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

FORM 10-Q

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

For the quarterly period ended January 31, 2023

OR

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

Commission File Number 001-00566

PACKAGING SUCCESS TOGETHER™

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

Delaware **(State or other jurisdiction of incorporation or organization)**	**31-4388903** **(I.R.S. Employer Identification No.)**
425 Winter Road **Delaware Ohio** **(Address of principal executive offices)**	**43015** **(Zip Code)**

(740) 549-6000
(Registrant's telephone number, including area code)

Not Applicable
Former name, former address and former fiscal year, if changed since last report.

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

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

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Class A Common Stock	GEF	New York Stock Exchange
Class B Common Stock	GEF-B	New York Stock Exchange

The number of shares outstanding of each of the issuer’s classes of common stock as of the close of business on February 27, 2023:

Class A Common Stock	25,936,892 shares
Class B Common Stock	21,545,869 shares

PART I. FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

(in millions, except per share amounts)	Three Months Ended January 31, 2023	2022
Net sales	$ 1,271.0	$ 1,564.3
Cost of products sold	1,019.4	1,274.6
Gross profit	251.6	289.7
Selling, general and administrative expenses	139.4	151.6
Restructuring charges	2.4	3.5
Acquisition and integration related costs	7.5	1.6
Non-cash asset impairment charges	0.5	62.4
Gain on disposal of properties, plants and equipment, net	—	(1.4)
Gain on disposal of businesses, net	(54.6)	—
Operating profit	156.4	72.0
Interest expense, net	22.8	17.1
Other expense, net	3.3	2.0
Income before income tax expense and equity earnings of unconsolidated affiliates, net	130.3	52.9
Income tax expense	37.7	35.6
Equity earnings of unconsolidated affiliates, net of tax	(0.5)	(1.3)
Net income	93.1	18.6
Net income attributable to noncontrolling interests	(3.2)	(8.3)
Net income attributable to Greif, Inc.	$ 89.9	$ 10.3
Basic earnings per share attributable to Greif, Inc. common shareholders:		
Class A common stock	$ 1.55	$ 0.17
Class B common stock	$ 2.31	$ 0.25
Diluted earnings per share attributable to Greif, Inc. common shareholders:		
Class A common stock	$ 1.54	$ 0.18
Class B common stock	$ 2.31	$ 0.25
Weighted-average number of Class A common shares outstanding:		
Basic	25.7	26.6
Diluted	25.8	26.8
Weighted-average number of Class B common shares outstanding:		
Basic	21.7	22.0
Diluted	21.7	22.0
Cash dividends declared per common share:		
Class A common stock	$ 0.50	$ 0.46
Class B common stock	$ 0.74	$ 0.68

See accompanying Notes to Condensed Consolidated Financial Statements

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (UNAUDITED)

	Three Months Ended January 31,	
(in millions)	2023	2022
Net income	$ 93.1	$ 18.6
Other comprehensive income (loss), net of tax:		
Foreign currency translation	51.3	(31.5)
Derivative financial instruments	(25.7)	11.8
Minimum pension liabilities	(2.4)	3.1
Other comprehensive income (loss), net of tax	23.2	(16.6)
Comprehensive income	116.3	2.0
Comprehensive income attributable to noncontrolling interests	3.5	4.0
Comprehensive income (loss) attributable to Greif, Inc.	$ 112.8	$ (2.0)

See accompanying Notes to Condensed Consolidated Financial Statements

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(in millions)	January 31, 2023	October 31, 2022
ASSETS		
Current assets		
Cash and cash equivalents	$ 161.0	$ 147.1
Trade accounts receivable, net of allowance	674.2	749.1
Inventories:		
Raw materials	338.4	316.0
Finished goods	102.7	87.3
Assets held for sale	1.3	1.3
Prepaid expenses	64.1	57.3
Other current assets	129.8	141.3
	1,471.5	1,499.4
Long-term assets		
Goodwill	1,540.8	1,464.5
Other intangible assets, net of amortization	695.9	576.2
Deferred tax assets	11.2	10.1
Pension asset	39.7	30.8
Operating lease assets	240.9	254.7
Finance lease assets	32.6	1.2
Other long-term assets	149.6	178.0
	2,710.7	2,515.5
Properties, plants and equipment		
Timber properties, net of depletion	228.4	226.8
Land	158.0	154.8
Buildings	537.9	515.1
Machinery and equipment	2,056.2	1,968.3
Capital projects in progress	180.2	182.9
	3,160.7	3,047.9
Accumulated depreciation	(1,652.3)	(1,592.9)
	1,508.4	1,455.0
Total assets	$ 5,690.6	$ 5,469.9

See accompanying Notes to Condensed Consolidated Financial Statements

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(in millions)	January 31, 2023	October 31, 2022
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 464.0	$ 561.3
Accrued payroll and employee benefits	96.3	174.4
Restructuring reserves	13.0	12.3
Current portion of long-term debt	80.8	71.1
Short-term borrowings	4.6	5.7
Current portion of operating lease liabilities	47.4	48.9
Current portion of finance lease liabilities	3.9	0.9
Other current liabilities	170.5	173.3
	880.5	1,047.9
Long-term liabilities		
Long-term debt	2,143.9	1,839.3
Operating lease liabilities	196.9	209.4
Finance lease liabilities	30.2	0.2
Deferred tax liabilities	335.7	343.6
Pension liabilities	60.0	58.0
Postretirement benefit obligations	7.3	7.2
Contingent liabilities and environmental reserves	19.2	19.0
Long-term income tax payable	25.6	25.6
Other long-term liabilities	93.8	109.6
	2,912.6	2,611.9
Commitments and contingencies (Note 9)		
Redeemable noncontrolling interests	15.3	15.8
Equity		
Common stock, without par value	188.5	173.5
Treasury stock, at cost	(221.1)	(205.1)
Retained earnings	2,157.4	2,095.2
Accumulated other comprehensive loss, net of tax:		
Foreign currency translation	(265.5)	(316.5)
Derivative financial instruments	47.1	72.8
Minimum pension liabilities	(61.0)	(58.6)
Total Greif, Inc. shareholders' equity	1,845.4	1,761.3
Noncontrolling interests	36.8	33.0
Total shareholders' equity	1,882.2	1,794.3
Total liabilities and shareholders' equity	$ 5,690.6	$ 5,469.9

See accompanying Notes to Condensed Consolidated Financial Statements

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(in millions)	Three Months Ended January 31, 2023	2022
Cash flows from operating activities:		
Net income	$ 93.1	$ 18.6
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion and amortization	55.1	59.4
Non-cash asset impairment charges	0.5	62.4
Gain on disposals of properties, plants and equipment, net	—	(1.4)
Gain on disposals of businesses, net	(54.6)	—
Unrealized foreign exchange loss	0.1	3.4
Deferred income tax loss	0.7	2.0
Non-cash lease expense	12.9	14.6
Other, net	0.5	0.6
Increase (decrease) in cash from changes in certain assets and liabilities, net of impacts from the purchase of acquisitions:		
Trade accounts receivable	112.0	(4.8)
Inventories	(2.6)	(62.9)
Accounts payable	(103.1)	9.6
Restructuring reserves	0.5	(1.7)
Operating leases	(12.8)	(16.0)
Pension and post-retirement benefit liabilities	(8.1)	(10.4)
Other, net	(61.3)	(51.0)
Net cash provided by operating activities	32.9	22.4
Cash flows from investing activities:		
Purchases of business, net of cash acquired	(301.9)	—
Purchases of properties, plants and equipment	(49.3)	(44.5)
Purchases of and investments in timber properties	(2.3)	(4.8)
Payments for deferred purchase price of acquisitions	(21.7)	(4.7)
Proceeds from the sale of properties, plants, equipment and other assets	0.5	8.2
Proceeds from the sale of businesses	105.6	—
Net cash used in investing activities	(269.1)	(45.8)
Cash flows from financing activities:		
Proceeds from issuance of long-term debt	836.3	641.6
Payments on long-term debt	(538.3)	(551.4)
Payments on short-term borrowings, net	(1.6)	(4.2)
Proceeds from trade accounts receivable credit facility	55.5	—
Payments on trade accounts receivable credit facility	(48.7)	(2.0)
Dividends paid to Greif, Inc. shareholders	(28.9)	(27.2)
Dividends paid to noncontrolling interests	—	(2.8)
Payments for share repurchases	(17.8)	—
Tax withholding payments for stock-based awards	(12.4)	—
Purchases of redeemable noncontrolling interest	(3.3)	—
Other, net	(1.3)	—
Net cash provided by financing activities	239.5	54.0
Effects of exchange rates on cash	10.6	(18.6)
Net increase in cash and cash equivalents	13.9	12.0
Cash and cash equivalents at beginning of period	147.1	124.6
Cash and cash equivalents at end of period	$ 161.0	$ 136.6

See accompanying Notes to Condensed Consolidated Financial Statements

GREIF, INC. AND SUBSIDIARY COMPANIES
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (UNAUDITED)

	Three Months Ended January 31, 2023								
	Capital Stock		**Treasury Stock**						
(in millions, except for shares which are in thousands)	**Common Shares**	**Amount**	**Treasury Shares**	**Amount**	**Retained Earnings**	**Accumulated Other Comprehensive Income (Loss)**	**Greif, Inc. Equity**	**Non controlling Interests**	**Total Equity**
As of October 31, 2022	47,443	$ 173.5	29,399	$ (205.1)	$ 2,095.2	$ (302.3)	$ 1,761.3	$ 33.0	$ 1,794.3
Net income					89.9		89.9	3.2	93.1
Other comprehensive income (loss):									
Foreign currency translation						51.0	51.0	0.3	51.3
Derivative financial instruments, net of $8.5 million of income tax expense						(25.7)	(25.7)		(25.7)
Minimum pension liability adjustment, net of $0.9 million income tax expense						(2.4)	(2.4)		(2.4)
Comprehensive income							112.8		116.3
Current period mark to redemption value of redeemable noncontrolling interest and other					0.8		0.8		0.8
Net income allocated to redeemable noncontrolling interests							—	0.3	0.3
Dividends paid to Greif, Inc. shareholders ($0.50 and $0.74 per Class A share and Class B share, respectively)					(28.9)		(28.9)		(28.9)
Dividends earned on RSU shares					0.4		0.4		0.4
Share repurchases	(232)	—	232	(17.8)			(17.8)		(17.8)
Long-term incentive shares issued	331	13.8	(331)	1.8			15.6		15.6
Share based compensation	—	1.2	—	—			1.2		1.2
As of January 31, 2023	47,542	$ 188.5	29,300	$ (221.1)	$ 2,157.4	$ (279.4)	$ 1,845.4	$ 36.8	$ 1,882.2

	Three Months Ended January 31, 2022								
	Capital Stock		**Treasury Stock**						
(in millions, except for shares which are in thousands)	**Common Shares**	**Amount**	**Treasury Shares**	**Amount**	**Retained Earnings**	**Accumulated Other Comprehensive Income (Loss)**	**Greif, Inc. Equity**	**Non controlling Interests**	**Total Equity**
As of October 31, 2021	48,559	$ 179.3	28,283	$ (134.1)	$ 1,825.6	$ (356.5)	$ 1,514.3	$ 61.3	$ 1,575.6
Net income					10.3		10.3	8.3	18.6
Other comprehensive income (loss):									
Foreign currency translation						(27.2)	(27.2)	(4.3)	(31.5)
Derivative financial instruments, net of $4.0 million income tax benefit						11.8	11.8		11.8
Minimum pension liability adjustment, net of $0.5 million income tax benefit						3.1	3.1		3.1
Comprehensive income							(2.0)		2.0
Current period mark to redemption value of redeemable noncontrolling interest and other					5.0		5.0		5.0
Net income allocated to redeemable noncontrolling interests							—	0.4	0.4
Dividends paid to Greif, Inc. shareholders ($0.46 and $0.68 per Class A share and Class B share, respectively)					(27.2)		(27.2)		(27.2)
Dividends paid to noncontrolling interests and other							—	(1.7)	(1.7)
Dividends earned on RSU shares					(0.8)		(0.8)		(0.8)
Long-term incentive shares issued	46	2.7	(46)	0.1			2.8		2.8
Share based compensation	—	1.1	—	—			1.1		1.1
Restricted stock, executive	3	0.1	(3)	—			0.1		0.1
As of January 31, 2022	48,608	$ 183.2	28,234	$ (134.0)	$ 1,812.9	$ (368.8)	$ 1,493.3	$ 64.0	$ 1,557.3

GREIF, INC. AND SUBSIDIARY COMPANIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 1 — BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The interim condensed consolidated financial statements have been prepared in accordance with the U.S. Securities and Exchange Commission ("SEC") instructions to Quarterly Reports on Form 10-Q and include all of the information and disclosures required by accounting principles generally accepted in the United States ("GAAP") for interim financial reporting. The preparation of financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the amounts reported in the interim condensed consolidated financial statements and accompanying notes. Actual amounts could differ from those estimates.

The fiscal year of Greif, Inc. and its subsidiaries (the "Company") begins on November 1 and ends on October 31 of the following year. Any references to years or to any quarter of those years, relates to the fiscal year or quarter, as the case may be, ended in that year, unless otherwise stated.

The information filed herein reflects all adjustments that are, in the opinion of management, necessary for a fair presentation of the interim condensed consolidated balance sheet as of January 31, 2023 and the condensed consolidated balance sheet as of October 31, 2022, the interim condensed consolidated statements of income, comprehensive income and changes in shareholders' equity for the three months ended January 31, 2023 and 2022 and the interim condensed consolidated statements of cash flows for the three months ended January 31, 2023 and 2022 of the Company. The interim condensed consolidated financial statements include the accounts of Greif, Inc., all wholly-owned and consolidated subsidiaries and investments in limited liability companies, partnerships and joint ventures in which it has controlling influence or is the primary beneficiary. Non-majority owned entities include investments in limited liability companies, partnerships and joint ventures in which the Company does not have controlling interest and are accounted for using either the equity or cost method, as appropriate.

The unaudited interim condensed consolidated financial statements included in the Quarterly Report on Form 10-Q (this "Form 10-Q") should be read in conjunction with the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for its fiscal year ended October 31, 2022 (the "2022 Form 10-K").

Newly Adopted Accounting Standards

There have been no new accounting standards adopted since the filing of the 2022 Form 10-K that have significance, or potential significance, to the interim condensed consolidated financial statements.

Recently Issued Accounting Standards

There have been no new accounting pronouncements issued since the filing of the 2022 Form 10-K that have significance, or potential significance, to the interim condensed consolidated financial statements.

NOTE 2 — ACQUISITIONS AND DIVESTITURES

Acquisitions

Lee Container Acquisition

The Company completed its acquisition of Lee Container Corporation, Inc. ("Lee Container") on December 15, 2022 (the "Lee Container Acquisition"). Lee Container is an industry-leading manufacturer of high-performance barrier, conventional blow molded containers, jerrycans and small plastics. The total purchase price for this acquisition, net of cash acquired, was $302.8 million. The Company incurred transaction costs of $5.1 million to complete this acquisition.

The following table summarizes the consideration transferred to acquire Lee Container and the preliminary valuation of identifiable assets acquired and liabilities assumed at the acquisition date:

(in millions)	Amounts Recognized as of the Acquisition Date
Fair value of consideration transferred	
Cash consideration	$ 302.8
Recognized amounts of identifiable assets acquired and liabilities assumed	
Accounts receivable	$ 21.9
Inventories	27.5
Prepaid and other current assets	0.5
Intangibles	133.5
Finance lease assets	32.4
Properties, plants and equipment	54.7
Total assets acquired	270.5
Accounts payable	(3.9)
Accrued payroll and employee benefits	(1.3)
Other current liabilities	(3.1)
Finance lease liabilities	(30.6)
Total liabilities assumed	(38.9)
Total identifiable net assets	$ 231.6
Goodwill	$ 71.2

The Company recognized goodwill related to this acquisition of $71.2 million. The goodwill recognized in this acquisition is attributable to the acquired assembled workforce, expected synergies, and economies of scale, none of which qualify for recognition as a separate intangible asset. Lee Container is reported within the Global Industrial Packaging segment to which the goodwill was assigned. The goodwill is expected to be deductible for tax purposes.

The cost approach was used to determine the fair value for building improvements and equipment. The cost approach measures the value by estimating the cost to acquire, or construct, comparable assets and adjusts for age and condition. The Company assigned building improvements a useful life ranging from 1 year to 9 years and equipment a useful life ranging from 1 year to 19 years. Acquired property, plant and equipment are being depreciated over their estimated remaining useful lives on a straight-line basis.

The fair value for acquired customer relationship intangibles was determined as of the acquisition date based on estimates and judgments regarding expectations for the future after-tax cash flows arising from the revenue from customer relationships that existed on the acquisition date over their estimated lives, including the probability of expected future contract renewals and revenue, less a contributory assets charge, all of which is discounted to present value. The fair values of the trade name intangible assets were determined utilizing the relief from royalty method which is a form of the income approach. Under this method, a royalty rate based on observed market royalties is applied to projected revenue supporting the trade names and discounted to present value using an appropriate discount rate.

Acquired intangible assets are being amortized over the estimated useful lives on a straight-line basis. The following table summarizes the preliminary purchase price allocation and weighted average remaining useful lives for identifiable intangible assets acquired:

(in millions)	Final Purchase Price Allocation	Weighted Average Estimated Useful Life
Customer relationships	$ 120.0	15.0
Trademarks	13.5	5.0
Total intangible assets	$ 133.5	

The Company has not yet finalized the determination of the fair value of assets acquired and liabilities assumed, including income taxes and contingencies. The Company expects to finalize these amounts within one year of the acquisition date. The estimate of fair value and purchase price allocation were based on information available at the time of closing the acquisition, and the Company continues to evaluate the underlying inputs and assumptions that are being used in fair value estimates. Accordingly, these preliminary estimates are subject to adjustments during the measurement period, not to exceed one year, based upon new information obtained about facts and circumstances that existed as of the date of closing the acquisition.

Lee Container's results of operations have been included in the Company's financial statements for the period subsequent to the acquisition date of December 15, 2022. Lee Container contributed net sales of $18.0 million for the three months ended January 31, 2023.

The following unaudited supplemental pro forma data presents consolidated information as if the acquisition had been completed on November 1, 2021. These amounts were calculated after adjusting Lee Container's results to reflect interest expense incurred on the debt to finance the acquisition, additional depreciation and amortization that would have been charged assuming the fair value of property, plant and equipment and intangible assets had been applied from November 1, 2021, the adjusted tax expense, and related transaction costs.

	Three Months Ended January 31,	
(in millions, except per share amounts)	2023	2022
Pro forma net sales	$ 1,288.4	$ 1,602.9
Pro forma net income attributable to Greif, Inc.	102.2	9.5
Basic earnings per share attributable to Greif, Inc. common shareholders:		
Class A common stock	$ 1.76	$ 0.16
Class B common stock	$ 2.63	$ 0.24
Diluted earnings per share attributable to Greif, Inc. common shareholders:		
Class A common stock	$ 1.75	$ 0.17
Class B common stock	$ 2.63	$ 0.24

The unaudited supplemental pro forma financial information is based on the Company's preliminary assignment of purchase price and therefore subject to adjustment upon finalizing the purchase price assignment. The pro forma data should not be considered indicative of the results that would have occurred if the acquisition and related financing had been consummated on the assumed completion dates, nor are they indicative of future results.

Mandatorily Redeemable Noncontrolling Interests

The terms of the joint venture agreement for one joint venture within the Global Industrial Packaging reportable segment include mandatory redemption by the Company, in cash, of the noncontrolling interest holders' equity at a formulaic price after the expiration of a lockout period specific to each noncontrolling interest holder. The Company redeemed the 5.2% outstanding equity interest of the noncontrolling interest holder in this joint venture on January 26, 2023 for $3.3 million.

Divestitures

Tama Divestiture

During the first quarter of 2023, the Company completed its divestiture of a U.S. business in the Paper Packaging & Services segment, Tama Paperboard, LLC (the "Tama Divestiture"), for current net cash proceeds of $100.2 million. The Tama Divestiture did not qualify as discontinued operations as it did not represent a strategic shift that has had a major impact on the Company's operations or financial results. The Tama Divestiture resulted in $54.6 million gain on sale of business, including goodwill allocated to the sale of $22.5 million.

NOTE 3 — RESTRUCTURING CHARGES

The following is a reconciliation of the beginning and ending restructuring reserve balances for the three months ended January 31, 2023:

(in millions)	Employee Separation Costs	Other Costs	Total
Balance at October 31, 2022	$ 11.2	$ 1.1	$ 12.3
Costs incurred and charged to expense	1.1	1.3	2.4
Costs paid or otherwise settled	(0.9)	(0.8)	(1.7)
Balance at January 31, 2023	$ 11.4	$ 1.6	$ 13.0

The focus for restructuring activities in 2023 is to optimize operations and close under-performing assets.

During the three months ended January 31, 2023, the Company recorded restructuring charges of $2.4 million, as compared to $3.5 million of restructuring charges recorded during the three months ended January 31, 2022. The restructuring activity for the three months ended January 31, 2023 consisted of $1.1 million in employee separation costs and $1.3 million in other restructuring costs, primarily consisting of professional fees and other fees associated with restructuring activities.

The following is a reconciliation of the total amounts expected to be incurred from open restructuring plans or plans that are being formulated and have not been announced as of the filing date of this Form 10-Q. Remaining amounts expected to be incurred were $7.7 million as of January 31, 2023:

(in millions)	Total Amounts Expected to be Incurred	Amounts Incurred During the Three Months Ended January 31, 2023	Amounts Remaining to be Incurred
Global Industrial Packaging			
Employee separation costs	$ 4.0	$ 0.8	$ 3.2
Other restructuring costs	3.1	1.3	1.8
	7.1	2.1	5.0
Paper Packaging & Services			
Employee separation costs	1.6	0.3	1.3
Other restructuring costs	1.4	—	1.4
	3.0	0.3	2.7
	$ 10.1	$ 2.4	$ 7.7

NOTE 4 — LONG-TERM DEBT

Long-term debt is summarized as follows:

(in millions)	January 31, 2023	October 31, 2022
2022 Credit Agreement - Term Loans	$ 1,554.4	$ 1,565.0
Accounts receivable credit facilities	325.8	311.4
2022 Credit Agreement - Revolving Credit Facility	352.0	41.9
Other debt	0.2	0.4
	2,232.4	1,918.7
Less: current portion	80.8	71.1
Less: deferred financing costs	7.7	8.3
Long-term debt, net	$ 2,143.9	$ 1,839.3

2022 Credit Agreement

On March 1, 2022, the Company and certain of its subsidiaries entered into a second amended and restated senior secured credit agreement (the “2022 Credit Agreement”) with a syndicate of financial institutions. The 2022 Credit Agreement amended, restated and replaced in its entirety the Company’s previous credit agreement, referred to as the “2019 Credit Agreement”.

The 2022 Credit Agreement provides for (a) an $800.0 million secured revolving credit facility, consisting of a $725.0 million multicurrency facility and a $75.0 million U.S. dollar facility, maturing on March 1, 2027, (b) a $1,100 million secured term loan A-1 facility with quarterly principal installments that commenced on July 31, 2022 and continue through January 31, 2027, with any outstanding principal balance of such term loan A-1 facility being due and payable on maturity on March 1, 2027, and (c) a $515.0 million secured term loan A-2 facility with quarterly principal installments that commenced on July 31, 2022 and continue through January 31, 2027, with any outstanding principal balance of such term loan A-2 being due and payable on maturity on March 1, 2027. The term loan A-2 facility reflects the combination of the outstanding balances of the secured term A-2 and A-3 loans under the 2019 Credit Agreement.

Interest is based on Secured Overnight Financing Rate (“SOFR”) plus a credit spread adjustment, Euro Interbank Offer Rate (“EURIBOR”) or a base rate that resets periodically plus, in each case, a calculated margin amount that is based on the Company’s leverage ratio. Subject to the terms of the 2022 Credit Agreement, the Company has an option to borrow additional funds under the 2022 Credit Agreement with the agreement of the lenders.

As of January 31, 2023, $1,906.4 million was outstanding under the 2022 Credit Agreement. The current portion was $80.8 million, and the long-term portion was $1,825.6 million. The weighted average interest rate for borrowings under the 2022 Credit Agreement was 5.08% for the three months ended January 31, 2023. The actual interest rate for borrowings under the 2022 Credit Agreement was 5.58% as of January 31, 2023. The deferred financing costs associated with the term loan portion of the 2022 Credit Agreement totaled $7.7 million as of January 31, 2023 and are recorded as a reduction of long-term debt on the interim condensed consolidated balance sheets. The deferred financing costs associated with the revolving portion of the 2022 Credit Agreement totaled $4.3 million as of January 31, 2023 and are recorded within other long-term assets on the interim condensed consolidated balance sheets.

United States Trade Accounts Receivable Credit Facility

On May 17, 2022, Greif Receivables Funding LLC (“Greif Funding”), Greif Packaging LLC (“Greif Packaging”), and certain other U.S. subsidiaries of the Company, amended and restated its U.S. receivables financing facility (the “U.S. Receivables Facility”). The amended and restated U.S. Receivables Facility has a maturity date of May 17, 2023 and provides an accounts receivable financing facility of $300.0 million. As of January 31, 2023, there was $247.1 million outstanding under the U.S. Receivables Facility that is reported as long-term debt on the interim condensed consolidated balance sheets because the Company intends to refinance these obligations on a long-term basis and has the intent and ability to consummate a long-term refinancing.

Greif Funding is a direct subsidiary of Greif Packaging and is included in the Company’s consolidated financial statements. However, because Greif Funding is a separate and distinct legal entity from the Company, the assets of Greif Funding are not available to satisfy the liabilities and obligations of the Company, Greif Packaging or other subsidiaries of the Company, and the liabilities of Greif Funding are not the liabilities or obligations of the Company or its other subsidiaries.

International Trade Accounts Receivable Credit Facility

On April 20, 2022, Cooperage Receivables Finance B.V. and Greif Services Belgium BV, an indirect wholly owned subsidiary of Greif, Inc., amended and restated the Nieuw Amsterdam Receivables Financing Agreement (the "European RFA") with affiliates of a major international bank. The amended and restated European RFA matures April 24, 2023. The European RFA provides an accounts receivable financing facility of up to €100.0 million ($108.7 million as of January 31, 2023) secured by certain European accounts receivable. The $78.7 million outstanding on the European RFA as of January 31, 2023 is reported as long-term debt on the interim condensed consolidated balance sheets because the Company intends to refinance these obligations on a long-term basis and has the intent and ability to consummate a long-term refinancing.

NOTE 5 — FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Recurring Fair Value Measurements

The following table presents the fair value for those assets and (liabilities) measured on a recurring basis as of January 31, 2023 and October 31, 2022:

	January 31, 2023							
	Assets				Liabilities			
(in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	$ —	$ 54.5	$ —	$ 54.5	$ —	$ (9.4)	$ —	$ (9.4)
Foreign exchange hedges	—	0.7	—	0.7	—	(3.5)	—	(3.5)
Insurance annuity	—	—	19.4	19.4	—	—	—	—
Cross currency swap	—	29.5	—	29.5	—	—	—	—

	October 31, 2022							
	Assets				Liabilities			
(in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	$ —	$ 72.1	$ —	$ 72.1	$ —	$ (1.0)	$ —	$ (1.0)
Foreign exchange hedges	—	—	—	—	—	(0.2)	—	(0.2)
Insurance annuity	—	—	17.8	17.8	—	—	—	—
Cross currency swap	—	46.8	—	46.8	—	—	—	—

The carrying amounts of cash and cash equivalents, trade accounts receivable, accounts payable, current liabilities and short-term borrowings as of January 31, 2023 and October 31, 2022 approximate their fair values because of the short-term nature of these items and are not included in this table.

Interest Rate Derivatives

As of January 31, 2023, the Company has various interest rate swaps with a total notional amount of $1,300.0 million, maturing between March 11, 2024 and July 15, 2029. The Company will receive variable rate interest payments based upon one-month U.S. dollar SOFR, and in return the Company will be obligated to pay interest at a weighted average fixed interest rate of 2.62%. This effectively will convert the borrowing rate on an amount of debt equal to the notional amount of the interest rate swaps from a variable rate to a fixed rate.

These derivatives are designated as cash flow hedges for accounting purposes. Accordingly, the gain or loss on these derivative instruments is reported as a component of other comprehensive income and reclassified into earnings in the same line item associated with the forecasted transaction and in the same period during which the hedged transaction affects earnings. See Note 12 to the interim condensed consolidated financial statements for additional disclosures of the aggregate gain or loss included within other comprehensive income. The assumptions used in measuring fair value of these interest rate derivatives are considered level 2 inputs, which are based upon observable market rates, including SOFR and interest paid based upon a designated fixed rate over the life of the swap agreements.

Gains (losses) reclassified to earnings under these contracts were $4.7 million and $(4.3) million for the three months ended January 31, 2023, and 2022, respectively. A derivative gain of $28.5 million, based upon interest rates at January 31, 2023, is expected to be reclassified from accumulated other comprehensive income (loss) to earnings in the next twelve months.

Foreign Exchange Hedges

The Company conducts business in various international currencies and is subject to risks associated with changing foreign exchange rates. The Company's objective is to reduce volatility associated with foreign exchange rate changes. Accordingly, the Company enters into various contracts that change in value as foreign exchange rates change to protect the value of certain existing foreign currency assets and liabilities, commitments and anticipated foreign currency cash flows. As of January 31, 2023, and October 31, 2022, the Company had outstanding foreign currency forward contracts in the notional amount of $135.7 million and $132.1 million, respectively.

Adjustments to fair value are recognized in earnings, offsetting the impact of the hedged profits. The assumptions used in measuring fair value of foreign exchange hedges are considered level 2 inputs, which are based on observable market pricing for similar instruments, principally foreign exchange futures contracts.

For the three months ended January 31, 2023, and 2022, the Company recorded realized gain (loss) of $0.1 million and $(2.4) million under fair value contracts in other expense, net.

For the three months ended January 31, 2023, and 2022, the Company recorded an unrealized net gain (loss) of $(2.8) million and $1.0 million in other expense, net.

Cross Currency Swap

The Company has operations and investments in various international locations and is subject to risks associated with changing foreign exchange rates. As of January 31, 2023, the Company has various cross currency interest rate swaps that synthetically swap $334.4 million of fixed rate debt to Euro denominated fixed rate debt. The Company receives a weighted average rate of 1.56% on these swaps. These agreements are designated as either net investment hedges or cash flow hedges for accounting purposes and will mature between March 6, 2023 and October 5, 2026.

The gain or loss on these net investment hedge derivative instruments is included in the foreign currency translation component of other comprehensive income until the net investment is sold, diluted, or liquidated. See Note 12 to the interim condensed consolidated financial statements for additional disclosures of the aggregate gain or loss included within other comprehensive income. The gain or loss on the cash flow hedge derivative instruments is included in the unrealized foreign exchange component of other expense, offset by the underlying gain or loss on the underlying cash flows that are being hedged. Interest payments received for the cross currency swap are excluded from the net investment hedge effectiveness assessment and are recorded in interest expense, net on the consolidated statements of income. The assumptions used in measuring fair value of the cross currency swap are considered level 2 inputs, which are based upon the Euro to United States dollar exchange rate market.

For the three months ended January 31, 2023 and 2022, gains recorded in interest expense, net under the cross currency swap agreements were $1.4 million.

Other Financial Instruments

The fair values of the Company's 2022 Credit Agreement, the U.S. Receivables Facility and the European RFA do not materially differ from carrying value as the Company's cost of borrowing is variable and approximates current borrowing rates. The fair values of the Company's long-term obligations are estimated based on either the quoted market prices for the same or similar issues or the current interest rates offered for the debt of the same remaining maturities, which are considered level 2 inputs in accordance with Accounting Standard Codification ("ASC") Topic 820, "Fair Value Measurements and Disclosures."

Non-Recurring Fair Value Measurements

The following table presents quantitative information about the significant unobservable inputs used to determine the fair value of the impairment of long-lived assets held and used and net assets held for sale for the three months ended January 31, 2023 and 2022:

	Quantitative Information about Level 3 Fair Value Measurements				
(in millions)	Impairment Amount		Valuation Technique	Unobservable Input	Range of Input Values
January 31, 2023					
Long Lived Assets	$	0.5	Discounted Cash Flows; Indicative Bids	Discounted Cash Flows; Indicative Bids	N/A
Total	$	0.5			
January 31, 2022					
Impairment of Net Assets Held for Sale	$	62.4	Indicative Bids	Indicative Bids	N/A
Total	$	62.4			

Assets and Liabilities Held for Sale

During the three months ended January 31, 2023, the Company recorded no impairment charges related to assets and liabilities held for sale. During the three months ended January 31, 2022, the Company entered into a definitive agreement to divest its approximately 50% equity interest in the Flexible Products & Services business (the "FPS Divestiture"). This agreement triggered the reclassification of the Flexible Products & Services business to assets and liabilities held for sale, which further resulted in recognized impairment charges of $62.4 million in the first quarter of 2022.

The assumptions used in measuring fair value of assets and liabilities held for sale are considered level 3 inputs, which include recent purchase offers, market comparables and/or data obtained from commercial real estate brokers.

Long-Lived Assets

As necessary, based on triggering events, the Company measures long-lived assets at fair value on a non-recurring basis. The Company recorded $0.5 million impairment charges related to properties, plants and equipment, net during the three months ended January 31, 2023 and no impairment charges related to properties, plants and equipment, net during the three months ended January 31, 2022, respectively.

The assumptions used in measuring fair value of long-lived assets are considered level 3 inputs, which include bids received from third parties, recent purchase offers, market comparable information and discounted cash flows based on assumptions that market participants would use.

NOTE 6 – STOCK-BASED COMPENSATION

Long-Term Incentive Plan

The Company's 2020 Long-Term Incentive Plan (the "2020 LTIP") is intended to focus management on the key measures that drive superior performance over the longer term. The 2020 LTIP provides key employees with incentive compensation based upon consecutive and overlapping three-year performance periods that commence at the start of every year. For each three-year performance period, the performance goals are based on performance criteria as determined by the Compensation Committee of the Company's Board of Directors. For each three-year performance period commencing at the beginning of the year, participants may be granted restricted stock units ("RSUs") or performance stock units ("PSUs") or a combination of both.

The Company may grant RSUs based on a three-year vesting period on the basis of service only. The RSUs are an equity-classified plan measured at fair value on the grant date recognized ratably over the service period. Dividend-equivalent rights may be granted in connection with an RSU award and are recognized in conjunction with the Company's dividend issuance and settled upon vesting of the award.

The Company granted 105,753 RSUs on December 14, 2022, for the performance period commencing on November 1, 2022 and ending October 31, 2025. The weighted average fair value of the RSUs granted on that date was $68.99.

During the first quarter of 2023, the Company issued 75,575 shares of Class A Common Stock excluding shares withheld for the payment of taxes owed by recipients for RSUs vested for the performance period commencing on November 1, 2020 and ending October 31, 2022.

Under the 2020 LTIP, the Company may grant PSUs for a three-year performance period based upon service, performance criteria and market conditions. The performance criteria are based on targeted levels of (a) earnings before interest, taxes, depreciation, depletion and amortization and (b) total shareholder return, as determined by the Compensation Committee. The PSUs are a liability-classified plan wherein the fair value of the PSUs awarded is determined at each reporting period using a Monte Carlo simulation. A Monte Carlo simulation uses assumptions including the risk-free interest rate, expected volatility of the Company's stock price, and expected life of the awards to determine a fair value of the market condition throughout the vesting period.

The Company granted 183,218 PSUs on December 14, 2022, for the performance period commencing on November 1, 2022 and ending October 31, 2025. If earned, the PSUs are to be awarded in shares of Class A Common Stock. The weighted average fair value of the PSUs granted on that date was $70.06. The weighted average fair value of the PSUs at January 31, 2023 was $71.86.

During the first quarter of 2023, the Company issued 255,030 shares of Class A Common Stock excluding shares withheld for the payment of taxes owed by recipients for PSUs vested for the performance period commencing on November 1, 2020 and ending October 31, 2022.

NOTE 7 — INCOME TAXES

Income tax expense for the quarter and year to date periods was computed in accordance with ASC 740-270 "Income Taxes - Interim Reporting." Under this method, losses from jurisdictions for which a valuation allowance has been provided have not been included in the amount to which the ASC 740-270 rate was applied. The Company's income tax expense may fluctuate due to changes in estimated losses and income from jurisdictions for which a valuation allowance has been provided, the timing of recognition of the related tax expense under ASC 740-270, and the impact of discrete items in the respective quarter.

For the three months ended January 31, 2023 and January 31, 2022, income tax expense was $37.7 million and $35.6 million, respectively. The $2.1 million net increase in income tax expense for the three months ended January 31, 2023 was primarily attributable to nondeductible goodwill associated with the Tama Divestiture, net of reduced tax expense on lower pre-tax book income excluding the book gain on the Tama Divestiture. Additionally, in 2022, a $62.4 million book impairment was recorded for the FPS Divestiture for which no tax benefit was recorded.

NOTE 8 — POST RETIREMENT BENEFIT PLANS

The components of net periodic pension cost include the following:

	Three Months Ended January 31,	
(in millions)	**2023**	**2022**
Service cost	$ 2.0	$ 3.0
Interest cost	8.7	5.1
Expected return on plan assets	(9.7)	(8.2)
Amortization of prior service cost	(0.1)	(0.1)
Recognized net actuarial loss	(0.5)	2.0
Net periodic pension cost	$ 0.4	$ 1.8

As previously disclosed in the Company's 2022 Form 10-K, the Company expects to make employer contributions of $28.4 million, including benefits paid directly by the Company, during 2023.

The components of net periodic pension cost and net periodic post-retirement benefit, other than the service cost components, are included in the line item "Other income, net" in the interim condensed consolidated statements of income.

NOTE 9 — CONTINGENT LIABILITIES AND ENVIRONMENTAL RESERVES

Litigation-related Liabilities

The Company may become involved from time-to-time in litigation and regulatory matters incidental to its business, including governmental investigations, enforcement actions, personal injury claims, product liability, employment health and safety matters, commercial disputes, intellectual property matters, disputes regarding environmental clean-up costs, litigation in connection with acquisitions and divestitures, and other matters arising out of the normal conduct of its business. The Company intends to vigorously defend itself in such litigation. The Company does not believe that the outcome of any pending litigation will have a material adverse effect on its interim condensed consolidated financial statements.

The Company may accrue for contingencies related to litigation and regulatory matters if it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Because litigation is inherently unpredictable and unfavorable resolutions can occur, assessing contingencies is highly subjective and requires judgments about future events. The Company regularly reviews contingencies to determine whether its accruals are adequate. The amount of ultimate loss may differ from these estimates.

Environmental Reserves

As of January 31, 2023, and October 31, 2022, the Company's environmental reserves were $19.2 million and $19.0 million, respectively. These reserves are principally based on environmental studies and cost estimates provided by third parties, but also take into account management estimates. The estimated liabilities are reduced to reflect the anticipated participation of other potentially responsible parties in those instances where it is probable that such parties are legally responsible and financially capable of paying their respective shares of relevant costs. For sites that involve formal actions subject to joint and several liabilities, these actions have formal agreements in place to apportion the liability.

As of January 31, 2023 and October 31, 2022, the Company has accrued $9.8 million for the Diamond Alkali Superfund Site in New Jersey.

Aside from the Diamond Alkali Superfund Site, other environmental reserves of the Company as of January 31, 2023 and October 31, 2022 included $9.4 million and $9.2 million, respectively, for its various facilities around the world. It is possible that there could be resolution of uncertainties in the future that would require the Company to record charges that could be material to future earnings.

The Company's exposure to adverse developments with respect to any individual site is not expected to be material. Although environmental remediation could have a material effect on results of operations if a series of adverse developments occur in a particular quarter or year, the Company believes that the chance of a series of adverse developments occurring in the same quarter or year is remote. Future information and developments will require the Company to continually reassess the expected impact of these environmental matters.

NOTE 10 — EARNINGS PER SHARE

The Company has two classes of common stock and, as such, applies the "two-class method" of computing earnings per share ("EPS") as prescribed in ASC 260, "Earnings Per Share." In accordance with this guidance, earnings are allocated in the same fashion as dividends would be distributed. Under the Company's certificate of incorporation, any distribution of dividends in any year must be made in proportion of one cent a share for Class A Common Stock to one and one-half cents a share for Class B Common Stock, which results in a 40% to 60% split to Class A and B shareholders, respectively. In accordance with this, earnings are allocated first to Class A and Class B Common Stock to the extent that dividends are actually paid and the remainder is allocated assuming all of the earnings for the period have been distributed in the form of dividends.

The Company calculates EPS as follows:

$$\text{Basic Class A EPS} = \frac{40\% * \text{Average Class A Shares Outstanding}}{40\% * \text{Average Class A Shares Outstanding} + 60\% * \text{Average Class B Shares Outstanding}} * \frac{\text{Undistributed Net Income}}{\text{Average Class A Shares Outstanding}} + \text{Class A Dividends Per Share}$$

$$\text{Diluted Class A EPS} = \frac{40\% * \text{Average Class A Shares Outstanding}}{40\% * \text{Average Class A Shares Outstanding} + 60\% * \text{Average Class B Shares Outstanding}} * \frac{\text{Undistributed Net Income}}{\text{Average Diluted Class A Shares Outstanding}} + \text{Class A Dividends Per Share}$$

$$\text{Basic Class B EPS} = \frac{60\% * \text{Average Class B Shares Outstanding}}{40\% * \text{Average Class A Shares Outstanding} + 60\% * \text{Average Class B Shares Outstanding}} * \frac{\text{Undistributed Net Income}}{\text{Average Class B Shares Outstanding}} + \text{Class B Dividends Per Share}$$

*Diluted Class B EPS calculation is identical to Basic Class B calculation

The following table provides EPS information for each period, respectively:

	Three Months Ended January 31,	
(in millions)	**2023**	**2022**
Numerator for basic and diluted EPS		
Net income attributable to Greif, Inc.	$ 89.9	$ 10.3
Cash dividends	(28.9)	(27.2)
Undistributed earnings attributable to Greif, Inc.	$ 61.0	$ (16.9)

The Class A Common Stock has no voting rights unless four quarterly cumulative dividends upon the Class A Common Stock are in arrears. The Class B Common Stock has full voting rights. There is no cumulative voting for the election of directors.

Common Stock Repurchases

In June 2022, the Stock Repurchase Committee of the Company's Board of Directors authorized a program to repurchase up to $150.0 million of shares of the Company's Class A or Class B Common Stock or any combination thereof. On June 23, 2022, the Company entered into a $75.0 million accelerated share repurchase agreement ("ASR") with Bank of America, N.A. for the repurchase of shares of the Company's Class A Common Stock. In addition, the Company plans to repurchase an aggregate of $75.0 million of shares of its Class A or Class B Common Stock, or any combination thereof, in open market purchases ("OSR program").

Under the ASR, on June 24, 2022, the Company made a payment of $75.0 million and received an initial delivery of approximately 80% of the expected share repurchases, or 1,021,451 shares of Class A Common Stock, with any remaining shares expected to be delivered by the end of the Company's second quarter 2023. The ASR has been accounted for as a purchase of shares of Class A Common Stock and a forward purchase contract. The final number of shares of Class A Common Stock to be repurchased will be based on the volume-weighted average price of the shares of the Company's Class A Common Stock during the term of the ASR less a discount. The Company has treated the shares of Class A Common Stock delivered as treasury shares as of the date the shares were physically delivered in computing the weighted average shares outstanding of Class A Common Stock for both basic and diluted earnings per share. The forward stock purchase contract was determined to be indexed to the Company's own stock and met all of the applicable criteria for equity classification. On February 28, 2023, the Company received the remaining 94,259 shares of Class A Common Stock.

The Company began making repurchases of Class B Common Stock under the OSR program on September 9, 2022, and the Company may continue to make open market repurchases over the next 12 to 18 months under this program, all in accordance with Rule 10b-18 promulgated under the Securities Exchange Act of 1934. The timing of any such repurchases will depend on market conditions and will be made at the Company's discretion. While the Company intends to repurchase up to $75.0 million of shares, it is not obligated to repurchase any dollar amount or number or class of shares and may suspend or discontinue repurchases at any time. As of January 31, 2023, 402,926 shares of Class B Common Stock had been repurchased under the OSR program.

The following table summarizes the shares of the Company's Class A and Class B Common Stock as of the specified dates:

	Authorized Shares	Issued Shares	Outstanding Shares	Treasury Shares
January 31, 2023				
Class A Common Stock	128,000,000	42,281,920	25,936,892	16,345,028
Class B Common Stock	69,120,000	34,560,000	21,604,799	12,955,201
October 31, 2022				
Class A Common Stock	128,000,000	42,281,920	25,606,287	16,675,633
Class B Common Stock	69,120,000	34,560,000	21,836,745	12,723,255

The following is a reconciliation of the shares used to calculate basic and diluted earnings per share:

	Three Months Ended January 31,	
	2023	2022
Class A Common Stock:		
Basic shares	25,652,383	26,573,932
Assumed conversion of restricted shares	135,076	176,538
Diluted shares	25,787,459	26,750,470
Class B Common Stock:		
Basic and diluted shares	21,721,601	22,007,725

NOTE 11 — LEASES

The Company leases certain buildings, warehouses, land, transportation equipment, operating equipment, and office equipment with remaining lease terms from less than 1 year up to 19 years. The Company reviews all options to extend, terminate, or purchase a right of use asset at the time of lease inception and accounts for options deemed reasonably certain.

The Company combines lease and non-lease components for all leases, except real estate, for which these components are presented separately. Leases with an initial term of twelve months or less are not capitalized and are recognized on a straight-line basis over the lease term. The implicit rate is not readily determinable for substantially all of the Company's leases, and therefore the initial present value of lease payments is calculated utilizing an estimated incremental borrowing rate determined at the portfolio level based on market and Company specific information.

Certain of the Company's leases include variable costs. As the right of use asset recorded on the balance sheet was determined based upon factors considered at the commencement date, changes in these variable expenses are not capitalized and are expensed as incurred throughout the lease term.

As of January 31, 2023, the Company has not entered into any significant leases which have not yet commenced.

The following table presents the lease expense components for the three months ended January 31, 2023 and 2022:

	Three Months Ended January 31,	
(in millions)	2023	2022
Operating lease cost	$ 14.9	$ 17.0
Finance lease cost	1.1	0.8
Other lease cost*	7.4	4.9
Total lease cost	$ 23.4	$ 22.7

*includes variable and short-term lease costs

The following table presents the future maturity for the Company's lease liabilities, during the next five years, and in the aggregate for the years thereafter as of January 31, 2023:

(in millions)	Operating Leases	Finance Leases	Total expected payments
2023	$ 56.7	$ 5.8	$ 62.5
2024	47.9	5.8	53.7
2025	42.1	5.5	47.6
2026	34.2	5.4	39.6
2027	25.1	5.2	30.3
Thereafter	90.7	17.5	108.2
Total lease payments	$ 296.7	$ 45.2	$ 341.9
Less: interest	(52.4)	(11.1)	(63.5)
Lease liabilities	$ 244.3	$ 34.1	$ 278.4

The following table presents the weighted-average lease term and discount rate as of January 31, 2023 and 2022:

	January 31, 2023	January 31, 2022
Weighted-average remaining lease term (years):		
Operating leases	9.8	10.1
Finance leases	8.3	3.0
Weighted-average discount rate:		
Operating leases	3.82 %	3.58 %
Finance leases	6.30 %	3.21 %

The following table presents other required lease related information for the three months ended January 31, 2023 and 2022:

	Three Months Ended January 31,	
(in millions)	2023	2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows used for operating liabilities	$ 15.0	$ 17.1
Financing cash flows used for finance leases	0.7	0.3
Leased assets obtained in exchange for new lease liabilities:		
Leased assets obtained in exchange for new operating lease liabilities	4.7	7.7
Leased assets obtained in exchange for new finance lease liabilities	33.7	0.3

NOTE 12 — COMPREHENSIVE INCOME (LOSS)

The following table provides the rollforward of accumulated other comprehensive income (loss) for the three months ended January 31, 2023:

(in millions)	Foreign Currency Translation	Derivative Financial Instruments	Minimum Pension Liability Adjustment	Accumulated Other Comprehensive Income (Loss)
Balance as of October 31, 2022	$ (316.5)	$ 72.8	$ (58.6)	$ (302.3)
Other comprehensive income (loss)	51.0	(25.7)	(2.4)	22.9
Balance as of January 31, 2023	$ (265.5)	$ 47.1	$ (61.0)	$ (279.4)

The following table provides the rollforward of accumulated other comprehensive income (loss) for the three months ended January 31, 2022:

(in millions)	Foreign Currency Translation	Derivative Financial Instruments	Minimum Pension Liability Adjustment	Accumulated Other Comprehensive Income (Loss)
Balance as of October 31, 2021	$ (295.4)	$ (3.6)	$ (57.5)	$ (356.5)
Other comprehensive income (loss)	(27.2)	11.8	3.1	(12.3)
Balance as of January 31, 2022	$ (322.6)	$ 8.2	$ (54.4)	$ (368.8)

The components of accumulated other comprehensive income (loss) above are presented net of tax, as applicable.

NOTE 13 — BUSINESS SEGMENT INFORMATION

The Company has six operating segments, which are aggregated into three reportable business segments: Global Industrial Packaging; Paper Packaging & Services; and Land Management.

The Company's reportable business segments offer different products and services. The accounting policies of the reportable business segments are substantially the same as those described in the "Basis of Presentation and Summary of Significant Accounting Policies" note in the 2022 Form 10-K.

On December 15, 2022, the Company completed the Lee Container Acquisition. Lee Container is an industry-leading manufacturer of high-performance barrier, conventional blow molded containers, jerrycans and small plastics, which complement the Company's Global Industrial Packaging specialty portfolio. The results of Lee Container are recorded within the Global Industrial Packaging segment while the Company evaluates the impact of the Lee Container Acquisition on its reportable business segments.

The following tables present net sales disaggregated by geographic area for each reportable segment for the three months ended January 31, 2023:

	Three Months Ended January 31, 2023			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 259.3	$ 314.8	$ 131.7	$ 705.8
Paper Packaging & Services	550.5	—	9.7	560.2
Land Management	5.0	—	—	5.0
Total net sales	$ 814.8	$ 314.8	$ 141.4	$ 1,271.0

The following tables present net sales disaggregated by geographic area for each reportable segment for the three months ended January 31, 2022:

	Three Months Ended January 31, 2022			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 318.8	$ 457.3	$ 173.0	$ 949.1
Paper Packaging & Services	600.8	—	9.2	610.0
Land Management	5.2	—	—	5.2
Total net sales	$ 924.8	$ 457.3	$ 182.2	$ 1,564.3

The following segment information is presented for the periods indicated:

	Three Months Ended January 31,	
(in millions)	2023	2022
Operating profit:		
Global Industrial Packaging	$ 45.9	$ 31.0
Paper Packaging & Services	109.1	38.3
Land Management	1.4	2.7
Total operating profit	$ 156.4	$ 72.0
Depreciation, depletion and amortization expense:		
Global Industrial Packaging	$ 21.4	$ 20.6
Paper Packaging & Services	33.1	38.0
Land Management	0.6	0.8
Total depreciation, depletion and amortization expense	$ 55.1	$ 59.4

The following table presents total assets by segment and total properties, plants and equipment, net by geographic area:

(in millions)	January 31, 2023	October 31, 2022
Assets:		
Global Industrial Packaging	$ 2,645.3	$ 2,308.4
Paper Packaging & Services	2,394.4	2,473.9
Land Management	251.7	250.0
Total segments	5,291.4	5,032.3
Corporate and other	399.2	437.6
Total assets	$ 5,690.6	$ 5,469.9
Long lived assets, net:		
United States	$ 1,367.3	$ 1,315.6
Europe, Middle East and Africa	320.4	303.7
Asia Pacific and other Americas	94.2	91.6
Total long-lived assets, net	$ 1,781.9	$ 1,710.9

NOTE 14 — SUBSEQUENT EVENTS

Acquisitions

On February 28, 2023, the Company entered into a definitive agreement to increase its ownership interest in Centurion Container LLC (“Centurion”), a leader in the North American IBC reconditioning industry, to an 80% stake in an all-cash transaction for $145.0 million, subject to customary adjustments for cash and debt, and subject to customary closing conditions, including regulatory clearances. The all-cash transaction will be funded through Greif's existing credit facility.

The company anticipates completing the acquisition in the second fiscal quarter of 2023. The Company anticipates completing the preliminary purchase price allocation in the second fiscal quarter of 2023, which would then be reflected in the Company's April 30, 2023 financial statements. The results of operations of the acquired business will be included in the Company's results from the closing date of the acquisition.

Stock Repurchase Program

The Company settled the ASR and received the remaining shares of Class A Common Stock at February 28, 2023.

See Note 10 to the Condensed Consolidated Financial Statements included in Item 1 of Part I of this Form 10-Q for additional information regarding this program and the repurchase of shares of Class A and B Common Stock.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

GENERAL

The terms "Greif," "our company," "we," "us" and "our" as used in this discussion refer to Greif, Inc. and its subsidiaries. Our fiscal year begins on November 1 and ends on October 31 of the following year. Any references in unaudited interim condensed consolidated financial statements included in this Quarterly Report on Form 10-Q (this "Form 10-Q") to the years, or to any quarter of those years, relates to the fiscal year or quarter, as the case may be, ended in that year, unless otherwise stated.

The discussion and analysis presented below relates to the material changes in financial condition and results of operations for the interim condensed consolidated balance sheet as of January 31, 2023 and the condensed consolidated balance sheet as of October 31, 2022, and for the interim condensed consolidated statements of income for the three months ended January 31, 2023 and 2022. This discussion and analysis should be read in conjunction with the interim condensed consolidated financial statements that appear elsewhere in this Form 10-Q and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the fiscal year ended October 31, 2022 (the "2022 Form 10-K"). Readers are encouraged to review the entire 2022 Form 10-K, as it includes information regarding Greif not discussed in this Form 10-Q. This information will assist in your understanding of the discussion of our current period financial results.

All statements, other than statements of historical facts, included in this Form 10-Q, including without limitation, statements regarding our future financial position, business strategy, budgets, projected costs, goals, trends, and plans and objectives of management for future operations, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements generally can be identified by the use of forward-looking terminology such as "may," "will," "expect," "intend," "estimate," "anticipate," "aspiration," "objective," "project," "believe," "continue," "on track" or "target" or the negative thereof or variations thereon or similar terminology. All forward-looking statements made in this Form 10-Q are based on assumptions, expectations and other information currently available to management. Although we believe that the expectations reflected in forward-looking statements have a reasonable basis, we can give no assurance that these expectations will prove to be correct.

Forward-looking statements are subject to risks and uncertainties that could cause our actual results to differ materially from those forecasted, projected or anticipated, whether expressed in or implied by the statements. Such risks and uncertainties that might cause a difference include, but are not limited to, the following: (i) historically, our business has been sensitive to changes in general economic or business conditions, (ii) our global operations subject us to political risks, instability and currency exchange that could adversely affect our results of operations, (iii) the current and future challenging global economy and disruption and volatility of the financial and credit markets may adversely affect our business, (iv) the COVID-19 pandemic could continue to impact any combination of our business, financial condition, results of operations and cash flows, (v) the continuing consolidation of our customer base and suppliers may intensify pricing pressure, (vi) we operate in highly competitive industries, (vii) our business is sensitive to changes in industry demands and customer preferences, (viii) raw material, price fluctuations, global supply chain disruptions and increased inflation may adversely impact our results of operations, (ix) energy and transportation price fluctuations and shortages may adversely impact our manufacturing operations and costs, (x) we may not successfully implement our business strategies, including achieving our growth objectives, (xi) we may encounter difficulties or liabilities arising from acquisitions or divestitures, (xii) we may incur additional rationalization costs and there is no guarantee that our efforts to reduce costs will be successful, (xiii) several operations are conducted by joint ventures that we cannot operate solely for our benefit, (xiv) certain of the agreements that govern our joint ventures provide our partners with put or call options, (xv) our ability to attract, develop and retain talented and qualified employees, managers and executives is critical to our success, (xvi) our business may be adversely impacted by work stoppages and other labor relations matters, (xvii) we may be subject to losses that might not be covered in whole or in part by existing insurance reserves or insurance coverage and general insurance premium and deductible increases, (xviii) our business depends on the uninterrupted operations of our facilities, systems and business functions, including our information technology and other business systems, (xix) a security breach of customer, employee, supplier or our information and data privacy risks and costs of compliance with new regulations may have a material adverse effect on our business, financial condition, results of operations and cash flows, (xx) we could be subject to changes to our tax rates, the adoption of new U.S. or foreign tax legislation or exposure to additional tax liabilities, (xxi) full realization of our deferred tax assets may be affected by a number of factors, (xxii) we have a significant amount of goodwill and long-lived assets which, if impaired in the future, would adversely impact our results of operations, (xxiii) our pension and post-retirement plans are underfunded and will require future cash contributions, and our required future cash contributions could be higher than we expect, each of which could have a material adverse effect on our financial condition and liquidity, (xxiv) changing climate, global climate change regulations and greenhouse gas effects may adversely affect our operations and financial performance, (xxv) we may be unable to achieve our greenhouse gas emission reduction targets by 2030, (xxvi) legislation/regulation related to environmental and health and safety matters and corporate social responsibility could negatively impact our operations and financial performance, (xxvii) product liability claims and other legal proceedings could adversely affect our operations and financial performance, and (xxviii) we may incur fines or penalties, damage to our reputation or other adverse consequences if our employees, agents or business partners violate, or are alleged to have violated, anti-bribery, competition or other laws.

The risks described above are not all-inclusive, and given these and other possible risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results. For a detailed discussion of the most significant risks and uncertainties that could cause our actual results to differ materially from those forecasted, projected or anticipated, see “Risk Factors” in Part I, Item 1A of our 2022 Form 10-K and our other filings with the Securities and Exchange Commission.

All forward-looking statements made in this Form 10-Q are expressly qualified in their entirety by reference to such risk factors. Except to the limited extent required by applicable law, we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

OVERVIEW

Business Segments

We operate in three reportable business segments: Global Industrial Packaging; Paper Packaging & Services; and Land Management.

In the Global Industrial Packaging reportable segment, we are a leading global producer of industrial packaging products, such as steel, fibre and plastic drums, rigid intermediate bulk containers, jerrycans and other small plastics, closure systems for industrial packaging products, transit protection products, water bottles and remanufactured and reconditioned industrial containers, and services, such as container life cycle management, filling, logistics, warehousing and other packaging services. We sell our industrial packaging products on a global basis to customers in industries such as chemicals, paints and pigments, food and beverage, petroleum, industrial coatings, agriculture, pharmaceutical and minerals, among others.

In the Paper Packaging & Services reportable segment, we produce and sell containerboard, corrugated sheets, corrugated containers, and other corrugated products to customers in North America in industries such as packaging, automotive, food and building products. Our corrugated container products are used to ship such diverse products as home appliances, small machinery, grocery products, automotive components, books and furniture, as well as numerous other applications. We also produce and sell coated recycled paperboard and uncoated recycled paperboard, some of which we use to produce and sell industrial products (tubes and cores, construction products, and protective packaging). In addition, we also purchase and sell recycled fiber and produce and sell adhesives used in out paperboard products.

In the Land Management reportable segment, we are focused on the active harvesting and regeneration of our United States timber properties to achieve sustainable long-term yields. While timber sales are subject to fluctuations, we seek to maintain a consistent cutting schedule, within the limits of market and weather conditions. We also sell, from time to time, timberland and special use land, which consists of surplus land, HBU land and development land. As of January 31, 2023, we owned approximately 175,000 acres of timber property in the southeastern United States, which includes 18,800 acres of special use land.

CRITICAL ACCOUNTING POLICIES

The discussion and analysis of our financial condition and results of operations are based upon our interim condensed consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these interim condensed consolidated financial statements, in accordance with these principles, require us to make estimates and assumptions that affect the reported amount of assets and liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities as of the date of our interim condensed consolidated financial statements.

Our critical accounting policies are discussed in Part II, Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations of the 2022 Form 10-K. We believe that the consistent application of these policies enables us to provide readers of the interim condensed consolidated financial statements with useful and reliable information about our results of operations and financial condition. There have been no material changes to our critical accounting policies from the disclosures contained in the 2022 Form 10-K, except for the inclusion of our business combinations policies as discussed below and in Note 2 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q.

Business Combinations

We completed our acquisition of Lee Container Corporation, Inc. ("Lee Container") on December 15, 2022 (the "Lee Container Acquisition"). Lee Container is an industry-leading manufacturer of high-performance barrier, conventional blow molded containers, jerrycans and small plastics and expanded the Global Industrial Packaging segment portfolio. Lee Container's results of operations have been included in our financial results for the period subsequent to its acquisition date.

Under the acquisition method of accounting, we allocate 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 fair values assigned, defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between willing market participants, are based on estimates and assumptions determined by management. The excess purchase consideration over the aggregate fair value of tangible and intangible assets, net of liabilities assumed, is recorded as goodwill.

When determining the fair value of assets acquired and liabilities assumed, we make significant estimates and assumptions, especially with respect to intangible assets. Our estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

During the measurement period, not to exceed one year from the date of acquisition, we may record adjustments to the assets acquired and liabilities assumed, with a corresponding offset to goodwill if new information is obtained related to facts and circumstances that existed as of the acquisition date. After the measurement period, any subsequent adjustments are reflected in the consolidated statements of operations. Acquisition costs, such as legal and consulting fees, are expensed as incurred.

See Note 2 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q.

Recently Issued and Newly Adopted Accounting Standards

There have been no new accounting pronouncements issued or adopted since the filing of the 2022 Form 10-K that have significance, or potential significance, to the interim condensed consolidated financial statements.

RESULTS OF OPERATIONS

The following comparative information is presented for the three months ended January 31, 2023 and 2022. Historical revenues and earnings may or may not be representative of future operating results as a result of various economic and other factors.

Items that could have a significant impact on the financial statements include the risks and uncertainties listed in Part I, Item 1A — Risk Factors, of the 2022 Form 10-K. Actual results could differ materially using different estimates and assumptions, or if conditions are significantly different in the future.

The non-GAAP financial measures of EBITDA and Adjusted EBITDA are used throughout the following discussion of our results of operations, both for our consolidated and segment results. For our consolidated results, EBITDA is defined as net income, plus interest expense, net, plus debt extinguishment charges, plus income tax expense, plus depreciation, depletion and amortization, and Adjusted EBITDA is defined as EBITDA plus restructuring charges, plus timberland gains, net, plus acquisition and integration related costs, plus non-cash asset impairment charges, plus non-cash pension settlement (income) charges, plus (gain) loss on disposal of properties, plants, equipment and businesses, net. Since we do not calculate net income by reportable segment, EBITDA and Adjusted EBITDA by reportable segment are reconciled to operating profit by reportable segment. In that case, EBITDA is defined as operating profit by reportable segment less other (income) expense, net, less non-cash pension settlement (income) charges, less equity earnings of unconsolidated affiliates, net of tax, plus depreciation, depletion and amortization expense for that reportable segment, and Adjusted EBITDA is defined as EBITDA plus restructuring charges, plus timberland gains, net, plus acquisition and integration related costs, plus non-cash asset impairment charges, plus non-cash pension settlement charges, plus (gain) loss on disposal of properties, plants, equipment and businesses, net, for that reportable segment.

We use EBITDA and Adjusted EBITDA as financial measures to evaluate our historical and ongoing operations and believe that these non-GAAP financial measures are useful to enable investors to perform meaningful comparisons of our historical and current performance. The foregoing non-GAAP financial measures are intended to supplement and should be read together with our financial results. These non-GAAP financial measures should not be considered an alternative or substitute for, and should not be considered superior to, our reported financial results. Accordingly, users of this financial information should not place undue reliance on the non-GAAP financial measures.

First Quarter Results

The following table sets forth the net sales, operating profit, EBITDA and Adjusted EBITDA for each of our business segments for the three months ended January 31, 2023 and 2022:

	Three Months Ended January 31,	
(in millions)	2023	2022
Net sales:		
Global Industrial Packaging	$ 705.8	$ 949.1
Paper Packaging & Services	560.2	610.0
Land Management	5.0	5.2
Total net sales	$ 1,271.0	$ 1,564.3
Operating profit:		
Global Industrial Packaging	$ 45.9	$ 31.0
Paper Packaging & Services	109.1	38.3
Land Management	1.4	2.7
Total operating profit	$ 156.4	$ 72.0
EBITDA:		
Global Industrial Packaging	$ 64.2	$ 51.0
Paper Packaging & Services	142.5	76.2
Land Management	2.0	3.5
Total EBITDA	$ 208.7	$ 130.7
Adjusted EBITDA:		
Global Industrial Packaging	$ 71.8	$ 114.2
Paper Packaging & Services	90.7	80.5
Land Management	2.0	2.1
Total Adjusted EBITDA	$ 164.5	$ 196.8

The following table sets forth EBITDA and Adjusted EBITDA, reconciled to net income and operating profit, for our consolidated results for the three months ended January 31, 2023 and 2022:

	Three Months Ended January 31,	
(in millions)	2023	2022
Net income	$ 93.1	$ 18.6
Plus: interest expense, net	22.8	17.1
Plus: income tax expense	37.7	35.6
Plus: depreciation, depletion and amortization expense	55.1	59.4
EBITDA	$ 208.7	$ 130.7
Net income	$ 93.1	$ 18.6
Plus: interest expense, net	22.8	17.1
Plus: income tax expense	37.7	35.6
Plus: other expense, net	3.3	2.0
Plus: equity earnings of unconsolidated affiliates, net of tax	(0.5)	(1.3)
Operating profit	156.4	72.0
Less: other expense, net	3.3	2.0
Less: equity earnings of unconsolidated affiliates, net of tax	(0.5)	(1.3)
Plus: depreciation, depletion and amortization expense	55.1	59.4
EBITDA	208.7	130.7
Plus: restructuring charges	2.4	3.5
Plus: acquisition and integration related costs	7.5	1.6
Plus: non-cash asset impairment charges	0.5	62.4
Plus: gain on disposal of properties, plants, equipment, and businesses, net	(54.6)	(1.4)
Adjusted EBITDA	$ 164.5	$ 196.8

The following table sets forth EBITDA and Adjusted EBITDA for our business segments, reconciled to the operating profit for each segment, for the three months ended January 31, 2023 and 2022:

	Three Months Ended January 31,	
(in millions)	2023	2022
Global Industrial Packaging		
Operating profit	$ 45.9	$ 31.0
Less: other expense, net	3.6	1.9
Less: equity earnings of unconsolidated affiliates, net of tax	(0.5)	(1.3)
Plus: depreciation and amortization expense	21.4	20.6
EBITDA	64.2	51.0
Plus: restructuring charges	2.1	2.1
Plus: acquisition and integration related costs	5.0	—
Plus: non-cash asset impairment charges	0.5	62.4
Plus: gain on disposal of properties, plants, equipment, and businesses, net	—	(1.3)
Adjusted EBITDA	$ 71.8	$ 114.2
Paper Packaging & Services		
Operating profit	$ 109.1	$ 38.3
Less: other (income) loss, net	(0.3)	0.1
Plus: depreciation and amortization expense	33.1	38.0
EBITDA	142.5	76.2
Plus: restructuring charges	0.3	1.4
Plus: acquisition and integration related costs	2.5	1.6
Plus: (gain) loss on disposal of properties, plants, equipment, and businesses, net	(54.6)	1.3
Adjusted EBITDA	$ 90.7	$ 80.5
Land Management		
Operating profit	$ 1.4	$ 2.7
Plus: depreciation and depletion expense	0.6	0.8
EBITDA	2.0	3.5
Plus: gain on disposal of properties, plants, equipment, and businesses, net	—	(1.4)
Adjusted EBITDA	$ 2.0	$ 2.1

Net Sales

Net sales were $1,271.0 million for the first quarter of 2023 compared with $1,564.3 million for the first quarter of 2022. The $293.3 million decrease was primarily due to lower average sale prices and volumes across the Global Industrial Packaging segment, lower volumes across the Paper Packaging & Services segment and the impact to net sales resulting from the divestiture of the Flexibles Product & Services business in the second quarter of 2022 (the "FPS Divestiture"), partially offset by higher published containerboard and boxboard prices across the Paper Packaging & Services segment. See the "Segment Review" below for additional information on net sales by segment for the first quarter of 2023.

Gross Profit

Gross profit was $251.6 million for the first quarter of 2023 compared with $289.7 million for the first quarter of 2022. The $38.1 million decrease was primarily due to the same factors that impacted net sales, partially offset by lower raw material and transportation costs. See the "Segment Review" below for additional information on gross profit by segment. Gross profit margin was 19.8 percent and 18.5 percent for the first quarter of 2023 and 2022, respectively.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses were $139.4 million for the first quarter of 2023 and $151.6 million for the first quarter of 2022 primarily due to incentive compensation expense reduction. SG&A expenses were 11.0 percent and 9.7 percent of net sales for the first quarter of 2023 and 2022, respectively.

Financial Measures

Operating profit was $156.4 million for the first quarter of 2023 compared with $72.0 million for the first quarter of 2022. Net income was $93.1 million for the first quarter of 2023 compared with $18.6 million for the first quarter of 2022. Adjusted EBITDA was $164.5 million for the first quarter of 2023 compared with $196.8 million for the first quarter of 2022. The reasons for the changes in operating profit, net income, and Adjusted EBITDA for each segment are described below in the "Segment Review."

Trends

We anticipate that the lower customer demand patterns that we experienced during the first quarter will continue through our second quarter, subject to normal seasonal increases. We expect that steel and resin prices have reached lows and may start to trend upward, but we do not expect material inflationary trends to return during the second quarter. We expect the weakness in old corrugated container pricing to continue through the second quarter. Transportation, labor, and utilities are expected to remain relatively stable through the second quarter.

Segment Review

Global Industrial Packaging

Our Global Industrial Packaging segment offers a comprehensive line of industrial packaging products, such as steel, fibre and plastic drums, rigid intermediate bulk containers, jerrycans and other small plastics, closure systems for industrial packaging products, transit protection products, water bottles and remanufactured and reconditioned industrial containers, and services, such as container life cycle management, filling, logistics, warehousing and other packaging services. Key factors influencing profitability in the Global Industrial Packaging segment are:

- Selling prices, product mix, customer demand and sales volumes;
- Raw material costs, primarily steel, resin, containerboard and used industrial packaging for reconditioning;
- Energy and transportation costs;
- Benefits from executing the Greif Business System;
- Restructuring charges;
- Acquisition of businesses and facilities;
- Divestiture of businesses and facilities; and
- Impact of foreign currency translation.

Net sales were $705.8 million for the first quarter of 2023 compared with $949.1 million for the first quarter of 2022. The $243.3 million decrease was primarily due to the impact to net sales resulting from the FPS Divestiture, negative foreign currency translation impacts, and lower volumes and selling prices.

Gross profit was $125.3 million for the first quarter of 2023 compared with $177.1 million for the first quarter of 2022. The $51.8 million decrease in gross profit was primarily due to the same factors that impacted net sales, partially offset by lower raw material, transportation, labor, utility and maintenance costs. Gross profit margin was 17.8 percent and 18.7 percent for the three months ended January 31, 2023 and 2022, respectively.

Operating profit was $45.9 million for the first quarter of 2023 compared with operating profit of $31.0 million for the first quarter of 2022. The $14.9 million increase was primarily due to the $62.4 million non-cash impairment charge during the first quarter of 2022 related to the FPS Divestiture, partially offset by the same factors that impacted gross profit. Adjusted EBITDA was $71.8 million for the first quarter of 2023 compared with $114.2 million for the first quarter of 2022. The $42.4 million decrease in Adjusted EBITDA was primarily due to the same factors that impacted gross profit, partially offset by lower incentive compensation expense in SG&A.

Paper Packaging & Services

Our Paper Packaging & Services segment produces and sells containerboard, corrugated sheets, corrugated containers, and other corrugated products to customers in North America in industries such as packaging, automotive, food and building products. Our corrugated container products are used to ship such diverse products as home appliances, small machinery, grocery products, automotive components, books and furniture, as well as numerous other applications. We also produce and sell coated recycled paperboard and uncoated recycled paperboard, some of which we use to produce and sell products (tubes and cores, construction products, and protective packaging), which ultimately serve both industrial and consumer markets. In addition, we purchase and sell recycled fiber, and we also produce and sell adhesives. Key factors influencing profitability in the Paper Packaging & Services segment are:

- Selling prices, product mix, customer demand and sales volumes;
- Raw material costs, primarily old corrugated containers;
- Energy and transportation costs;
- Benefits from executing the Greif Business System;
- Restructuring charges;
- Acquisition of businesses and facilities; and
- Divestiture of businesses and facilities.

Net sales were $560.2 million for the first quarter of 2023 compared with $610.0 million for the first quarter of 2022. The $49.8 million decrease was primarily due to lower volumes, partially offset by higher published containerboard and boxboard prices.

Gross profit was $124.2 million for the first quarter of 2023 compared with $110.8 million for the first quarter of 2022. The $13.4 million increase in gross profit was primarily due to higher published containerboard and boxboard prices, lower raw material, transportation, and labor costs, partially offset by lower volume and higher manufacturing costs. Gross profit margin was 22.2 percent and 18.2 percent for the first quarter of 2023 and 2022, respectively.

Operating profit was $109.1 million for the first quarter of 2023 compared with $38.3 million for the first quarter of 2022. The $70.8 million increase was primarily due to the same factors that impacted gross profit and the $54.6 million gain from divestiture of Tama Paperboard, LLC in the Paper Packaging & Services segment (the "Tama Divestiture") during the first quarter of 2023. Adjusted EBITDA was $90.7 million for the first quarter of 2023 compared with $80.5 million for the first quarter of 2022. The $10.2 million increase in Adjusted EBITDA was primarily due to the same factors that impacted gross profit.

Land Management

As of January 31, 2023, our Land Management segment consisted of approximately 175,000 acres of timber properties in the southeastern United States. Key factors influencing profitability in the Land Management segment are:

- Planned level of timber sales;
- Selling prices and customer demand;
- Gains on timberland sales; and
- Gains on the disposal of development, surplus and HBU properties ("special use property").

Net sales were $5.0 million for the first quarter of 2023 compared with $5.2 million for the first quarter of 2022.

Gross profit was $2.1 million for the first quarter of 2023 compared with $1.8 million for the first quarter of 2022.

Operating profit was $1.4 million for the first quarter of 2023 compared with $2.7 million for the first quarter of 2022. Adjusted EBITDA was $2.0 million and $2.1 million for the first quarter of 2023 and 2022, respectively.

In order to maximize the value of our timber property, we continue to review our current portfolio and explore the development of certain of these properties. This process has led us to characterize our property as follows:

- Surplus property, meaning land that cannot be efficiently or effectively managed by us, whether due to parcel size, lack of productivity, location, access limitations or for other reasons;
- HBU property, meaning land that in its current state has a higher market value for uses other than growing and selling timber;
- Development property, meaning HBU land that, with additional investment, may have a significantly higher market value than its HBU market value; and
- Core timberland, meaning land that is best suited for growing and selling timber.

We report the sale of core timberland property in timberland gains, the sale of HBU and surplus property in gain on disposal of properties, plants and equipment, net and the sale of timber and development property under net sales and cost of products sold in our interim condensed consolidated statements of income. All HBU and development property, together with surplus property, is used to productively grow and sell timber until the property is sold.

Whether timberland has a higher value for uses other than growing and selling timber is a determination based upon several variables, such as proximity to population centers, anticipated population growth in the area, the topography of the land, aesthetic considerations, including access to lakes or rivers, the condition of the surrounding land, availability of utilities, markets for timber and economic considerations both nationally and locally. Given these considerations, the characterization of land is not a static process, but requires an ongoing review and re-characterization as circumstances change.

As of January 31, 2023, we had approximately 18,800 acres of special use property in the United States.

Income Tax Expense

Our quarterly income tax expense was computed in accordance with Accounting Standards Codification ("ASC") 740-270 "Income Taxes - Interim Reporting." In accordance with this accounting standard, annual estimated tax expense is computed based on forecasted annual earnings and other forecasted annual amounts, including, but not limited to, items such as uncertain tax positions and withholding taxes. Additionally, losses from jurisdictions for which a valuation allowance has been provided have not been included in the annual estimated tax rate. Income tax expense each quarter is provided for on a current year-to-date basis using the annual estimated tax rate, adjusted for discrete taxable events that occur during the interim period.

Income tax expense for the first quarter of 2023 was $37.7 million on $130.3 million of pretax income and income tax expense for the first quarter of 2022 was $35.6 million on $52.9 million of pretax income. The $2.1 million net increase in income tax expense was primarily attributable to nondeductible goodwill associated with the Tama Divestiture, net of reduced tax expense on lower pre-tax book income excluding the book gain on the Tama Divestiture. Additionally, in 2022, a $62.4 million book impairment was recorded for the FPS Divestiture for which no tax benefit was recorded.

We are subject to audits by U.S. federal, state and local tax authorities and foreign tax authorities. We believe that adequate provisions have been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the tax audits are resolved in a manner not consistent with management's expectations, we could be required to adjust our provision for income taxes in the period such resolution occurs.

The estimated net decrease in unrecognized tax benefits for the next 12 months ranges from zero to $7.1 million. Actual results may differ materially from this estimate.

LIQUIDITY AND CAPITAL RESOURCES

Our primary sources of liquidity are operating cash flows and borrowings under our senior secured credit facilities and proceeds from our trade accounts receivable credit facilities. We use these sources to fund our working capital needs, capital expenditures, cash dividends, debt repayment and acquisitions. We anticipate continuing to fund these items in a like manner. We currently expect that operating cash flows, borrowings under our senior secured credit facilities and proceeds from our trade accounts receivable credit facilities will be sufficient to fund our anticipated working capital, capital expenditures, cash dividends, debt repayment, potential acquisitions of businesses and other liquidity needs for at least 12 months.

Cash Flow

Three Months Ended January 31, *(in millions)*	**2023**	**2022**
Net cash provided by operating activities	$ 32.9	$ 22.4
Net cash used in investing activities	(269.1)	(45.8)
Net cash provided by financing activities	239.5	54.0
Effects of exchange rates on cash	10.6	(18.6)
Net increase in cash and cash equivalents	13.9	12.0
Cash and cash equivalents at beginning of year	147.1	124.6
Cash and cash equivalents at end of period	$ 161.0	$ 136.6

Operating Activities

The $74.9 million decrease in accounts receivable to $674.2 million as of January 31, 2023 from $749.1 million as of October 31, 2022 was primarily due to lower average sale prices and lower volumes.

The $37.8 million increase in inventories to $441.1 million as of January 31, 2023 from $403.3 million as of October 31, 2022 was primarily due to the inventories that were acquired through the Lee Container Acquisition.

The $97.3 million decrease in accounts payable to $464.0 million as of January 31, 2023 from $561.3 million as of October 31, 2022 was primarily due to the decrease in raw material prices and timing of payable settlements.

Investing Activities

During the first three months of 2023 and 2022, we invested $49.3 million and $44.5 million, respectively, of cash in capital expenditures. During the first three months of 2023, we paid $301.9 million for purchases of business, net of cash acquired, primarily for the Lee Container Acquisition. During the first three months of 2023, we received $105.6 million of cash from sale of businesses, primarily from the Tama Divestiture.

Financing Activities

During the first three months of 2023 and 2022, we paid cash dividends to stockholders of Greif, Inc. in the amount of $28.9 million and $27.2 million, respectively. We borrowed $298.0 million of long-term debt, net of proceeds, for the first three months of 2023 and issued $90.2 million of long-term debt, net of payments, for the first three months of 2022. During the first three months of 2023, we paid $17.8 million for the share repurchase program.

Stock Repurchase Program

In June 2022, the Stock Repurchase Committee of our Board of Directors authorized a program to repurchase up to $150.0 million of shares of our Class A or Class B Common Stock or any combination thereof. On June 23, 2022, we entered into a $75.0 million accelerated share repurchase agreement (“ASR”) with Bank of America, N.A. for the repurchase of shares of our Class A Common Stock. In addition, we plan to repurchase an aggregate of $75.0 million of shares of our Class A or Class B Common Stock, or any combination thereof, in open market purchases (“OSR program”).

Under the ASR, on June 24, 2022, we made a payment of $75.0 million and received an initial delivery of approximately 80% of the expected share repurchases, or 1,021,451 shares of Class A Common Stock, with any remaining shares expected to be delivered by the end of our second quarter 2023. The final number of shares of Class A Common Stock to be repurchased will be based on the volume-weighted average price of the shares of the Company’s Class A Common Stock during the term of the ASR less a discount. We have treated the shares of Class A Common Stock delivered as treasury shares as of the date the shares were physically delivered in computing the weighted average shares outstanding of Class A Common Stock for both basic and diluted earnings per share. The forward stock purchase contract was determined to be indexed to our own stock and met all of the applicable criteria for equity classification. We settled the ASR and received the remaining shares of Class A Common Stock at February 28, 2023.

We began making repurchases of Class B Common Stock under the OSR program on September 9, 2022, and we may continue to make open market repurchases over the next 12 to 18 months under this program, all in accordance with Rule 10b-18 promulgated under the Securities Exchange Act of 1934. The timing of any such repurchases will depend on market conditions and will be made at our discretion. While we intend to repurchase up to $75.0 million of shares, we are not obligated to repurchase any dollar amount or number or class of shares and may suspend or discontinue repurchases at any time. As of January 31, 2023, 402,926 shares of Class B Common Stock had been repurchased under the OSR program.

See Note 10 to the Condensed Consolidated Financial Statements included in Item 1 of Part I of this Form 10-Q for additional information regarding this program and the repurchase of shares of Class A and B Common Stock.

Financial Obligations

Borrowing Arrangements

Long-term debt is summarized as follows:

(in millions)	**January 31, 2023**	**October 31, 2022**
2022 Credit Agreement - Term Loans	$ 1,554.4	$ 1,565.0
Accounts receivable credit facilities	325.8	311.4
2022 Credit Agreement - Revolving Credit Facility	352.0	41.9
Other debt	0.2	0.4
	2,232.4	1,918.7
Less: current portion	80.8	71.1
Less: deferred financing costs	7.7	8.3
Long-term debt, net	$ 2,143.9	$ 1,839.3

2022 Credit Agreement

On March 1, 2022, we and certain of our subsidiaries entered into a second amended and restated senior secured credit agreement (the “2022 Credit Agreement”) with a syndicate of financial institutions. The 2022 Credit Agreement amended, restated and replaced in its entirety our previous credit agreement, referred to as the “2019 Credit Agreement”.

The 2022 Credit Agreement provides for (a) an $800.0 million secured revolving credit facility, consisting of a $725.0 million multicurrency facility and a $75.0 million U.S. dollar facility, maturing on March 1, 2027, (b) a $1,100 million secured term loan A-1 facility with quarterly principal installments that commenced on July 31, 2022 and continue through January 31, 2027, with any outstanding principal balance of such term loan A-1 facility being due and payable on maturity on March 1, 2027, and (c) a $515.0 million secured term loan A-2 facility with quarterly principal installments that commenced on July 31, 2022 and continue through January 31, 2027, with any outstanding principal balance of such term loan A-2 being due and payable on maturity on March 1, 2027. The term loan A-2 facility reflects the combination of the outstanding balances of the secured term A-2 and A-3 loans under the 2019 Credit Agreement.

The repayment of this facility is secured by a security interest in our personal property and the personal property of certain of our U.S. subsidiaries, including equipment and inventory and certain intangible assets, as well as a pledge of the capital stock of substantially all of our U.S. subsidiaries, and is secured, in part, by the capital stock of the non-U.S. borrowers. However, in the event that we receive and maintain an investment grade rating from either Moody’s Investors Services, Inc. or Standard & Poor’s Financial Services LLC, we may request the release of such collateral.

Interest is based on Secured Overnight Financing Rate (“SOFR”) plus a credit spread adjustment, Euro Interbank Offer Rate (“EURIBOR”) or a base rate that resets periodically plus, in each case, a calculated margin amount that is based on our leverage ratio. Subject to the terms of the 2022 Credit Agreement, we have an option to add borrowings to the 2022 Credit Agreement with the agreement of the lenders. As of January 31, 2023, we had $448.0 million of available borrowing capacity under the $800.0 million secured revolving credit facility.

The 2022 Credit Agreement contains certain covenants, which include financial covenants that require us to maintain a certain leverage ratio and an interest coverage ratio. The leverage ratio generally requires that at the end of any fiscal quarter we will not permit the ratio of (a) our total consolidated indebtedness (less the aggregate amount of our unrestricted cash and cash equivalents), to (b) our consolidated net income plus depreciation, depletion and amortization, interest expense (including capitalized interest), income taxes, and minus certain extraordinary gains and non-recurring gains (or plus certain extraordinary losses and non-recurring losses) and plus or minus certain other items for the preceding twelve months (as used in this paragraph only "EBITDA") to be greater than 4.00 to 1.00; provided that such leverage ratio is subject to (i) a covenant step-up (as defined in the 2022 Credit Agreement) increase adjustment of 0.50 upon the consummation of, and the following three fiscal quarters after, certain specified acquisitions, and (ii) a collateral release decrease adjustment of 0.25x during any collateral release period (as defined in the 2022 Credit Agreement). The interest coverage ratio generally requires that at the end of any fiscal quarter we will not permit the ratio of (a) our consolidated EBITDA, to (b) our consolidated interest expense to the extent paid or payable, to be less than 3.00 to 1.00, during the applicable preceding twelve-month period. As of January 31, 2023, we were in compliance with these covenants.

United States Trade Accounts Receivable Credit Facility

We have a $300.0 million U.S. Receivables Facility, as defined in Note 4 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q, which matures on May 17, 2023. As of January 31, 2023, there was $247.1 million outstanding balance under the U.S. Receivables Facility that is reported as long-term debt in the consolidated balance sheets because we intend to refinance these obligations on a long-term basis and have the intent and ability to consummate a long-term refinancing by renewing the existing agreement or entering into new financing arrangements. The U.S. Receivables Facility also contains events of default and covenants, which are substantially the same as the covenants under the 2022 Credit Agreement. As of January 31, 2023, we were in compliance with these covenants. Proceeds of the U.S. Receivables Facility are available for working capital and general corporate purposes.

International Trade Accounts Receivable Credit Facilities

We have a €100.0 million ($108.7 million as of January 31, 2023) European Receivables Financing Agreement (the "European RFA"), as defined in Note 5 of the Notes to Consolidated Financial Statements included in Item 8 of this Form 10-K, which matures on April 24, 2023. The $78.7 million outstanding on the European RFA as of January 31, 2023 is reported as long-term debt in the consolidated balance sheets because we intend to refinance these obligations on a long-term basis and have the intent and ability to consummate a long-term refinancing by renewing the existing agreement or entering into new financing arrangements. As of January 31, 2023, we were in compliance with these covenants. Proceeds of the European RFA are available for working capital and general corporate purposes.

See Note 4 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q for additional disclosures regarding our financial instruments.

Financial Instruments

Interest Rate Derivatives

As of January 31, 2023, we have various interest rate swaps with a total notional amount of $1,300.0 million, amortizing down over the term, in which we receive variable interest rate payments based on SOFR and in return are obligated to pay interest at a weighted average fixed interest rate of 2.62%, plus a spread. These derivatives are designated as cash flow hedges for accounting purposes and will mature between March 11, 2024 and July 15, 2029.

Accordingly, the gain or loss on these derivative instruments is reported as a component of other comprehensive income and reclassified into earnings in the same line item associated with the forecasted transactions and in the same period during which the hedged transaction affects earnings.

Foreign Exchange Hedges

We conduct business in international currencies and are subject to risks associated with changing foreign exchange rates. Our objective is to reduce volatility associated with foreign exchange rate changes to allow management to focus its attention on business operations. Accordingly, we enter into various contracts that change in value as foreign exchange rates change to protect the value of certain existing foreign currency assets and liabilities, commitments and anticipated foreign currency cash flows.

As of January 31, 2023, and October 31, 2022, we had outstanding foreign currency forward contracts in the notional amount of $135.7 million, and $132.1 million, respectively.

Cross Currency Swap

We have operations and investments in various international locations and are subject to risks associated with changing foreign exchange rates. We have cross currency interest rate swaps that synthetically swap $334.4 million of fixed rate debt to Euro denominated fixed rate debt. We receive a weighted average rate of 1.56%. These agreements are designated either net investment hedges or cash flow hedges for accounting purposes and will mature between March 6, 2023 and October 5, 2026.

Accordingly, the gain or loss on the net investment hedge derivative instruments is included in the foreign currency translation component of other comprehensive income until the net investment is sold, diluted, or liquidated. The gain or loss on the cash flow hedge derivative instruments is included in the unrealized foreign exchange component of other expense, offset by the underlying gain or loss on the underlying cash flows that are being hedged. Interest payments received from the cross currency swap are excluded from the net investment hedge effectiveness assessment and are recorded in interest expense, net on the consolidated statements of income.

See Note 5 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q for additional disclosures regarding our financial instruments.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

There have been no significant changes in the quantitative and qualitative disclosures about our market risk from the disclosures contained in the 2022 Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES

Changes in Internal Control Over Financial Reporting

The Company completed the Lee Container Acquisition on December 15, 2022. The scope of the Company's assessment of the effectiveness of internal controls over financial reporting for the fiscal year ending October 31, 2023, will not include the Lee Container Acquisition. This exclusion is in accordance with the Securities and Exchange Commission's general guidance that an assessment of a recently acquired business may be omitted from the Company's scope in the year of acquisition.

There has been no change in our internal control over financial reporting that occurred during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Disclosure Controls and Procedures

With the participation of our principal executive officer and principal financial officer, our management has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of the end of the period covered by this report. Based upon that evaluation, our principal executive officer and principal financial officer have concluded that, as of the end of the period covered by this report:

- Information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission;
- Information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure; and
- Our disclosure controls and procedures are effective.

PART II. OTHER INFORMATION

ITEM 1A. RISK FACTORS

There have been no material changes in our risk factors from those disclosed in the 2022 Form 10-K under Part I, Item 1A — Risk Factors.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(c.) Purchases of Equity Securities by the Issuer

In June 2022, the Stock Repurchase Committee of the Company's Board of Directors authorized a program to repurchase up to $150.0 million of shares of the Company's Class A or Class B Common Stock or any combination thereof. On June 23, 2022, the Company entered into a $75.0 million accelerated share repurchase agreement ("ASR") with Bank of America, N.A. for the repurchase of shares of the Company's Class A Common Stock. In addition, the Company plans to repurchase an aggregate of $75.0 million of shares of its Class A or Class B Common Stock, or any combination thereof, in open market purchases ("OSR program").

Under the ASR, on June 24, 2022, the Company made a payment of $75.0 million and received an initial delivery of approximately 80% of the expected share repurchases, or 1,021,451 shares of Class A Common Stock, with any remaining shares expected to be delivered by the end of the Company's second quarter 2023. The final number of shares of Class A Common Stock to be repurchased will be based on the volume-weighted average price of the shares of the Company's Class A Common Stock during the term of the ASR less a discount.

The Company began making repurchases of Class B Common Stock under the OSR program on September 9, 2022, and the Company may continue to make open market repurchases over the next 12 to 18 months under this program, all in accordance with Rule 10b-18 promulgated under the Securities Exchange Act of 1934. The timing of any such repurchases will depend on market conditions and will be made at the Company's discretion. While the Company intends to repurchase up to $75.0 million of shares, it is not obligated to repurchase any dollar amount or number or class of shares and may suspend or discontinue repurchases at any time. As of January 31, 2023, 402,926 shares of Class B Common Stock had been repurchased under the OSR program.

See Note 10 to the Condensed Consolidated Financial Statements included in Item 1 of Part I of this Form 10-Q for additional information regarding this program and the repurchase of shares of Class A and B Common Stock.

During the three months ended January 31, 2023, the Company's repurchases of shares of its Class A and Class B Common Stock were as follows:

Period	Total Number of Shares of Class A Common Stock Purchased	Average Price Paid per Share of Class A Common Stock*	Total Number of Shares of Class B Common Stock Purchased	Average Price Paid per Share of Class B Common Stock*	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value That May Yet be Purchased Under the Program
November 1, 2022 to November 30, 2022	—	$ —	75,149	$ 74.90	75,149	$ 58,258,591
December 1, 2022 to December 31, 2022	—	—	73,626	75.89	73,626	52,670,848
January 1, 2023 to January 31, 2023	—	—	83,171	79.72	83,171	46,040,699
Total	—	—	231,946	76.94	231,946	

*Average price paid per share reflects the weighted average purchase price paid for shares.

ITEM 6. EXHIBITS

(a.) Exhibits

Exhibit No.	Description of Exhibit
31.1	Certification of Chief Executive Officer Pursuant to Rule 13a — 14(a) of the Securities Exchange Act of 1934.
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a — 14(a) of the Securities Exchange Act of 1934.
32.1	Certification of Chief Executive Officer required by Rule 13a —14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.
32.2	Certification of Chief Financial Officer required by Rule 13a — 14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.
10.1	Amended and Restated 2005 Outside Directors Equity Award Plan
101	The following financial statements from the Company’s Quarterly Report on Form 10-Q for the quarter ended January 31, 2023, formatted in Inline XBRL (Extensible Business Reporting Language): (i) Condensed Consolidated Statements of Income and Comprehensive Income (Loss), (ii) Condensed Consolidated Balance Sheets, (iii) Condensed Consolidated Statements of Cash Flow and (iv) Notes to Condensed Consolidated Financial Statements.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned thereto duly authorized.

GREIF, INC.
(Registrant)

Date: March 3, 2023

/s/ LAWRENCE A. HILSHEIMER
Lawrence A. Hilsheimer
Executive Vice President and Chief Financial Officer

GREIF, INC.

AMENDED AND RESTATED
OUTSIDE DIRECTORS EQUITY AWARD PLAN

§1. Purpose.

The purpose of the Amended and Restated Outside Directors Equity Award Plan, formerly known as the 2005 Outside Directors Equity Award Plan (the "**Plan**"), of Greif, Inc., a Delaware corporation (the "**Company**"), is to assist the Company in attracting and retaining qualified members of its Board of Directors. The Plan provides for equity ownership opportunities to Outside Directors (as defined in §3 of the Plan) in order to encourage and enable them to participate in the Company's future prosperity and growth and to better match their interests with those of stockholders. The Plan seeks to achieve its purpose by granting to Outside Directors equity-based awards in the form of: (a) stock options to purchase shares of Class A Common Stock, without par value, of the Company ("**Shares**"), which options are not intended to qualify as incentive stock options (the "**Stock Options**") under Section 422 of the Internal Revenue Code of 1986, as amended (the "**Code**"); (b) Shares which may be subject to restrictions on transfer, as further described in §7 of the Plan (the "**Restricted Shares**"); and (c) stock appreciation rights ("**SARs**") subject to §8 of the Plan. The Stock Options, Restricted Shares and SARs are collectively referred to as the "**Awards**."

§2. Administration.

The Plan shall be administered by the Compensation Committee (the "**Committee**") of the Company's Board of Directors, which shall have the power and authority to grant Awards to Outside Directors. The Committee shall have the authority to: (a) select Outside Directors as recipients of Awards (such recipients, "**Participants**"); (b) grant Stock Options, Restricted Shares, SARs, or any combination thereof; (c) determine the number and type of Awards to be granted; (d) determine the terms and conditions, not inconsistent with the terms hereof, of any Award; (e) adopt, alter and repeal such administrative rules, guidelines and practices governing the Plan as it shall, from time to time, deem advisable, but subject to §15 of the Plan; (f) interpret the terms and provisions of the Plan and any Award granted and any agreements relating thereto; and (g) take any other actions the Committee considers appropriate in connection with, and otherwise supervise the administration of, the Plan. All decisions made by the Committee pursuant to the provisions hereof shall be made in the Committee's sole discretion and shall be final and binding on all persons.

§3. Eligibility.

The persons eligible to receive Awards under the Plan shall include only individuals who are directors of the Company and who are not employees of the Company or any subsidiary or affiliate of the Company (each such individual, an "**Outside Director**"), including members of the Committee who are Outside Directors.

§4. Shares Subject to Plan.

The total number of Shares reserved and available for issuance pursuant to Awards hereunder shall be Six Hundred Thousand (600,000) Shares ("**Available Shares**"). The Available Shares may consist, in whole or in part, of authorized but unissued Shares, treasury Shares, or previously issued Shares re-acquired by the Company, including Shares purchased on the open market.

§5. Grant of Awards.

Stock Options, Restricted Shares, and SARs may be granted alone or in addition to other Awards granted under the Plan. Any Awards granted under the Plan shall be in such form as the Committee may from time to time approve, consistent with the Plan, and the provisions of Awards need not be the same with respect to each Participant. Awards may be made to any Participant or all Participants, either in conjunction with the Company's annual meeting of stockholders or at any other time, as determined by the Committee.

Each Award granted under the Plan shall be authorized by the Committee and shall be evidenced by a written Stock Option Award Agreement, Restricted Share Award Agreement, or SAR Unit Award Agreement, as the case may be (collectively, "**Award Agreements**"), in the form approved by the Committee from time to time, which shall be dated as of the date approved by the Committee in connection with the grant, signed by an officer of the Company authorized by the Committee, and signed by the Participant, and which shall describe the Award and state that the Award is subject to all the terms and provisions of the Plan and such other terms and provisions, not inconsistent with the Plan, as the Committee may approve. The date on which the Committee approves the granting of an Award shall be deemed to be the date on which the Award is granted for all purposes, unless the Committee otherwise specifies in its approval. The granting of an Award under the Plan, however, shall be effective only if and when a written Award Agreement is duly executed and delivered by or on behalf of the Company and the Participant. See §10 of the Plan with respect to the determination of the fair market value of Shares as of a given date.

§6. Stock Options.

Stock Options granted under the Plan shall be subject to the following terms and conditions and shall contain such additional terms and conditions not inconsistent with the terms of the Plan as the Committee deems appropriate.

(a) Exercise Price.

The exercise or purchase price of each Share issuable upon the exercise of a Stock Option shall be the fair market value of one Share at the time such Stock Option is granted, as determined under §10 of the Plan. The exercise price per Share of any Stock Option granted under the Plan shall not be changed or modified after the time such Stock Option is granted unless such change or modification is made with the prior approval of the holders of a majority of the shares of Class B Common Stock of the Company. Notwithstanding the foregoing, in no event will the exercise price as changed or modified be less than the fair market value of a Share at the time such Stock Option is granted, as determined under §10 of the Plan.

(b) Exercise of Stock Options.

Stock Options shall be fully vested and exercisable on the date granted.

(c) Term.

Subject to §6(f) of the Plan, each Stock Option shall be exercisable for ten years from the date of grant.

(d) Method of Exercise.

A Stock Option may be exercised, in whole or in part, by giving written notice to the Secretary of the Company stating the number of Shares (which must be a whole number) to be purchased. Payment of the full purchase price for such Shares shall be made by (i) certified or bank cashier's check or other form of payment acceptable to the Company, (ii) delivery of unrestricted Shares having a fair market value on the date of such delivery equal to the total exercise price, (iii) surrender of Shares subject to the Stock Option which have a fair market value equal to the total exercise price at the time of exercise, or (iv) a combination of the preceding methods. Upon receipt of payment of the full purchase price for such Shares, and subject to compliance with all other terms and conditions of the Plan and the Stock Option Award Agreement relating to such Stock Option, the Company shall issue, as soon as reasonably practicable after receipt of such payment, such Shares to the person entitled to receive such Shares, or such person's designated representative. Such Shares may be issued in the form of a certificate, by book entry, or otherwise, in the Company's sole discretion.

(e) Transferability of Stock Options.

Except as provided in this paragraph, Stock Options shall not be transferable, and any attempted transfer (other than as provided in this paragraph) shall be null and void. Except for Stock Options transferred as provided in this paragraph, all Stock Options shall be exercisable during a Participant's lifetime only by the Participant or the Participant's legal representative. Without limiting the generality of the foregoing, (i) Stock Options may be transferred by will or the laws of descent and distribution and, in the case of such a transfer, shall be exercisable only by the transferee or such transferee's legal representative, and (ii) the Committee may, in its sole discretion and in the manner established by the Committee, provide for the irrevocable transfer, without payment of consideration, of any Stock Options by a Participant to such Participant's parent(s), spouse, domestic or life partner, children, grandchildren, nieces, nephews or to the trustee of a trust for the principal benefit of one or more such persons or to a partnership whose only partners are one or more such persons, and, in the case of such transfer, such Stock Option shall be exercisable only by the transferee or such transferee's legal representative.

(f) Termination of Option.

Except as otherwise provided herein, if a Participant ceases to be a director of the Company for any reason, then all Stock Options or any unexercised portion of such Stock Options which otherwise are exercisable by such Participant shall terminate unless such Stock Options are exercised within six months after the date such Participant ceases to be a director (but in no event after expiration of the original term of any such Stock Option); provided, that if such Participant ceases to be a director by reason of such Participant's death, then the six-month period shall instead be a one-year period.

(g) No rights as a Stockholder.

No Participant or the Participant's transferee shall have any rights of a stockholder in the Company with respect to the Shares covered by a Stock Option unless and until such Shares have been duly issued to him under §6(d) of the Plan.

(h) No Stock Option Repurchases Without Shareholder Approval.

The Committee shall not purchase Stock Options previously issued pursuant to the Plan from Participants for a share price greater than the current fair market value per share unless such purchase is made with the prior approval of the holders of a majority of the shares of Class B Common Stock of the Company.

§7. Restricted Shares.

Restricted Shares awarded under the Plan shall be subject to the following terms and conditions and such additional terms and conditions not inconsistent with the terms of the Plan as the Committee deems appropriate:

(a) Price.

The purchase price for Restricted Shares shall be any price set by the Committee and may be zero. Payment in full of the purchase price for the Restricted Shares, if any, shall be made by (i) certified or bank cashier's check or other form of payment acceptable to the Company, (ii) delivery of unrestricted Shares having a fair market value on the date of such delivery equal to the total purchase price, or (iii) a combination of the preceding methods.

(b) Vesting; No Risk of Forfeiture.

Restricted Shares shall be fully vested on the date granted and shall not be subject to any risk of forfeiture thereafter.

(c) Restrictions on Transfer.

At the time of the Restricted Share Award, the Committee may determine to restrict the Participant's ability to sell, pledge, encumber, assign, or otherwise transfer the Restricted Shares (the "**Transfer Restrictions**") during the period of time determined by the Committee, in its discretion, and set forth in the applicable Restricted Share Award Agreement (the "**Restriction Period**"). Subject to §9 of the Plan, the Restriction Period may be zero days. Awards of Restricted Shares must be accepted by the Participant within 30 days (or such other period as the Committee may specify at grant) after the grant date by executing the Restricted Share Award Agreement and paying the price, if any, required under §7(a) of the Plan. The prospective Participant shall not have any rights with respect to the grant of Restricted Shares unless and until the prospective Participant has executed the Restricted Share Award Agreement, delivered a fully executed copy thereof to the Secretary of the Company, and otherwise complied with the applicable terms and conditions of the Award.

(d) Stock Issuances.

Upon execution and delivery of the Restricted Share Award Agreement as described above and receipt of payment of the full purchase price, if any, for the Restricted Shares subject to such Restricted Share Award Agreement, the Company shall, as soon as reasonably practicable thereafter, issue the Restricted Shares to the Participant. Restricted Shares may be issued, whenever issued, in the form of a certificate, by book entry, or otherwise, in the Company's sole discretion, and shall bear an appropriate legend with respect to the Transfer Restrictions, if any. On and after the issuance of Restricted Shares to a Participant, such Participant shall have, with respect to such Restricted Shares, all of the rights of a stockholder of the Company, including the right to vote such Restricted Shares and the right to receive any dividends or other distributions with respect to such Restricted Shares, but subject, however, to the Transfer Restrictions, if any, placed on such Restricted Shares pursuant to the Plan and as specified by the Committee in the Restricted Share Award Agreement.

(e) Expiration of Restriction Period.

Upon the expiration of the Restriction Period, if any, unrestricted Shares shall be issued and delivered to the Participant.

§8. Stock Appreciation Rights.

SARs granted under the Plan shall be subject to the following terms and conditions and shall contain such additional terms and conditions not inconsistent with the terms of the Plan as the Committee deems appropriate:

(a) Designation of SAR Units; Right to Payment.

SARs granted under the Plan shall be designated in "**SAR Units**." Each SAR Unit shall confer upon the Participant the right to receive, upon exercise thereof, the excess of (i) the fair market value of one Share at the time of exercise, as determined under §10 of the Plan, over (ii) the grant price of the SAR Unit. The grant price of an SAR Unit shall be determined by the Committee at the time of grant of the SAR Unit, which grant price shall be the fair market value of one Share at the time the SAR Unit is granted, as determined under §10 of the Plan. The grant price of an SAR Unit granted under the Plan shall not be changed or modified after the time such SAR Unit is granted unless such change or modification is made with the prior approval of the holders of a majority of the shares of Class B Common Stock of the Company. Notwithstanding the foregoing, in no event will the grant price of an SAR Unit as changed or modified be less than the fair market value of one Share at the time the SAR Unit is granted, as determined under §10 of the Plan.

(b) Exercise of SAR Units.

SAR Units shall be fully vested and exercisable on the date granted.

(c) Term.

Subject to §8(f) of the Plan, each SAR Unit shall be exercisable for ten years from the date of grant.

(d) Method of Exercise.

A SAR Unit may be exercised, in whole or in part, by giving written notice to the Secretary of the Company stating the number of SAR Units being exercised. Within 30 days after the Company's receipt of such notice, the Company shall pay to the Participant or the Participant's transferee, as the case may be, by Company check an amount of money equal to the cash value of the SAR Units being exercised, determined in accordance with §8(a) of the Plan.

(e) Transferability of SAR Units.

Except as provided in this paragraph, SAR Units shall not be transferable, and any attempted transfer (other than as provided in this paragraph) shall be null and void. Except for SAR Units transferred as provided in this paragraph, all SAR Units shall be exercisable during a Participant's lifetime only by the Participant or the Participant's legal representative. Without limiting the generality of the foregoing, (i) SAR Units may be transferred by will or the laws of descent and distribution and, in the case of such a transfer, shall be exercisable only by the transferee or such transferee's legal representative, and (ii) the Committee may, in its sole discretion and in the manner established by the Committee, provide for the irrevocable transfer, without payment of consideration, of any SAR Units by a Participant to such Participant's parent(s), spouse, domestic or life partner, children, grandchildren, nieces, nephews or to the trustee of a trust for the principal benefit of one or more such persons or to a partnership whose only partners are one or more such persons, and, in the case of such transfer, such SAR Unit shall be exercisable only by the transferee or such transferee's legal representative.

(f) Termination of SARs.

Except as otherwise provided herein, if a Participant ceases to be a director of the Company for any reason, then all SAR Units or any unexercised portion of such SAR Units which otherwise are exercisable by such Participant shall terminate unless such SAR Units are exercised within six months after the date such Participant ceases to be a director (but in no event after expiration of the original term of any such SAR Unit); provided, that if such Participant ceases to be a director by reason of such Participant's death, then the six-month period shall instead be a one-year period.

(g) No Rights as a Stockholder.

A SAR Unit shall not confer upon the Participant or the Participant's transferee any rights of a stockholder of the Company. Without limiting the generality of the foregoing, the holder of any SAR Units shall have no right to vote or to receive any dividends or other distributions with respect to such SAR Units.

§9. Section 16 Compliance.

Unless a Participant could otherwise dispose of equity securities, including derivative securities, acquired under the Plan without incurring liability under Section 16(b) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), equity securities acquired under the Plan must be held for a period of six months following the date of such acquisition, provided that this condition shall be satisfied with respect to a derivative security if at least six months elapse from the date of acquisition of the derivative security to the date of disposition of the derivative security (other than upon exercise or conversion) or its underlying equity security.

§10. Determination of Fair Market Value of Shares.

For purposes of the Plan, the fair market value of the Shares shall mean, as of any given date: (a) the last reported sale price on the New York Stock Exchange on the most recent previous trading day (or if there was no trading in the Shares on that day, then on the next preceding trading day on which there was trading in the Shares); (b) the last reported sale price on the Nasdaq National Market System on the most recent previous trading day (or if there was no trading in the Shares on that day, then on the next preceding trading day on which there was trading in the Shares); (c) the mean between the high and low bid and ask prices, as reported by the National Association of Securities Dealers, Inc., on the most recent previous trading day; or (d) the last reported sale price on any other stock exchange on which the Shares are listed on the most recent previous trading day (or if there was no trading in the Shares on that day, then on the next preceding trading day on which there was trading in the Shares), whichever is applicable; provided that if none of the foregoing is applicable, then the fair market value of the Shares shall be the value determined in good faith by the Committee, in its sole discretion.

§11. Withholding Tax.

The Company, at its option, shall have the right to require the Participant or any other person receiving Shares or Restricted Shares to pay the Company the amount of any taxes which the Company is required to withhold with respect to such Shares or Restricted Shares or, in lieu of such payment, to retain or sell without notice a number of such Shares sufficient to cover the amount required to be so withheld. The Company, at its option, shall have the right to deduct from all payments made with respect to the exercise of SAR Units or dividends paid with respect to Shares or Restricted Shares the amount of any taxes which the Company is required to withhold with respect to such dividend payments. The Company, at its option, shall also have the right to require a Participant to pay to the Company the amount of any taxes which the Company is required to withhold with respect to the receipt by the Participant of Shares pursuant to the exercise of a Stock Option, or, in lieu of such payment, to retain, or sell without notice, a number of Shares sufficient to cover the amount required to be so withheld. The obligations of the Company under the Plan shall be conditional on such payment or other arrangements acceptable to the Company.

§12. Securities Law Restrictions.

No right under the Plan shall be exercisable, no Share shall be delivered under the Plan, and no Award shall be made under the Plan except in compliance with all applicable federal and state securities laws and regulations. The Company shall not be required to deliver any Shares or other securities under the Plan prior to such registration or other qualification of such Shares or other securities under any state or federal law, rule, or regulation as the Committee shall determine to be necessary or advisable.

The Committee may require each person acquiring Shares under the Plan (a) to represent and warrant and agree with the Company, in writing, that such person is acquiring the Shares without a view to the distribution thereof, and (b) to make such additional representations, warranties, and agreements with respect to the investment intent of such person or persons as the Committee may reasonably request. Any certificates for such Shares may include any legend which the Committee deems appropriate to reflect any restrictions on transfer.

All Shares or other securities delivered under the Plan shall be subject to such stop-transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations, and other requirements of the Securities and Exchange Commission, any stock exchange upon or market in which the Shares are then listed or traded, and any applicable federal or state securities law, and the Committee may cause a legend or legends to be put on any certificates evidencing such Shares to make appropriate reference to such restrictions.

§13. Changes in Capital Structure.

In the event the Company changes its outstanding Shares by reason of stock splits, stock dividends, or any other increase or reduction of the number of outstanding Shares without receiving consideration in the form of money, services, or property deemed appropriate by the Committee, in its discretion, then the aggregate number of Shares reserved for issuance under the Plan, the number and exercise price of Shares subject to outstanding Stock Options, the purchase price for Restricted Shares, the number of Shares granted by a Restricted Share Award, and the number and grant price of outstanding SAR Units shall be proportionately adjusted or substituted, with the objective that the Participant's proportionate interest in the Company shall reflect equitably the effects of such changes as applicable to the unexercised portion of any then-outstanding Awards, all as determined by the Committee in its sole discretion.

In the event of any other recapitalization, corporate separation or division, or any merger, consolidation, or other reorganization of the Company, the Committee shall make such adjustment, if any, as it may deem appropriate to accurately reflect the number and kind of shares deliverable, and the exercise prices payable, upon subsequent exercise of any then-outstanding Awards, as determined by the Committee in its sole discretion.

The Committee's determination of the adjustments appropriate to be made under this §13 shall be conclusive upon all Participants under the Plan.

§14. Acceleration of Rights.

The Committee shall have the authority, in its discretion, to accelerate the time at which any Award shall be exercisable whenever it may determine that such action is appropriate by reason of changes in applicable tax or other laws or other changes in circumstances occurring after the grant of the Award.

§15. Interpretation, Amendment, or Termination of the Plan.

The interpretation by the Committee of any provision of the Plan or of any Award Agreement executed pursuant to the grant of an Award under the Plan shall be final and conclusive upon all Participants or transferees under the Plan. The Board, without further action on the part of the stockholders of the Company, may from time to time alter, amend, or suspend the Plan or may at any time terminate the Plan, provided that: (a) no such action shall be take that would impair the rights of a Participant or transferee under any Award theretofore granted, without the Participant's or transferee's consent, except for amendments made to cause the Plan to comply with applicable law, applicable stock exchange rules or accounting rules; and (b) except for the adjustments provided for in §13 of the Plan, no amendment may be made by Board action without stockholder approval if the amendment would require stockholder approval under applicable law or applicable stock exchange rules.

The Committee may amend the terms of any Award theretofore granted, prospectively or retroactively; provided, no such amendment shall impair the rights of an optionee, Participant or transferee under any Award theretofore granted, without the Participant's or transferee's consent, except for amendments made to cause the Plan to comply with applicable law, stock exchange rules or accounting rules.

§16. Unfunded Status of the Plan.

The Plan is intended to constitute an "**unfunded**" plan for incentive compensation. With respect to any payments or deliveries of Shares not yet made by the Company to a Participant or transferee nothing contained herein shall give any such Participant or transferee any rights that are greater than those of a general creditor of the Company. The Committee may authorize the creation of trusts or other arrangements to meet obligations created under the Plan to deliver Shares or payments hereunder consistent with the foregoing.

§17. Protection of Board and Committee.

No member of the Board of Directors or the Committee shall have any liability for any determination or other action made or taken in good faith with respect to the Plan or any Award granted under the Plan.

§18. Government Regulations.

Notwithstanding any provision of the Plan or any Award Agreement executed pursuant to the Plan, the Company's obligations under the Plan and such Award Agreement shall be subject to all applicable laws, rules, and regulations and to such approvals as may be required by any governmental or regulatory agencies, including without limitation, any stock exchange or market on which the Company's Shares may then be listed or traded.

§19. Governing Law.

The Plan shall be construed under and governed by the laws of the State of Delaware.

§20. Genders and Numbers.

When permitted by the context, each pronoun used in the Plan shall include the same pronoun in other genders and numbers.

§21. Captions.

The captions of the various sections of the Plan are not part of the context of the Plan, but are only labels to assist in locating those sections, and shall be ignored in construing the Plan.

§22. Term of Plan.

The Plan became effective on February 28, 2005, the date the Plan was approved by stockholders of the Company (the "**Effective Date**"). No Awards shall be granted pursuant to the Plan unless and until approval of the Plan by the stockholders of the Company. No Awards shall be granted pursuant to the Plan on or after February 28, 2035 (the "**Expiration Date**"), but Awards granted prior to the Expiration Date may extend beyond the Expiration Date.

§23. Savings Clause.

In case any one or more of the provisions of this Plan or any Award shall be held invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and the invalid, illegal, or unenforceable provision shall be deemed null and void; however, to the extent permissible by law, any provision which could be deemed null and void shall first be construed, interpreted, or revised retroactively to permit this Plan or such Award, as applicable, to be construed so as to foster the intent of this Plan.

The Committee may modify the terms of any Award under the Plan granted to a Participant who, at the time of grant or during the term of the Award, is resident or employed outside of the United States in any manner deemed by the Committee to be necessary or appropriate in order to accommodate differences in local law, regulation, tax policy or custom, or so that the value and other benefits of the Award to the Participant, as affected by foreign tax laws and other restrictions applicable as a result of the Participant's residence or employment abroad, will be comparable to the value of such Award to a Participant who is resident or employed in the United States. Moreover, the Committee may approve such supplements to, or amendments, restatements or alternative versions of this Plan as it may consider necessary or appropriate for such purposes without thereby affecting the terms of this Plan as in effect for any other purpose, provided that no such supplements, amendments, restatements or alternative versions shall include any provisions that are inconsistent with the terms of the Plan, as then in effect, unless this Plan could have been amended to eliminate such inconsistency without further approval of stockholders of the Company.

§24. Miscellaneous Provisions.

No person shall have any claim or right to be granted an Award under this Plan and the grant of an Award shall not confer upon any Participant any right to be retained as a director of the Company, nor shall it interfere in any way with the right of the Company to terminate the service as a director of any of the Plan's Participants at any time.

The Committee may establish such procedures as it deems appropriate for a Participant to designate a beneficiary to whom any amounts or benefits payable in the event of the Participant's death are to be paid.

§25. Indemnification.

No member of the Board of Directors or the Committee shall be liable for any action or determination made in good faith with respect to the Plan or any Award granted under the Plan. Each person who is or shall have been a member of the Committee or of the Board of Directors shall be indemnified and held harmless by the Company against and from any loss, cost, liability or expense that may be imposed upon or reasonably incurred by him or her in connection with or resulting from any claim, action, suit or proceeding to which he may be a party or in which he may be involved by reason of any action taken or failure to act under or in connection with this Plan or any Award granted under this Plan and against and from any and all amounts paid by him or her in settlement thereof, with the Company's approval, or paid by him or her, except a judgment based upon a finding of bad faith, provided he or she shall give the Company an opportunity, at its own expense, to handle and defend the same before he or she undertakes to handle and defend it on his or her own behalf. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such person may be entitled under the Company's Certificate of Incorporation or By-Laws, contained in any indemnification agreements, as a matter of law, or otherwise, or any power that the Company may have to indemnify him or her or hold him or her harmless.

§26. Internal Revenue Code ("Code") Section 409A.

The Plan is intended to comply with the requirements of Code Section 409A, to the extent applicable, and shall be interpreted accordingly. Notwithstanding the foregoing, the Company makes no representations or covenants that any compensation paid or awarded under the Plan will comply with Section 409A.

Exhibit 31.1

CERTIFICATION

I, Ole G. Rosgaard, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Greif, Inc.;

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

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

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

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 3, 2023

/s/ OLE G. ROSGAARD

Ole G. Rosgaard,
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Lawrence A. Hilsheimer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Greif, Inc.;

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

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

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

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

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

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 3, 2023

/s/ LAWRENCE A. HILSHEIMER

Lawrence A. Hilsheimer,
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification Required by Rule 13a — 14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code

In connection with the Quarterly Report of Greif, Inc. (the "Company") on Form 10-Q for the quarterly period ended January 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ole G. Rosgaard, the President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2023

/s/ OLE G. ROSGAARD

Ole G. Rosgaard,
President and Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to Greif, Inc. and will be retained by Greif, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

Certification Required by Rule 13a — 14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code

In connection with the Quarterly Report of Greif, Inc. (the "Company") on Form 10-Q for the quarterly period ended January 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lawrence A. Hilsheimer, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2023

/s/ LAWRENCE A. HILSHEIMER
Lawrence A. Hilsheimer,
Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Greif, Inc. and will be retained by Greif, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.