against deferred tax assets in Sweden, including the deferred tax asset related to the unrealized foreign currency activity. Additionally, the Company recorded a tax benefit of approximately \$5 million related to the release of a valuation allowance recorded against the net deferred tax assets of its Brazilian subsidiary based on historic earnings.

As a result of the NACP Combination, during 2020 and 2021, federal and state income taxes are not recorded with respect to consolidated domestic earnings attributable to the Company's minority interest partner, resulting in a difference between the effective tax rate and the statutory tax rate. As a result of decreases in the minority partner's interest during 2021 and 2020, the difference between the effective tax rate and the statutory tax also declined.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

In addition, during 2021, the Company recognized tax expense of approximately \$ 4 million related to the remeasurement of deferred tax assets for executive compensation as a result of IP's exchange of its remaining shares in GPIIP during the period and approximately \$3 million related to the remeasurement of its net deferred tax liability for its UK subsidiaries due to the statutory tax rate increase enacted during the second quarter.

During 2020, the Company recognized a tax benefit of approximately \$ 8 million attributable to the release of a valuation allowance recorded against the net deferred tax assets of two of its Canadian subsidiaries as a result of internal restructuring. The Company also recognized a tax benefit related to updates to its 2019 financial statement income tax calculations of approximately \$2 million primarily due to new guidance in final U.S. Treasury Regulations issued during 2020.

As a result of IP's final exchange in 2021, the Company currently owns 100% of the outstanding interests in GPIIP. GPIIP continued to be treated as a partnership for U.S. federal and state income tax purposes despite IP's exit as a minority partner until September 1, 2022, when, due to an internal restructuring, GPIIP became a single member limited liability company, terminating the partnership for income tax purposes. Accordingly, as of December 31, 2022, domestic deferred tax assets and liabilities are tracked based on the inside basis difference of assets and liabilities and are no longer tracked based on the Company's outside basis difference in the partnership. As a result, the deferred tax liability on the Investment in Partnership has been reduced to zero and other deferred tax assets and liabilities, including PP&E and Intangibles, have been increased to reflect the tax effect of the inside basis difference of the respective assets and liabilities. The tax effects of differences that give rise to significant portions of the deferred income tax assets and deferred income tax liabilities as of December 31 were as follows:

<i>In millions</i>	2022	2021
Deferred Income Tax Assets:		
Compensation Based Accruals	\$ 37	\$ 4
Net Operating Loss Carryforwards	103	192
Postretirement Benefits	26	1
Tax Credits	26	31
Capitalized Research & Development Costs	44	—
Unrealized Foreign Exchange	28	7
Other	81	30
Valuation Allowance	(57)	(38)
Total Deferred Income Tax Assets	\$ 288	\$ 227
Deferred Income Tax Liabilities:		
Property, Plant and Equipment	(661)	(108)
Goodwill & Other Intangibles	(280)	(111)
Investment in Partnership	—	(564)
Net Noncurrent Deferred Income Tax Liabilities	\$ (941)	\$ (783)
Net Deferred Income Tax Liability	\$ (653)	\$ (556)

The Company has evaluated the need to maintain a valuation allowance for deferred tax assets based on its assessment of whether it is more likely than not that deferred tax assets will be realized through the generation of future taxable income. Appropriate consideration was given to all available evidence, both positive and negative, in assessing the need for a valuation allowance. The Company reviewed its deferred income tax assets as of December 31, 2022 and 2021, respectively, and determined that it is more likely than not that a portion will not be realized. A valuation allowance of \$57 million and \$38 million as of December 31, 2022 and 2021, respectively, is maintained on the deferred income tax assets for which the Company has determined that realization is not more likely than not. Of the total valuation allowance at December 31, 2022, \$27 million relates to net deferred tax assets in Sweden, \$ 25 million relates to net deferred tax assets in various other foreign jurisdictions and \$5 million relates to net operating losses and tax credit carryforwards in certain U.S. states as well as U.S. foreign tax carryforwards. The need for a valuation allowance is made on a jurisdiction-by-jurisdiction basis. As of December 31, 2022, the Company concluded that due to cumulative pretax losses and the lack of sufficient future taxable income of the appropriate character, realization is not more likely than not on the net deferred income tax assets related primarily to the Company's operations in Australia, the Netherlands, and Norway as well as certain operations in Germany and Sweden.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The following table represents a summary of the valuation allowances against deferred tax assets as of and for the three years ended December 31, 2022, 2021, and 2020, respectively:

<i>In millions</i>	Additions						Deductions		Balance at End of Period
	December 31,	Balance at Beginning of Period	Charged to Costs and Expenses	Charged to Other Accounts	Credited to Costs and Expenses	Credited to Other Accounts			
2022	\$	38	\$ 29	\$ 1	\$ (8)	\$ (3)	\$	57	
2021		34	4	4	(3)	(1)		38	
2020		41	2	1	(9)	(1)		34	

The Company utilized its remaining U.S. federal net operating loss carryforwards during 2020. However, as a result of deductions associated with the step up in tax basis of certain assets as a result of International Paper's exit from the partnership, the Company generated a taxable loss of \$564 million during 2021 that can be carried forward for U.S. federal income tax purposes indefinitely. As of December 31, 2022, the Company's remaining U.S. federal net operating loss carryforward is approximately \$238 million. As such, based on the remaining net operating loss carryforward and tax credit carryforwards, which are available to offset future U.S. federal income tax, the Company expects its U.S. federal cash tax liability in 2023 to be reduced by approximately \$100 million.

The Company's U.S. state net operating loss carryforwards total \$ 177 million and expire in various years through 2041.

International net operating loss carryforward amounts total \$ 174 million, of which substantially all have no expiration date.

Tax Credit carryforwards total \$ 26 million which expire in various years through 2042.

Uncertain Tax Positions

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

<i>In millions</i>	2022	2021	2020
Balance at January 1,	\$ 24	\$ 20	\$ 21
Additions for Tax Positions of Current Year	2	1	1
Additions for Tax Positions of Prior Years	1	3	2
Reductions for Tax Positions of Prior Years	(1)	—	(4)
Balance at December 31,	\$ 26	\$ 24	\$ 20

At December 31, 2022, \$26 million of the total gross unrecognized tax benefits, if recognized, would affect the annual effective income tax rate. As of December 31, 2022, none of the total gross unrecognized tax benefits recorded are related to indefinite lived deferred tax assets and did not have an impact on total tax expense.

The Company recognizes potential accrued interest and penalties related to unrecognized tax benefits within its global operations in Income Tax Expense. The Company had an immaterial accrual for the payment of interest and penalties at December 31, 2022.

The Company anticipates that an immaterial portion of the total unrecognized tax benefits at December 31, 2022 could change within the next twelve months.

The Company files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions and our income tax filings are regularly examined by federal, state and non-U.S. tax authorities. The Company's 2018 U.S. federal corporate and partnership income tax filings are currently under examination by the Internal Revenue Service. With few exceptions, the Company is no longer subject to U.S. federal, state and local tax examinations for years before 2018.

As of December 31, 2022, the Company has provided for deferred income taxes attributable to future foreign withholding tax expense related to the Company's equity investment in the joint venture, Rengo Riverwood Packaging, Ltd. In addition, Company provides deferred income taxes for future Canadian withholding tax to the extent of excess cash available for distribution after consideration of working capital needs and other debt settlement of its Canadian subsidiary, Graphic Packaging International Canada, ULC. The Company continues to assert that it is permanently reinvested in the cumulative earnings of its Canadian subsidiary in excess of the amount of cash that is on hand and available for distribution after consideration of working capital needs and other debt settlement. The Company determined that no deferred tax liability should be recorded related to the outside basis difference of its Canadian subsidiary as of December 31, 2022.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The Company has not provided for deferred U.S. income taxes on approximately \$ 44 million of its undistributed earnings in other international subsidiaries because of the Company's intention to indefinitely reinvest these earnings outside the U.S. The determination of the amount of the unrecognized deferred U.S. income tax liability (primarily withholding tax in certain jurisdictions) on the unremitted earnings or any other associated outside basis difference is not practicable because of the complexities associated with the calculation.

The Company has elected to recognize global intangible low-taxed income ("GILTI") as period cost as incurred, therefore there are no deferred taxes recognized for basis differences that are expected to impact the amount of the GILTI inclusion upon reversal.

NOTE 10. FINANCIAL INSTRUMENTS, DERIVATIVES AND HEDGING ACTIVITIES

The Company enters into derivative instruments for risk management purposes only, including derivatives designated as hedging instruments under the *Derivatives and Hedging* topic of the FASB Codification and those not designated as hedging instruments under this guidance. The Company uses natural gas swap contracts and has previously used interest rate swaps and forward exchange contracts. These derivative instruments are designated as cash flow hedges and, to the extent they are effective in offsetting the variability of the hedged cash flows, changes in the derivatives' fair value are not included in current earnings but are included in Accumulated Other Comprehensive Loss. These changes in fair value will subsequently be reclassified to earnings, contemporaneously with and offsetting changes in the related hedged exposure, and presented in the same line of the income statement expected for the hedged item.

Interest Rate Risk

The Company has previously used interest rate swaps to manage interest rate risks on future interest payments caused by interest rate changes on its variable rate term loan facility. Changes in fair value will subsequently be reclassified into earnings as a component of Interest Expense, Net as interest is incurred on amounts outstanding under the term loan facility.

As of December 31, 2021, the Company had interest rate swap positions with a notional value of \$ 200 million which matured in January 2022. As discussed in "Note 9 - Income Taxes", a \$10 million expense was recorded to release the tax expense remaining in Other Comprehensive Income after the settlement of these swaps in the first quarter of 2022. As of December 31, 2022, the Company had no outstanding interest rate swaps

These derivative instruments are designated as cash flow hedges and, to the extent they are effective in offsetting the variability of the hedged cash flows, changes in the derivatives' fair value are not included in current earnings but are included in Accumulated Other Comprehensive Loss. Ineffectiveness measured in the hedging relationship is recorded in earnings in the period it occurs. During 2022 and 2021, there were no amounts of ineffectiveness. During 2022 and 2021, there were no amounts excluded from the measure of effectiveness.

Commodity Risk

To manage risks associated with future variability in cash flows and price risk attributable to purchases of natural gas, the Company enters into natural gas swap contracts to hedge prices for a designated percentage of its expected natural gas usage. Such contracts are designated as cash flow hedges. The contracts are carried at fair value with changes in fair value recognized in Accumulated Other Comprehensive Loss and resulting gain or loss reclassified into Cost of Sales concurrently with the recognition of the commodity consumed. The Company has hedged approximately 52% of its expected natural gas usage for 2023.

During 2022 and 2021, there were no amounts of ineffectiveness related to changes in the fair value of natural gas swap contracts. Additionally, there were no amounts excluded from the measure of effectiveness.

Foreign Currency Risk

The Company has previously entered into forward exchange contracts to manage risks associated with foreign currency transactions and future variability of cash flows arising from those transactions that may be adversely affected by changes in exchange rates. The contracts are carried at fair value with changes in fair value recognized in Accumulated Other Comprehensive Loss and gains/losses related to these contracts are recognized in Other Expense (Income), Net or Net Sales, when appropriate.

As of December 31, 2022 and 2021, the Company had no outstanding forward exchange contracts. As of December 31, 2020, multiple forward exchange contracts existed that expired on various dates throughout the following year

No amounts were reclassified to earnings during 2022, 2021 or 2020 in connection with forecasted transactions that were considered probable of not occurring and there was no amount of ineffectiveness related to changes in the fair value of foreign currency forward contracts. Additionally, there were no amounts excluded from the measure of effectiveness during 2022, 2021 or 2020.

The Company has not entered into any foreign exchange contracts in 2022.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Derivatives not Designated as Hedges

The Company enters into forward exchange contracts to effectively hedge substantially all of its accounts receivables resulting from sales transactions and intercompany loans denominated in foreign currencies in order to manage risks associated with variability in cash flows that may be adversely affected by changes in exchange rates. At December 31, 2022 and 2021, multiple foreign currency forward exchange contracts existed, with maturities ranging up to three months. Those foreign currency exchange contracts outstanding at December 31, 2022 and 2021, when aggregated and measured in U.S. dollars at contractual rates at December 31, 2022 and 2021, respectively, had net notional amounts totaling \$111 million and \$103 million. Unrealized gains and losses resulting from these contracts are recognized in Other (Income) Expense, Net and approximately offset corresponding recognized but unrealized gains and losses on the remeasurement of these accounts receivable.

Deal Contingent Hedge

On May 14, 2021, in connection with the AR Packaging acquisition, the Company entered into deal contingent foreign exchange forward contracts, with no upfront cash cost, to hedge €700 million of the acquisition price. These forward contracts settled October 29, 2021, immediately prior to the acquisition of AR Packaging and are accounted for as derivatives under ASC 815, Derivatives and Hedging. Realized losses of \$48 million for the year ended December 31, 2021 resulting from these contracts are recognized in Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net on the Company's Consolidated Statements of Operations. For more information, see "Note 1 - General Information" of the Company's 2021 Annual Report on Form 10-K for the year ended December 31, 2021.

Foreign Currency Movement Effect

For the year ended December 31, 2022, 2021 and 2020 net currency exchange losses (gains) included in determining Income from Operations were \$ 3 million, \$3 million, and \$3 million, respectively.

NOTE 11. FAIR VALUE MEASUREMENT

The Company follows the fair value guidance integrated into the *Fair Value Measurements and Disclosures* topic of the FASB Codification in regards to financial and nonfinancial assets and liabilities. Nonfinancial assets and nonfinancial liabilities include those measured at fair value in goodwill impairment testing, asset retirement obligations initially measured at fair value, and those assets and liabilities initially measured at fair value in a business combination.

The FASB's guidance defines fair value, establishes a framework for measuring fair value and expands the fair value disclosure requirements. The accounting guidance applies to accounting pronouncements that require or permit fair value measurements. It indicates, among other things, that a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. The guidance defines fair value based upon an exit price model, whereby fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The guidance clarifies that fair value should be based on assumptions that market participants would use, including a consideration of non-performance risk.

Valuation Hierarchy

The *Fair Value Measurements and Disclosures* topic establishes a valuation hierarchy for disclosure of the inputs used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1 inputs — quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs — quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 inputs — unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value.

An asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The Company has determined that its financial assets and financial liabilities include derivative instruments which are carried at fair value and are valued using Level 2 inputs in the fair value hierarchy. The Company uses valuation techniques based on discounted cash flow analyses, which reflects the terms of the derivatives and uses observable market-based inputs, including forward rates and uses market price quotations obtained from third party derivatives brokers, corroborated with information obtained from third party pricing service providers.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Fair Value of Financial Instruments

As of December 31, 2022 and 2021, there has not been any significant impact to the fair value of the Company's derivative liabilities due to its own credit risk. Similarly, there has not been any significant adverse impact to the Company's derivative assets based on evaluation of the Company's counterparties' credit risks. As of December 31, 2022, the Company had commodity contract derivative liabilities, which were included in Other Accrued Liabilities on the Condensed Consolidated Balance Sheet, of \$12 million. As of December 31, 2021 the Company had commodity contract assets, which were included in Other Current Assets on the Condensed Consolidated Balance Sheet, of \$2 million.

The fair values of the Company's other financial assets and liabilities at December 31, 2022 and 2021 approximately equal the carrying values reported on the Consolidated Balance Sheets except for Long-Term Debt. The fair value of the Company's Long-Term Debt (excluding finance leases and deferred financing fees) was \$4,749 million and \$5,715 million, as compared to the carrying amounts of \$ 5,097 million and \$5,676 million as of December 31, 2022 and 2021, respectively. The fair value of the Company's Total Debt, including the Senior Notes, is based on quoted market prices (Level 2 inputs). Level 2 valuation techniques for Long-Term Debt are based on quotations obtained from independent pricing service providers.

Effect of Derivative Instruments

The pre-tax effect of derivative instruments in cash flow hedging relationships on the Company's Consolidated Statements of Operations for the year ended December 31, 2022 and 2021 is as follows:

<i>In millions</i>	Amount of Loss (Gain) Recognized in Accumulated Other Comprehensive Loss			Location in Statement of Operations	Amount of (Gain) Loss Recognized in Statement of Operations		
	Year Ended December 31,				Year Ended December 31,		
	2022	2021	2020		2022	2021	2020
Commodity Contracts	\$ 2	\$ (11)	\$ 1	Cost of Sales	\$ (12)	\$ (11)	\$ 6
Foreign Currency Contracts	—	(2)	2	Other (Income) Expense, Net	—	2	—
Interest Rate Swap Agreements	—	—	6	Interest Expense, Net	—	6	7
Total	\$ 2	\$ (13)	\$ 9		\$ (12)	\$ (3)	\$ 13

At December 31, 2022, the Company expects to reclassify \$ 12 million of pre-tax loss in the next twelve months from Accumulated Other Comprehensive Loss to earnings, contemporaneously with and offsetting changes in the related hedged exposure. The actual amount that will be reclassified to future earnings may vary from this amount as a result of changes in market conditions.

The pre-tax effect of derivative instruments not designated as hedging instruments on the Company's Consolidated Statements of Operations for the years ended December 31, 2022 and 2021 is as follows:

<i>In millions</i>		2022	2021	2020
Foreign Currency Contracts	Other (Income) Expense, Net	\$ (9)	\$ (5)	\$ 9
Deal Contingent Foreign Exchange Hedge	Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net	\$ —	\$ 48	\$ —

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 12. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The components of Other Comprehensive Income (Loss) attributable to Graphic Packaging Holding Company are as follows:

<i>In millions</i>	Year Ended December 31,								
	2022			2021			2020		
	Pretax Amount	Tax Effect	Net Amount ^(a)	Pretax Amount	Tax Effect	Net Amount ^(a)	Pretax Amount	Tax Effect	Net Amount
Derivative Instruments Gain (Loss)	\$ 22	\$ (18)	\$ 4	\$ 7	\$ (2)	\$ 5	\$ 5	\$ (1)	\$ 4
Pension and Postretirement Benefit Plans	(22)	13	(9)	53	(8)	45	126	(26)	100
Currency Translation Adjustment	(156)	8	(148)	(28)	—	(28)	17	—	17
Other Comprehensive Income (Loss)	\$ (156)	\$ 3	\$ (153)	\$ 32	\$ (10)	\$ 22	\$ 148	\$ (27)	\$ 121

^(a) Amounts exclude impact of noncontrolling interest. See "Note 17 - Changes in Accumulated Other Comprehensive Loss."

The balances of Accumulated Other Comprehensive Loss Attributable to Graphic Packaging Holding Company, net of applicable taxes are as follows:

<i>In millions</i>	December 31,	
	2022	2021
Accumulated Derivative Instruments Loss	\$ (4)	\$ (8)
Pension and Postretirement Benefit Plans	(103)	(94)
Currency Translation Adjustment	(270)	(122)
Accumulated Other Comprehensive Loss	\$ (377)	\$ (224)

NOTE 13. COMMITMENTS

The Company has entered into other long-term contracts principally for the purchase of fiber and chip processing. The minimum purchase commitments extend beyond 2027. At December 31, 2022, total commitments under these contracts were as follows:

<i>In millions</i>	
2023	\$ 98
2024	55
2025	50
2026	18
2027	8
Thereafter	34
Total	\$ 263

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 14. ENVIRONMENTAL AND LEGAL MATTERS

Environmental Matters

The Company is subject to a broad range of foreign, federal, state and local environmental, health and safety laws and regulations, including those governing discharges to air, soil and water, the management, treatment and disposal of hazardous substances, solid waste and hazardous wastes, the investigation and remediation of contamination resulting from historical site operations and releases of hazardous substances, the recycling of packaging and the health and safety of employees. Compliance initiatives could result in significant costs, which could negatively impact the Company's consolidated financial position, results of operations or cash flows. Any failure to comply with environmental or health and safety laws and regulations or any permits and authorizations required thereunder could subject the Company to fines, corrective action or other sanctions.

Some of the Company's current and former facilities are the subject of environmental investigations and remediations resulting from historic operations and the release of hazardous substances or other constituents. Some current and former facilities have a history of industrial usage for which investigation and remediation obligations may be imposed in the future or for which indemnification claims may be asserted against the Company. Also, closures or sales of facilities may necessitate investigation and may result in remediation activities at those facilities.

The Company has established reserves for those facilities or issues where a liability is probable and the costs are reasonably estimable. The Company believes that the amounts accrued for its loss contingencies, and the reasonably possible loss beyond the amounts accrued, are not material to the Company's consolidated financial position, results of operations or cash flows. The Company cannot estimate with certainty other future compliance, investigation or remediation costs. Some costs relating to historic usage that the Company considers to be reasonably possible of resulting in liability are not quantifiable at this time. The Company will continue to monitor environmental issues at each of its facilities, as well as regulatory developments, and will revise its accruals, estimates and disclosures relating to past, present and future operations, as additional information is obtained.

Legal Matters

The Company is a party to a number of lawsuits arising in the ordinary conduct of its business. Although the timing and outcome of these lawsuits cannot be predicted with certainty, the Company does not believe that disposition of these lawsuits will have a material adverse effect on the Company's consolidated financial position, results of operations or cash flows.

NOTE 15. BUSINESS SEGMENT AND GEOGRAPHIC AREA INFORMATION

The Company has three reportable segments as follows:

Paperboard Mills includes the seven North American paperboard mills that produce primarily CRB, CUK, and SBS, which is consumed internally to produce paperboard packaging for the Americas and Europe Packaging segments. Paperboard not consumed internally is sold externally to a wide variety of paperboard packaging converters and brokers. The Paperboard Mills segment Net Sales represent the sale of paperboard only to external customers. The effect of intercompany transfers to the paperboard packaging segments has been eliminated from the Paperboard Mills segment to reflect the economics of the integration of these segments.

Americas Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to consumer packaged goods ("CPG") companies, and cups, lids and food containers sold primarily to foodservice companies and quick-service restaurants ("QSR"), serving the food, beverage, and consumer product markets in the Americas.

Europe Paperboard Packaging includes paperboard packaging, primarily folding cartons, sold primarily to CPG companies serving the food, beverage and consumer product markets including healthcare and beauty primarily in Europe.

The Company allocates certain mill and corporate costs to the reportable segments to appropriately represent the economics of these segments. The Corporate and Other caption includes the Pacific Rim and Australia operating segments and unallocated corporate and one-time costs.

These segments are evaluated by the chief operating decision maker based primarily on Income from Operations as adjusted for depreciation and amortization. The accounting policies of the reportable segments are the same as those described above in "Note 1 - Nature of Business and Summary of Significant Accounting Policies."

The Company did not have any one customer who accounted for 10% or more of the Company's net sales during 2022, 2021 or 2020.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Business segment information is as follows:

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
NET SALES:			
Paperboard Mills	\$ 1,290	\$ 1,007	\$ 988
Americas Paperboard Packaging	6,015	4,996	4,650
Europe Paperboard Packaging	1,973	992	765
Corporate/Other/Eliminations ^(a)	162	161	157
Total	\$ 9,440	\$ 7,156	\$ 6,560
INCOME (LOSS) FROM OPERATIONS:			
Paperboard Mills ^{(b)(d)}	\$ 45	\$ (10)	\$ (110)
Americas Paperboard Packaging	800	456	639
Europe Paperboard Packaging ^(c)	59	82	66
Corporate and Other	2	(121)	(71)
Total	\$ 906	\$ 407	\$ 524
CAPITAL EXPENDITURES:			
Paperboard Mills	\$ 336	\$ 615	\$ 444
Americas Paperboard Packaging	131	113	120
Europe Paperboard Packaging	43	37	40
Corporate and Other	39	37	42
Total	\$ 549	\$ 802	\$ 646
DEPRECIATION AND AMORTIZATION:			
Paperboard Mills	\$ 242	\$ 231	\$ 249
Americas Paperboard Packaging	173	176	163
Europe Paperboard Packaging	109	53	41
Corporate and Other	29	29	23
Total	\$ 553	\$ 489	\$ 476

^(a) Includes revenue from customers for the Australia and Pacific Rim operating segments.

^(b) Includes accelerated depreciation related to exit activities in 2022, 2021, and 2020.

^(c) Includes impairment charges of \$96 million related to Russia incurred in 2022. See "Note 19 - Impairment and Divestiture of Russian Business" in the Notes to Condensed Consolidated Financial Statements for further information.

^(d) Includes expenses related to business combinations, shutdown and other special charges, and exit activities.

<i>In millions</i>	December 31,		
	2022	2021	2020
ASSETS AT DECEMBER 31:			
Paperboard Mills	\$ 3,516	\$ 3,482	\$ 3,097
Americas Paperboard Packaging	3,822	3,682	3,327
Europe Paperboard Packaging	2,474	2,669	746
Corporate and Other	516	624	635
Total	\$ 10,328	\$ 10,458	\$ 7,805

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Business geographic area information is as follows:

<i>In millions</i>	Year Ended December 31,		
	2022	2021	2020
NET SALES:			
United States	\$ 6,741	\$ 5,543	\$ 5,200
International ^(a)	2,699	1,613	1,360
Total	\$ 9,440	\$ 7,156	\$ 6,560
<hr/>			
<i>In millions</i>	2022	2021	2020
LONG-LIVED ASSETS AT DECEMBER 31:			
United States	\$ 3,813	\$ 3,865	\$ 3,253
International ^(a)	766	812	307
Total	\$ 4,579	\$ 4,677	\$ 3,560

^(a) Net Sales and long-lived assets of individual countries outside of the United States are not material.

NOTE 16. EARNINGS PER SHARE

<i>In millions, except per share data</i>	Year Ended December 31,		
	2022	2021	2020
Net Income Attributable to Graphic Packaging Holding Company	\$ 522	\$ 204	\$ 167
Weighted Average Shares:			
Basic	308.8	297.1	278.8
Dilutive effect of RSUs	0.7	0.8	0.8
Diluted	309.5	297.9	279.6
Earnings Per Share — Basic	\$ 1.69	\$ 0.69	\$ 0.60
Earnings Per Share — Diluted	\$ 1.69	\$ 0.68	\$ 0.60

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 17. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE LOSS

The following represents changes in Accumulated Other Comprehensive Loss attributable to Graphic Packaging Holding Company by component for the year ended December 31, 2022:

<i>In millions</i>	Derivatives Instruments	Pension and Postretirement Benefit Plans	Currency Translation Adjustments	Total
Balance at December 31, 2021	\$ (8)	\$ (94)	\$ (122)	\$ (224)
Other Comprehensive Income (Loss) before Reclassifications	3	(10)	(149)	(156)
Amounts Reclassified from Accumulated Other Comprehensive (Loss) Income ^(a)	1	1	—	2
Net Current-period Other Comprehensive Income (Loss)	4	(9)	(149)	(154)
Less:				
Net Current-period Other Comprehensive Income Attributable to Noncontrolling Interest	—	—	1	1
Balance at December 31, 2022	\$ (4)	\$ (103)	\$ (270)	\$ (377)

^(a) See following table for details about these reclassifications.

The following represents reclassifications out of Accumulated Other Comprehensive Loss for the year ended December 31, 2022:

<i>In millions</i>	Amount Reclassified from Accumulated Other Comprehensive Loss	Affected Line Item in the Statement Where Net Income is Presented
Derivatives Instruments:		
Commodity Contracts	\$ (12)	Cost of Sales
	(12)	Total before Tax
	13 ^(a)	Tax Expense
	<u>\$ 1</u>	Total, Net of Tax
Amortization of Defined Benefit Pension Plans:		
Prior Service Costs	\$ 3 ^(b)	
	3	Total before Tax
	(1)	Tax Expense
	<u>\$ 2</u>	Total, Net of Tax
Amortization of Postretirement Benefit Plans:		
Actuarial Gains	(2) ^(b)	
	1	Tax Expense
	<u>\$ (1)</u>	Total, Net of Tax
Total Reclassifications for the Period	<u>\$ 2</u>	

^(a) Includes tax expense of \$10 million to release the lingering tax effect after settling the interest rate swaps (see "Note 10 - Financial Instruments, Derivatives and Hedging Activities" and "Note 9 - Income Taxes").

^(b) These accumulated other comprehensive loss components are included in the computation of net periodic pension cost (see "Note 8 - Pensions and Other Postretirement Benefits").

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 18. EXIT ACTIVITIES

During 2019, the Company announced its plans to invest in a new CRB paper machine in Kalamazoo, Michigan. At the time of the announcement, the Company expected to close two of its smaller CRB mills in 2022 in order to remain capacity neutral. During the third quarter of 2021, the Company decided to continue to operate one of the two original smaller CRB mills. In the second quarter of 2022, the Company closed the Battle Creek, MI CRB mill. The Company has incurred charges associated with this exit activity for post-employment benefits, retention bonuses and incentives, which are included in the Severance costs and other line item in the table below for the years ended December 31, 2022, 2021 and 2020.

In March 2020, the Company made the decision to close the White Pigeon, Michigan CRB mill and shut down the PM1 containerboard machine in West Monroe, Louisiana. During the second quarter of 2020, the Company closed the White Pigeon, Michigan CRB mill and shut down the PM1 containerboard machine.

In June 2020, the Company made the decision to close certain converting plants that were acquired from Greif. The Burlington, North Carolina converting facility and the Los Angeles, California converting facility were closed during 2020.

In March 2022, the Company announced its decision to close the Norwalk, Ohio folding carton facility and closed the facility in September 2022. The Company has incurred charges associated with this exit activity for post-employment benefits, retention bonuses and incentives, which are included in the Severance costs and other line item in the table below for the year ended December 31, 2022.

During the years ended December 31, 2022, 2021, and 2020 the Company recorded \$ 17 million, \$38 million and \$51 million of exit costs, respectively, associated with these restructurings. Other costs associated with the start-up of the new CRB paper machine recorded in the period in which they are incurred.

The following table summarizes the costs incurred during 2022, 2021 and 2020 related to these restructurings:

<i>In millions</i>	Location in Statement of Operations	Year Ended December 31,		
		2022	2021	2020
Severance Costs and Other ^(a)	Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net	\$ 1	\$ 21	\$ 11
Asset Write-offs and Start-Up Costs ^(b)	Business Combinations, Shutdown and Other Special Charges, and Exit Activities, Net	9	—	14
Accelerated Depreciation	Cost of Sales	7	17	26
Total		\$ 17	\$ 38	\$ 51

^(a) Costs incurred include activities for post-employment benefits, retention bonuses, incentives and professional services. (see "Note 1 - Business Combinations, Shutdown and Other Special Charges and Exit Activities, Net").

^(b) Costs incurred include non-cash write-offs for items such as supplies and inventory.

The following table summarizes the balance of accrued expenses related to restructuring:

<i>In millions</i>	Total
Balance at December 31, 2020	\$ 12
Costs Incurred	21
Payments	(20)
Adjustments ^(a)	(5)
Balance at December 31, 2021	\$ 8
Costs Incurred	1
Payments	(6)
Adjustments ^(a)	(2)
Balance at December 31, 2022	\$ 1

^(a) Adjustments related to changes in estimates of severance costs.

In conjunction with the CRB platform optimization project and closure of the Battle Creek, MI CRB Mill, the Company incurred charges associated with these exit activities for post-employment benefits, retention bonuses and incentives of \$15 million, and accelerated depreciation and inventory and asset write-offs of \$52 million through December 31, 2022.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

For the closures of the White Pigeon, Michigan CRB mill and the shutdown of the PM1 containerboard machine in West Monroe, Louisiana, the Company has incurred cumulative exit activity charges for post-employment benefits of \$2 million and accelerated depreciation and inventory and asset write-offs of \$ 17 million through December 31, 2022. The Company does not expect to incur any additional significant costs charges related to these closures.

NOTE 19. IMPAIRMENT AND DIVESTITURE OF RUSSIAN BUSINESS

In the second quarter of 2022, the Company began the process of the divesting its interests in its two carton folding plants in Russia (the "Disposal Group"), which met the criteria of to be considered a business, through a sale of 100% of the Disposal Group's outstanding shares. The Company expects the sale to be complete within the next six months. The assets and liabilities to be disposed of in connection with this transaction continued to meet the held for sale criteria as of December 31, 2022.

The carrying value of the net assets held for sale, inclusive of the cumulative translation adjustment balance attributable to the business, was greater than their fair value, less costs to sell, resulting in a pre-tax loss of \$84 million, which is included in the Business, Combinations, Shutdown and Other Special Charges, and Exit Activities, Net in the Consolidated Statement of Operations. The assets related to the sale, inclusive of the valuation allowance, and liabilities related to the sale were classified as Other current assets and Other accrued liabilities, respectively, within the Consolidated Balance Sheet as of December 31, 2022. Excluded from the assets classified as held for sale within the Consolidated Balance Sheet is an intercompany note receivable totaling \$32 million from the Company to the Disposal Group. The intercompany note will be sold as part of the transaction and, thus, should be considered when calculating the carrying value of the Disposal Group and the allowance to adjust the carrying value to the fair value less costs to sell. Upon consummation of the sale of the Disposal Group, the Company will reclassify this note from intercompany to the applicable liability line item in the Consolidated Balance Sheet as it will represent a liability to an external third party. The cumulative translation adjustment attributable to the business of \$4 million is included within Accumulated Other Comprehensive Income within the Consolidated Balance Sheet as of December 31, 2022. Goodwill totaling \$12 million associated with the Disposal Group was determined to be impaired as of December 31, 2022. The pre-tax impairment loss is included in the Business, Combinations, Shutdown and Other Special Charges, and Exit Activities, Net in the Consolidated Statement of Operations.

As the Disposal Group is not considered a strategic shift that will have a major effect on the Company's operations or financial results, it was not reported as discontinued operations. We will continue to evaluate the Disposal Group for future impairments until it is sold. The Disposal Group is reported within the Europe Paperboard Packaging segment.

The following table summarizes the Company's assets and liabilities held for sale by major class:

<i>In millions</i>	December 31, 2022	
Cash and Cash Equivalents	\$	5
Receivables, Net		15
Inventories		19
Property, Plant and Equipment, Net		24
Intangible Assets, Net		15
Assets Held for Sale		78
Valuation Allowance to Adjust Carrying Value of Russian Operations to Fair Value Less Costs to Sell		(84)
Total Assets Held for Sale, Net Included in Other Current Assets	\$	(6)
Short-Term Debt and Current Portion of Long-Term Debt	\$	—
Accounts Payable		4
Other Accrued Liabilities		1
Deferred Income Tax Liabilities		7
Total Liabilities Held for Sale Included in Other Current Accrued Liabilities	\$	12

NOTE 20. RELATED PARTY TRANSACTIONS

In connection with the NACP Combination, the Company entered into agreements with IP for transition services, fiber procurement fees, and corrugated products and ink supply. Payments to IP for the twelve months ended December 31, 2021 for fiber procurement fees and corrugated products were \$4 million (related to pass through wood purchases of \$81 million) and \$13 million, respectively. As discussed in " Note 1 - Nature of Business and Summary of Significant Accounting Policies", IP has no ownership interest remaining in GPIIP as of May 21, 2021.

GRAPHIC PACKAGING HOLDING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 21. SUBSEQUENT EVENTS

On January 31, 2023, the Company completed the acquisition of Tama Paperboard, LLC, a CRB mill located in Tama, Iowa, from Greif Packaging LLC for approximately \$100 million, subject to customary working capital adjustments using existing cash and borrowings under its revolving credit facility. The acquisition will be reported within the Paperboard Mills reportable segment.

On February 7, 2023, GPIL entered into Amendment No. 3 to the Fourth Amended and Restated Credit Agreement (the "Third Amendment"). The Third Amendment provides for a future replacement floating interest rate benchmark (the Canadian Overnight Repo Rate Average "CORRA") to take effect upon the cessation of the Canadian Dollar Offered Rate ("CDOR") for Canadian Dollar borrowings under the domestic revolving credit facility. The Third Amendment also modified the borrowing mechanics for certain term SOFR loans under the domestic revolving line of credit.

On February 7, 2023, the Company announced an approximately \$1 billion investment in a new CRB mill in Waco, Texas that will support growing demand for CRB in North America, and is expected to optimize paperboard network capacity and flexibility and enhance circularity, reliability and environmental footprint. Construction is expected to begin in Q1 2023 and the mill is expected to be operational in Q1 2026.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Graphic Packaging Holding Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Graphic Packaging Holding Company and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Goodwill Impairment Assessment – Foodservice and Europe Reporting Units

As described in Note 1 to the consolidated financial statements, the Company's consolidated goodwill balance was \$1,979 million as of December 31, 2022. As disclosed by management, the goodwill associated with the Foodservice and Europe reporting units was \$43 million and \$481 million as of December 31, 2022, respectively. Management tests goodwill for impairment annually as of October 1, as well as whenever events or changes in circumstances suggest that the estimated fair value of a reporting unit may no longer exceed its carrying amount. An impairment charge is recognized for the amount by which the carrying amount of a reporting unit exceeds its fair value. When performing the quantitative analysis, the estimated fair value of each reporting unit is determined by utilizing a discounted cash flow analysis based on the Company's forecasts, discounted using a weighted average cost of capital and market indicators of terminal year cash flows based upon a multiple of EBITDA. In estimating the fair value of the Foodservice and Europe reporting units, management considers a number of factors, including but not limited to, future operating results, business plans, economic projections of revenues and operating margins, estimated future cash flows, and market data and analysis.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment for the Foodservice and Europe reporting units are a critical audit matter are (i) the high degree of auditor judgment and subjectivity in performing procedures related to the fair value of the reporting units due to the significant judgment by management when determining the estimated fair value of the Foodservice and Europe reporting units; (ii) the significant audit effort in evaluating management's significant assumption related to economic projections of operating margins; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's Foodservice and Europe reporting units and the development of the significant assumption related to economic projections of operating margins. These procedures also included, among others, testing management's process for determining the fair value of the Foodservice and Europe reporting units; evaluating the appropriateness of the discounted cash flow analysis; and evaluating the reasonableness of the significant assumption related to economic projections of operating margins. Evaluating the assumption related to economic projections of operating margins involved evaluating whether the assumption used by management was reasonable considering (i) the current and past performance of the Foodservice and Europe reporting units; (ii) the consistency with external market and industry data; and (iii) whether this assumption was consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of the discounted cash flow analysis.

/s/ PricewaterhouseCoopers LLP
Atlanta, Georgia
February 9, 2023

We have served as the Company's auditor since 2020.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The Company's management has established disclosure controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within time periods specified in the Securities and Exchange Commission rules and forms. Such disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management to allow timely decisions regarding required disclosure. Based on management's evaluation as of the end of the period covered by this Annual Report on Form 10-K, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Exchange Act) were effective as of December 31, 2022, the end of the period covered by this Annual Report on Form 10-K.

Management's Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company, as such term is defined in Exchange Act Rule 13a-15(f). 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. Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only with proper authorizations; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

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

The Company's management, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Financial Officer, assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2022 based on criteria for effective control over financial reporting described in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment the Company's management concluded that its internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 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

Not Applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Pursuant to Instruction G(3) to Form 10-K, the information relating to Directors of the Registrant, compliance with Section 16(a) of the Exchange Act, compliance with the Company's Code of Ethics, and certain other information required by Item 9 is incorporated by reference to the Registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the Registrant's fiscal year ended December 31, 2022.

ITEM 11. EXECUTIVE COMPENSATION

Pursuant to Instruction G(3) to Form 10-K, the information required by Item 11 is incorporated by reference to the Registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the Registrant's fiscal year ended December 31, 2022.

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

Pursuant to Instruction G(3) to Form 10-K, the information required by Item 12 is incorporated by reference to the Registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the Registrant's fiscal year ended December 31, 2022.

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

Pursuant to Instruction G(3) to Form 10-K, the information required by Item 13 is incorporated by reference to the Registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the Registrant's fiscal year ended December 31, 2022.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Pursuant to Instruction G(3) to Form 10-K, the information required by Item 14 is incorporated by reference to the Registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders, which is to be filed pursuant to Regulation 14A within 120 days after the end of the Registrant's fiscal year ended December 31, 2022.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- a. Financial statements, financial statement schedule and exhibits filed as part of this report:
1. Consolidated Statements of Operations for each of the three years in the period ended December 31, 2022
Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 31, 2022
Consolidated Balance Sheets as of December 31, 2022, and 2021
Consolidated Statements of Shareholders' Equity for each of the three years in the period ended December 31, 2022
Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2022
Notes to Consolidated Financial Statements
Reports of Independent Registered Public Accounting Firms
 2. All schedules are omitted as the information required is either included elsewhere in the consolidated financial statements herein or is not applicable.
 3. Exhibits to Annual Report on Form 10-K for Year Ended December 31, 2022.

Exhibit Number	Description
3.1	<u>Restated Certificate of Incorporation of New Giant Corporation. Filed as Exhibit 3.1 to Graphic Packaging Holding Company's Current Report on Form 8-K filed on March 10, 2008 and incorporated herein by reference.</u>
3.2	<u>Bylaws of Graphic Packaging Holding Company, as amended on May 20, 2015. Filed as Exhibit 3.1 to Graphic Packaging Holding Company's Current Report on Form 8-K filed on May 27, 2015 and incorporated herein by reference.</u>
3.3	<u>Certificate of Formation of Graphic Packaging International, LLC. Filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 1, 2018 and incorporated herein by reference.</u>
3.4	<u>Amended and Restated Limited Liability Company Operating Agreement of Graphic Packaging International, LLC. Filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on January 1, 2018 and incorporated herein by reference.</u>
4.1	<u>Indenture dated as of November 6, 2014, by and among Graphic Packaging International, Inc., the guarantors named therein and U.S. Bank National Association, as trustee. Filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on November 6, 2014 and incorporated herein by reference.</u>
4.2	<u>First Supplemental Indenture dated as of November 6, 2014 by and among Graphic Packaging International, Inc. the guarantors named therein and U.S. Bank National Association, as trustee. Filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on November 6, 2014 and incorporated herein by reference.</u>
4.3	<u>Second Supplemental Indenture dated as of August 11, 2016 by and among Graphic Packaging International Inc., Graphic Packaging Holding Company, the other guarantors named therein and U.S. Bank National Association as trustee. Filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on August 11, 2016 and incorporated herein by reference.</u>
4.4	<u>Supplemental Indenture among Graphic Packaging International, Inc., Graphic Packaging Holding Company, the other guarantors party thereto and U.S. Bank National Association, as Trustee, with respect to the 4.875% Senior Notes due 2022. Filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on October 24, 2017 and incorporated herein by reference.</u>
4.5	<u>Supplemental Indenture among Graphic Packaging International, Inc., Graphic Packaging Holding Company, the other guarantors party thereto and U.S. Bank National Association, as Trustee, with respect to the 4.125% Senior Notes due 2024. Filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on October 24, 2017 and incorporated herein by reference.</u>

- 4.6 [Third Supplemental Indenture dated as of June 25, 2019, by and among Graphic Packaging International, LLC, the guarantors listed therein and U.S. Bank, National Association. Filed as Exhibit 4.2 to Graphic Packaging Holding Company and Graphic Packaging International, LLC's current report on Form 8-K filed on June 25, 2019 and incorporated herein by reference.](#)
- 4.7 [Fourth Supplemental Indenture dated March 6, 2020, by and among Graphic Packaging International, LLC, the guarantors listed therein and U.S. Bank National Association, as Trustee, with respect to the 3.5% Senior Notes due 2028. Filed as Exhibit 4.2 to the Registrant's Form 8-K filed on March 6, 2020 and incorporated herein by reference.](#)
- 4.8 [Fifth Supplemental Indenture dated August 20, 2020, by and among Graphic Packaging International, LLC, the guarantors listed therein and U.S. Bank National Association, as Trustee, with respect to the 3.5% Senior Notes due 2029. Filed as Exhibit 4.2 to the Registrant's Form 8-K filed on August 31, 2020 and incorporated herein by reference.](#)
- 4.9 [Sixth Supplemental Indenture dated as of March 8, 2021, by and among Graphic Packaging International, LLC, Graphic Packaging International Partners, LLC, the guarantors listed therein and U.S. Bank, N.A. \(including the form of Note attached as an exhibit thereto\). Filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on March 8, 2021 and incorporated herein by reference.](#)
- 4.10 [Seventh Supplemental Indenture, dated as of November 19, 2021, by and among Graphic Packaging International, LLC, Graphic Packaging International Partners, LLC, the guarantors listed therein and U.S. Bank, National Association \(including the form of Note attached as an exhibit thereto\). Filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on November 19, 2021 and incorporated herein by reference.](#)
- 4.11 [Eighth Supplemental Indenture, dated as of November 19, 2021, by and among Graphic Packaging International, LLC, Graphic Packaging International Partners, LLC, the guarantors listed therein, U.S. Bank, National Association, Elavon Financial Services DAC, UK Branch, and Elavon Financial Services DAC \(including the form of Note attached as an exhibit thereto\). Filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on November 19, 2021 and incorporated herein by reference.](#)
- 10.1* [GPI U.S. Consolidated Pension Plan Master Document as amended and restated, effective January 1, 2017. Filed as exhibit 10.1 to the Registrant's Annual Report on Form 10-K filed on February 8, 2017 and incorporated herein by reference.](#)
- 10.2* [Second Amendment to the GPI Savings Plan as amended and restated, effective January 1, 2015. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on April 28, 2016 and incorporated herein by reference.](#)
- 10.3* [Third Amendment to the GPI Savings Plan as amended and restated, effective January 1, 2015. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on April 28, 2016 and incorporated herein by reference.](#)
- 10.4* [Fourth Amendment to the GPI Savings Plan as amended and restated, effective January 1, 2015. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on April 28, 2016 and incorporated herein by reference.](#)
- 10.5* [Amended and Restated Employment Agreement dated as of November 19, 2015 by and among Graphic Packaging International, Inc., the Registrant and Michael P. Doss. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 19, 2015 and incorporated herein by reference.](#)
- 10.6* [Graphic Packaging Excess Benefit Plan, as amended and restated, effective as of January 1, 2009. Filed as Exhibit 10.22 to Registrant's Annual Report on Form 10-K filed on February 23, 2010 and incorporated herein by reference.](#)
- 10.7* [Graphic Packaging Supplemental Retirement Plan, as amended and restated, effective as of January 1, 2009. Filed as Exhibit 10.23 to Registrant's Annual Report on Form 10-K filed on February 23, 2010 and incorporated herein by reference.](#)
- 10.8* [Graphic Packaging Holding Company 2014 Omnibus Stock and Incentive Compensation Plan effective as of May 21, 2014. Filed as Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A filed on April 10, 2014 and incorporated herein by reference.](#)
- 10.9* [Graphic Packaging International, Inc. Management Incentive Plan, as amended and restated as of January 1, 2020. Attached as Exhibit 10.9 to the Registrant's Annual Report on Form 10-K filed on February 16, 2021 and incorporated herein by reference.](#)
- 10.10 [Master Services Agreement dated November 29, 2007 by and between Graphic Packaging International, Inc. and Perot Systems Corporation. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on December 5, 2007 and incorporated herein by reference.](#)
- 10.11* [Graphic Packaging International, Inc. Supplemental Plan for Participants in the Riverwood International Employees Retirement Plan, as amended and restated, effective as of January 1, 2009. Filed as Exhibit 10.36 to the Registrant's Annual Report on Form 10-K filed on February 23, 2010 and incorporated herein by reference.](#)
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- 10.12* [Riverwood International Change in Control Supplemental Retirement Plan, as amended and restated, effective as of January 1, 2008. Filed as Exhibit 10.37 to Graphic Packaging Holding Company's Annual Report on Form 10-K filed on February 23, 2010 and incorporated herein by reference.](#)
- 10.13 [Amended and Restated Form of Indemnification Agreement for Directors. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on November 4, 2010 and incorporated herein by reference.](#)
- 10.14* [First Amendment to the Graphic Packaging International, Inc. Supplemental Plan for Participants in the Riverwood International Employees Retirement Plan. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 24, 2012 and incorporated herein by reference.](#)
- 10.15* [Employment Agreement dated as of April 1, 2012 by and among Graphic Packaging International, Inc., Graphic Packaging Holding Company and Stephen Scherger. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on April 5, 2012 and incorporated herein by reference.](#)
- 10.16 [First Amendment to Master Services Agreement dated as of September 22, 2008 by and between Graphic Packaging International, Inc. and Perot Systems Corporation. Filed as Exhibit 10.22 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
- 10.17 [Second Amendment to Master Services Agreement effective as of August 1, 2012 by and between Graphic Packaging International, Inc. and Dell Marketing L.P. \(as assignee of Perot Systems Corporation\). Filed as Exhibit 10.30 to the Registrant's Annual Report on Form 10-K filed on February 12, 2016 and incorporated herein by reference.](#)
- 10.18* [Fifth Amendment to the GPI Savings Plan as amended and restated, effective January 1, 2015. Filed as exhibit 10.24 to the Registrant's Annual Report on Form 10-K filed on February 8, 2017 and incorporated herein by reference.](#)
- 10.19* [GPI Savings Plan, as amended and restated effective January 1, 2015. Filed as Exhibit 10.32 to the Registrant's Annual Report on Form 10-K filed on February 12, 2016 and incorporated herein by reference.](#)
- 10.20* [First Amendment to the GPI Savings Plan, effective January 1, 2015. Filed as Exhibit 10.33 to the Registrant's Annual Report on Form 10-K filed on February 12, 2016 and incorporated herein by reference.](#)
- 10.21* [Amended and Restated Employment Agreement among the Registrant, Graphic Packaging International, Inc. and Joseph P. Yost effective September 1, 2015. Filed as Exhibit 10.38 to the Registrant's Annual Report on Form 10-K filed on February 12, 2016 and incorporated herein by reference.](#)
- 10.22* [Graphic Packaging International, Inc. Executive Severance Plan dated as of February 25, 2014. Filed as Exhibit 10.39 to the Registrant's Annual Report on Form 10-K filed on February 12, 2016 and incorporated herein by reference.](#)
- 10.23* [First Amendment to the Graphic Packaging Holding Company 2014 Omnibus Stock and Incentive Compensation Plan effective January 1, 2017. Filed as exhibit 10.33 to the Registrant's Annual Report on Form 10-K filed on February 8, 2017 and incorporated herein by reference.](#)
- 10.24 [Local Country Agreement - European Union Addendum effective as of November 1, 2016 to the Master Services Agreement between Graphic Packaging International, Inc. and Dell Marketing, L.P., as amended. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on April 26, 2017 and incorporated herein by reference.](#)
- 10.25 [Third Amendment to Master Services Agreement dated as of November 1, 2016 between Graphic Packaging International, Inc. and Dell Marketing, L.P. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on April 26, 2017 and incorporated herein by reference.](#)
- 10.26 [Fourth Amendment to Master Services Agreement dated as of March 1, 2017 between Graphic Packaging International, Inc. and NTT DATA Services, LLC, as successor-in-interest to Dell Marketing, L.P. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed on April 26, 2017 and incorporated herein by reference.](#)
- 10.27* [First Amendment to the GPI US Consolidated Pension Plan, dated as of May 19, 2017 and effective as of January 1, 2017. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on July 26, 2017 and incorporated herein by reference.](#)
- 10.28* [Sixth Amendment to the GPI Savings Plan, dated as of June 27, 2017 and effective as of January 1, 2015. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed on July 26, 2017 and incorporated herein by reference.](#)
- 10.29* [Graphic Packaging International, Inc. Non-Qualified Deferred Compensation Plan, as amended and restated effective November 1, 2017. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on October 25, 2017 and incorporated herein by reference.](#)
- 10.30* [First Amendment to the Amended and Restated Graphic Packaging International, Inc. Non-Qualified Deferred Compensation Plan effective January 1, 2018. Filed as Exhibit 10.51 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
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- 10.31* [Second Amendment to the GPI US Consolidated Pension Plan dated as of November 8, 2017. Filed as Exhibit 10.52 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
- 10.32* [Third Amendment to the GPI US Consolidated Pension Plan effective as of January 1, 2018. Filed as Exhibit 10.53 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
- 10.33* [Seventh Amendment to the GPI Savings Plan effective as of January 1, 2018. Filed as Exhibit 10.54 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
- 10.34* [Eighth Amendment to the GPI Savings Plan effective as of January 1, 2018. Filed as Exhibit 10.55 to the Registrant's Annual Report on Form 10-K filed on February 7, 2018 and incorporated herein by reference.](#)
- 10.35* [Tenth Amendment to the GPI Savings Plan dated as of November 12, 2018. Filed as Exhibit 10.49 to the Registrant's Annual Report on Form 10-K filed on February 13, 2019 and incorporated herein by reference.](#)
- 10.36* [Fourth Amendment to the GPI US Consolidated Pension Plan dated as of December 20, 2018. Filed as Exhibit 10.50 to the Registrant's Annual Report on Form 10-K filed on February 13, 2019 and incorporated herein by reference.](#)
- 10.37* [Fifth Amendment to the GPI US Consolidated Pension Plan effective as of January 1, 2017. Filed as Exhibit 10.44 to the Registrant's Annual Report on Form 10-K filed on February 11, 2020 and incorporated herein by reference.](#)
- 10.38 [Ninth Amendment to the GPI Savings Plan. Filed as Exhibit 10.1 to the Registrant's Form 10-Q filed on July 24, 2018 and incorporated herein by reference.](#)
- 10.39 [Non-Participating Single Premium Group Annuity Contract Proposal dated January 16, 2020 by and among Graphic Packaging International, LLC, American General Life Insurance Company and The United States Life Insurance Company in the City of New York. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed on April 21, 2020 and incorporated herein by reference.](#)
- 10.40 [Eleventh Amendment to the GPI Savings Plan dated as of December 9, 2020. Filed as Exhibit 10.40 to the Registrant's Annual Report on Form 10-K filed on February 22, 2022 and incorporated herein by reference.](#)
- 10.41 [Twelfth Amendment to the GPI Savings Plan dated as of December 17, 2020. Filed as Exhibit 10.41 to the Registrant's Annual Report on Form 10-K filed on February 22, 2022 and incorporated herein by reference.](#)
- 10.42 [Thirteenth Amendment to the GPI Savings Plan dated as of March 25, 2021. Filed as Exhibit 10.42 to the Registrant's Annual Report on Form 10-K filed on February 22, 2022 and incorporated herein by reference.](#)
- 10.43 [Fourteenth Amendment to the GPI Savings Plan dated as of November 10, 2021. Filed as Exhibit 10.43 to the Registrant's Annual Report on Form 10-K filed on February 22, 2022 and incorporated herein by reference.](#)
- 10.44 [Fifteenth Amendment to the GPI Savings Plan dated as of December 14, 2021. Filed as Exhibit 10.44 to the Registrant's Annual Report on Form 10-K filed on February 22, 2022 and incorporated herein by reference.](#)
- 10.45* [Directors' Non-Qualified Deferred Compensation Plan effective January 1, 2021. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 filed on April 27, 2021 and incorporated herein by reference.](#)
- 10.46 [Consent and Waiver Agreement dated as of February 16, 2021 by and among Graphic Packaging International Partners, LLC, Graphic Packaging Holding Company, GPI Holding III, LLC and International Paper Company. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 16, 2021 and incorporated herein by reference.](#)
- 10.47 [Amendment dated as of March 1, 2021 to the Third Amended and Restated Credit Agreement dated as of January 1, 2018, by and among Graphic Packaging International, LLC and certain subsidiaries thereof as Borrowers, the lenders and agents named therein, and Bank of America, N.A., as administrative agent. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on March 1, 2021 and incorporated herein by reference.](#)
- 10.48 [Fourth Amended and Restated Credit Agreement dated as of April 1, 2021 by and among Graphic Packaging International, LLC and certain subsidiaries thereof as Borrowers, the lenders and agents named therein, and Bank of America, N.A., as Administrative Agent. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K on April 1, 2021 and incorporated herein by reference.](#)
- 10.49 [Share Purchase Agreement dated May 12, 2021 among Sarcina Holdings S.a.r.l., the other sellers named therein and Graphic Packaging International Europe Holdings B.V. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 14, 2021 and incorporated herein by reference.](#)
- 10.50 [Consent and Waiver Agreement dated as of May 19, 2021 by and among Graphic Packaging International Partners, LLC, Graphic Packaging Holding Company, GPI Holding I, Inc. and International Paper Company. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 20, 2021 and incorporated herein by reference.](#)
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10.51	<u>Incremental Facility Amendment by and among Graphic Packaging International, LLC, as Borrower, Graphic Packaging International Partners, LLC and Field Container Queretaro (USA), L.L.C., as Guarantors, Bank of America, N.A. as Administrative Agent and CoBank, ACB, as Incremental Term A-3 Lead Arranger and Incremental Term A-3 Lender. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on July 21, 2021 and incorporated herein by reference.</u>
10.52	<u>Amendment No. 1 to the Fourth Amended and Restated Credit Agreement and Fourth Amended and Restated Guarantee and Collateral Agreement and Incremental Facility Amendment (Incremental Euro Tranche Increase and Incremental Euro Term Facility), by and among Graphic Packaging International, LLC and certain subsidiaries thereof as Borrowers, the lenders and agents named therein and Bank of America, N.A., as Administrative Agent. Filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on July 21, 2021 and incorporated herein by reference.</u>
10.53	<u>Incremental Facility Amendment by and among Graphic Packaging International, LLC, as Borrower, Graphic Packaging International Partners, LLC and Field Container Queretaro (USA), L.L.C. as Guarantors, Bank of America, N.A., as Administrative Agent and the Incremental Term A-4 Lenders party thereto, and acknowledged and agreed to by Graphic Packaging Holding Company. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on October 6, 2021 and incorporated herein by reference.</u>
10.54	<u>Sixteenth Amendment to the GPI Savings Plan dated November 10, 2022.</u>
10.55	<u>Amended and Restated GPI Savings Plan dated December 16, 2022 and effective January 1, 2023.</u>
10.56	<u>Amendment No. 2 to Fourth Amended and Restated Credit Agreement dated November 4, 2022 among Graphic Packaging International, LLC, certain subsidiaries of Graphic Packaging International, LLC, Graphic Packaging International Partners, LLC, Graphic Packaging Holding Company, the several banks and other financial institutions parties to the amendment, and Bank of America, N.A., as administrative agent.</u>
10.57	<u>Amendment No. 3 to the Fourth Amended and Restated Credit Agreement dated as of February 7, 2023 by and among Graphic Packaging International, LLC and certain subsidiaries thereof as borrowers and guarantors, Graphic Packaging International Partners, LLC, the lenders and agents named therein, Bank of America, N.A. as Administrative Agent, and acknowledged and agreed to by Graphic Packaging Holding Company.</u>
14.1	<u>Code of Business Conduct and Ethics dated as of December 23, 2020 . Filed as Exhibit 14.1 to the Registrant's From 10-K filed on February, 22, 2022 and incorporated herein by reference.</u>
21.1	<u>List of Subsidiaries.</u>
22.1	<u>Guarantors and Issuers of Guaranteed Securities.</u>
23.1	<u>Consent of Independent Registered Public Accounting Firm.</u>
24.1	<u>Power of Attorney. Incorporated by reference to the signature page of this Annual Report on Form 10-K.</u>
31.1	<u>Certification required by Rule 13a-14(a).</u>
31.2	<u>Certification required by Rule 13a-14(a).</u>
32.1	<u>Certification required by Section 1350 of Chapter 63 of Title 18 of the United States Code.</u>
32.2	<u>Certification required by Section 1350 of Chapter 63 of Title 18 of the United States Code.</u>
101.INS	Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File – the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document (included in Exhibit 101).

* Executive compensation plan or agreement

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.

GRAPHIC PACKAGING HOLDING COMPANY
(Registrant)

<u>/s/ Stephen R. Scherger</u> Stephen R. Scherger	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 9, 2023
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Pursuant to the requirements of the Securities Exchange Act of 1934, this report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>/s/ Michael P. Doss</u> Michael P. Doss	President and Chief Executive Officer (Principal Executive Officer)	February 9, 2023
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<u>/s/ Stephen R. Scherger</u> Stephen R. Scherger	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 9, 2023
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<u>/s/ Charles D. Lischer</u> Charles D. Lischer	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 9, 2023
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POWER OF ATTORNEY

Each of the directors of the Registrant whose signature appears below hereby appoints Stephen R. Scherger and Lauren S. Tashma, and each of them severally, as his or her attorney-in-fact to sign in his or her name and behalf, in any and all capacities stated below, and to file with the Securities and Exchange Commission any and all amendments to this report on Form 10-K, making such changes in this report on Form 10-K as appropriate, and generally to do all such things on their behalf in their capacities as directors and/or officers to enable the Registrant to comply with the provisions of the Securities Exchange Act of 1934, and all requirements of the Securities and Exchange Commission.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Aziz Aghili</u> Aziz Aghili	Director	February 9, 2023
<u>/s/ Dean A. Scarborough</u> Dean A. Scarborough	Director	February 9, 2023
<u>/s/ Larry M. Venturelli</u> Larry M. Venturelli	Director	February 9, 2023
<u>/s/ Laurie Brlas</u> Laurie Brlas	Director	February 9, 2023
<u>/s/ Lynn A. Wentworth</u> Lynn A. Wentworth	Director	February 9, 2023
<u>/s/ Mary K. Rhinehart</u> Mary K. Rhinehart	Director	February 9, 2023
<u>/s/ Michael P. Doss</u> Michael P. Doss	Director, President and Chief Executive Officer	February 9, 2023
<u>/s/ Paul D. Carrico</u> Paul D. Carrico	Director	February 9, 2023
<u>/s/ Philip R. Martens</u> Philip R. Martens	Chairman of the Board	February 9, 2023
<u>/s/ Robert A. Hagemann</u> Robert A. Hagemann	Director	February 9, 2023

