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 July 31, 2022

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 August 26, 2022:

Class A Common Stock	25,606,287 shares
Class B Common Stock	22,007,725 shares

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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 July 31, 2022	Three Months Ended July 31, 2021	Nine Months Ended July 31, 2022	Nine Months Ended July 31, 2021
Net sales	$ 1,622.1	$ 1,490.8	$ 4,853.7	$ 3,977.9
Cost of products sold	1,275.2	1,172.0	3,878.4	3,181.0
Gross profit	346.9	318.8	975.3	796.9
Selling, general and administrative expenses	141.6	142.6	440.6	423.7
Restructuring charges	3.1	3.7	10.3	18.8
Timberland gains	—	—	—	(95.7)
Integration related costs	2.2	2.4	5.8	6.2
Non-cash asset impairment charges	0.7	—	63.1	1.5
Gain on disposal of properties, plants and equipment, net	(6.4)	(3.0)	(8.1)	(1.3)
Gain on disposal of businesses, net	—	—	(4.2)	—
Operating profit	205.7	173.1	467.8	443.7
Interest expense, net	14.0	23.9	44.3	75.8
Debt extinguishment charges	—	—	25.4	—
Non-cash pension settlement charges	—	0.4	—	9.0
Other expense (income), net	7.3	(0.6)	4.9	2.2
Income before income tax expense and equity earnings of unconsolidated affiliates, net	184.4	149.4	393.2	356.7
Income tax expense	39.9	33.1	105.4	56.5
Equity earnings of unconsolidated affiliates, net of tax	(1.6)	(2.1)	(3.6)	(3.1)
Net income	146.1	118.4	291.4	303.3
Net income attributable to noncontrolling interests	(4.3)	(5.4)	(14.2)	(17.1)
Net income attributable to Greif, Inc.	$ 141.8	$ 113.0	$ 277.2	$ 286.2
Basic earnings per share attributable to Greif, Inc. common shareholders:				
Class A common stock	$ 2.38	$ 1.90	$ 4.66	$ 4.81
Class B common stock	$ 3.58	$ 2.85	$ 6.98	$ 7.21
Diluted earnings per share attributable to Greif, Inc. common shareholders:				
Class A common stock	$ 2.36	$ 1.89	$ 4.63	$ 4.80
Class B common stock	$ 3.58	$ 2.85	$ 6.98	$ 7.21
Weighted-average number of Class A common shares outstanding:				
Basic	26.2	26.6	26.5	26.5
Diluted	26.6	26.7	26.7	26.6
Weighted-average number of Class B common shares outstanding:				
Basic	22.0	22.0	22.0	22.0
Diluted	22.0	22.0	22.0	22.0
Cash dividends declared per common share:				
Class A common stock	$ 0.46	$ 0.44	$ 1.38	$ 1.32
Class B common stock	$ 0.69	$ 0.66	$ 2.06	$ 1.97

See accompanying Notes to Condensed Consolidated Financial Statements

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

	Three Months Ended July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Net income	$ 146.1	$ 118.4	$ 291.4	$ 303.3
Other comprehensive income (loss), net of tax:				
Foreign currency translation*	(30.8)	(15.5)	1.8	18.7
Derivative financial instruments	1.2	(0.6)	37.1	10.8
Minimum pension liabilities	2.7	2.2	9.2	49.3
Other comprehensive income (loss), net of tax	(26.9)	(13.9)	48.1	78.8
Comprehensive income	119.2	104.5	339.5	382.1
Comprehensive income attributable to noncontrolling interests	3.1	5.6	7.4	17.9
Comprehensive income attributable to Greif, Inc.	$ 116.1	$ 98.9	$ 332.1	$ 364.2

*Nine months ended July 31, 2022 balance includes $113.1 million release of foreign currency translation from business divestment.

See accompanying Notes to Condensed Consolidated Financial Statements

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

(in millions)	July 31, 2022	October 31, 2021
ASSETS		
Current assets		
Cash and cash equivalents	$ 127.5	$ 124.6
Trade accounts receivable, net of allowance	868.7	889.5
Inventories:		
Raw materials	381.8	390.7
Work-in-process	—	1.5
Finished goods	96.7	107.0
Assets held for sale	0.3	6.9
Prepaid expenses	55.4	54.0
Other current assets	117.3	89.9
	1,647.7	1,664.1
Long-term assets		
Goodwill	1,472.9	1,515.4
Other intangible assets, net of amortization	596.7	648.4
Deferred tax assets	14.2	16.3
Pension asset	68.5	39.9
Operating lease assets	253.2	289.4
Other long-term assets	145.8	121.1
	2,551.3	2,630.5
Properties, plants and equipment		
Timber properties, net of depletion	226.9	224.6
Land	155.8	161.9
Buildings	520.3	543.8
Machinery and equipment	1,969.4	2,042.3
Capital projects in progress	140.9	137.2
	3,013.3	3,109.8
Accumulated depreciation	(1,586.2)	(1,588.6)
	1,427.1	1,521.2
Total assets	$ 5,626.1	$ 5,815.8

See accompanying Notes to Condensed Consolidated Financial Statements

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

(in millions)	July 31, 2022	October 31, 2021
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 642.1	$ 704.5
Accrued payroll and employee benefits	144.0	160.3
Restructuring reserves	12.7	20.3
Current portion of long-term debt	50.9	120.3
Short-term borrowings	21.7	50.5
Liabilities held for sale	—	0.9
Current portion of operating lease liabilities	49.4	54.0
Other current liabilities	195.2	203.3
	1,116.0	1,314.1
Long-term liabilities		
Long-term debt	1,986.1	2,054.8
Operating lease liabilities	206.7	239.5
Deferred tax liabilities	325.0	318.0
Pension liabilities	69.6	78.3
Postretirement benefit obligations	10.6	11.0
Contingent liabilities and environmental reserves	20.3	19.5
Long-term income tax payable	27.8	27.8
Other long-term liabilities	110.4	153.1
	2,756.5	2,902.0
Commitments and contingencies (Note 8)		
Redeemable noncontrolling interests	17.0	24.1
Equity		
Common stock, without par value	172.4	179.3
Treasury stock, at cost	(194.0)	(134.1)
Retained earnings	2,024.3	1,825.6
Accumulated other comprehensive loss, net of tax:		
Foreign currency translation	(286.8)	(295.4)
Derivative financial instruments	33.5	(3.6)
Minimum pension liabilities	(48.3)	(57.5)
Total Greif, Inc. shareholders' equity	1,701.1	1,514.3
Noncontrolling interests	35.5	61.3
Total shareholders' equity	1,736.6	1,575.6
Total liabilities and shareholders' equity	$ 5,626.1	$ 5,815.8

See accompanying Notes to Condensed Consolidated Financial Statements

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

(in millions)	Nine Months Ended July 31, 2022	Nine Months Ended July 31, 2021
Cash flows from operating activities:		
Net income	$ 291.4	$ 303.3
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion and amortization	165.4	176.2
Non-cash asset impairment charges	63.1	1.5
Non-cash pension settlement charges	—	9.0
Gain on disposals of properties, plants and equipment, net	(8.1)	(1.3)
Gain on disposals of businesses, net	(4.2)	—
Timberland gains	—	(95.7)
Unrealized foreign exchange (gain) loss	(4.2)	0.8
Deferred income tax benefit	(5.1)	(41.6)
Debt extinguishment charges	22.6	—
Non-cash lease expense	26.8	36.5
Other, net	1.0	0.3
Increase (decrease) in cash from changes in certain assets and liabilities:		
Trade accounts receivable	(82.7)	(185.4)
Inventories	(63.3)	(157.5)
Accounts payable	46.6	204.1
Restructuring reserves	(6.3)	(1.2)
Operating leases	(27.6)	(40.1)
Pension and post-retirement benefit liabilities	(29.2)	(11.7)
Other, net	(15.3)	61.5
Net cash provided by operating activities	370.9	258.7
Cash flows from investing activities:		
Purchases of properties, plants and equipment	(112.2)	(94.2)
Purchases of and investments in timber properties	(4.6)	(7.4)
Proceeds from the sale of timberlands	—	145.1
Collections of receivables held in special purpose entities	—	50.9
Payments for issuance of loans receivable	—	(15.0)
Proceeds from the sale of properties, plants, equipment and other assets	17.0	10.7
Proceeds from the sale of businesses	139.2	—
Other, net	(4.7)	(3.9)
Net cash provided by investing activities	34.7	86.2
Cash flows from financing activities:		
Proceeds from issuance of long-term debt	3,492.2	1,160.5
Payments on long-term debt	(3,645.2)	(1,490.0)
Proceeds (payments) on short-term borrowings, net	(21.2)	28.4
Proceeds from trade accounts receivable credit facility	301.9	99.0
Payments on trade accounts receivable credit facility	(277.1)	(23.1)
Payments for liabilities held in special purpose entities	—	(43.3)
Dividends paid to Greif, Inc. shareholders	(82.0)	(78.4)
Dividends paid to noncontrolling interests	(10.6)	(7.2)
Payments for debt extinguishment and issuance costs	(20.8)	—
Payments for share repurchases	(60.0)	—
Forward contract for accelerated share repurchases	(15.0)	—
Purchases of redeemable noncontrolling interest	(6.0)	—
Net cash used in financing activities	(343.8)	(354.1)
Effects of exchange rates on cash	(58.9)	3.1
Net increase (decrease) in cash and cash equivalents	2.9	(6.1)
Cash and cash equivalents at beginning of period	124.6	105.9
Cash and cash equivalents at end of period	$ 127.5	$ 99.8

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 July 31, 2022

(in millions, except for shares which are in thousands)	Capital Stock Common Shares	Capital Stock Amount	Treasury Stock Treasury Shares	Treasury Stock Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Greif, Inc. Equity	Non controlling interests	Total Equity
As of April 30, 2022	48,636	$ 186.0	28,206	$ (134.0)	$ 1,910.3	$ (275.9)	$ 1,686.4	$ 32.0	$ 1,718.4
Net income					141.8		141.8	4.3	146.1
Other comprehensive income (loss):									
Foreign currency translation						(29.6)	(29.6)	(1.2)	(30.8)
Derivative financial instruments, net of $0.4 million of income tax benefit						1.2	1.2		1.2
Minimum pension liability adjustment, net of $0.8 million income tax benefit						2.7	2.7		2.7
Comprehensive income							116.1		119.2
Current period mark to redemption value of redeemable noncontrolling interest					(0.3)		(0.3)		(0.3)
Net income allocated to redeemable noncontrolling interests							—	(0.2)	(0.2)
Dividends paid to Greif, Inc. shareholders ($0.46 and $0.69 per Class A share and Class B share, respectively)					(27.4)		(27.4)		(27.4)
Dividends paid to noncontrolling interests and other							—	0.6	0.6
Dividends earned on RSU shares					(0.1)		(0.1)		(0.1)
Share repurchases	(1,022)	(15.0)	1,022	(60.0)			(75.0)		(75.0)
Share based compensation	—	1.4	—	—			1.4		1.4
As of July 31, 2022	47,614	$ 172.4	29,228	$ (194.0)	$ 2,024.3	$ (301.6)	$ 1,701.1	$ 35.5	$ 1,736.6

Nine Months Ended July 31, 2022

(in millions, except for shares which are in thousands)	Capital Stock Common Shares	Capital Stock Amount	Treasury Stock Treasury Shares	Treasury Stock 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					277.2		277.2	14.2	291.4
Other comprehensive income (loss):									
Foreign currency translation, net of $113.1 million business divestment release						8.6	8.6	(6.8)	1.8
Derivative financial instruments, net of $12.4 million of income tax benefit						37.1	37.1		37.1
Minimum pension liability adjustment, net of $2.3 million income tax benefit						9.2	9.2		9.2
Comprehensive income							332.1		339.5
Divestment of noncontrolling interest							—	(24.4)	(24.4)
Current period mark to redemption value of redeemable noncontrolling interest and other					4.6		4.6		4.6
Net income allocated to redeemable noncontrolling interests							—	(0.1)	(0.1)
Dividends paid to Greif, Inc. shareholders ($1.38 and $2.06 per Class A share and Class B share, respectively)					(82.0)		(82.0)		(82.0)
Dividends paid to noncontrolling interests and other							—	(8.7)	(8.7)
Dividends earned on RSU shares					(1.1)		(1.1)		(1.1)
Share repurchases	(1,022)	(15.0)	1,022	(60.0)			(75.0)		(75.0)
Long-term incentive shares issued	52	3.0	(52)	0.1			3.1		3.1
Share based compensation	—	3.8	—	—			3.8		3.8
Restricted stock, executive	3	0.1	(3)	—			0.1		0.1
Restricted stock, directors	22	1.2	(22)	—			1.2		1.2
As of July 31, 2022	47,614	$ 172.4	29,228	$ (194.0)	$ 2,024.3	$ (301.6)	$ 1,701.1	$ 35.5	$ 1,736.6

(in millions, except for shares which are in thousands)	Capital Stock: Common Shares	Capital Stock: Amount	Treasury Stock: Treasury Shares	Treasury Stock: Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Greif, Inc. Equity	Non controlling interests	Total Equity
Three Months Ended July 31, 2021									
As of April 30, 2021	48,559	$ 177.6	28,283	$ (134.1)	$ 1,666.1	$ (335.4)	$ 1,374.2	$ 55.5	$ 1,429.7
Net income					113.0		113.0	5.4	118.4
Other comprehensive income (loss):									
Foreign currency translation						(15.7)	(15.7)	0.2	(15.5)
Derivative financial instruments, net of $0.2 million income tax benefit						(0.6)	(0.6)		(0.6)
Minimum pension liability adjustment, net of $0.8 million income tax expense						2.2	2.2		2.2
Comprehensive income							98.9		104.5
Current period mark to redemption value of redeemable noncontrolling interest					1.0		1.0		1.0
Net income allocated to redeemable noncontrolling interests							—	(0.6)	(0.6)
Dividends paid to Greif, Inc. shareholders ($0.44 and $0.66 per Class A share and Class B share, respectively)					(26.2)		(26.2)		(26.2)
Dividends paid to noncontrolling interests and other							—	(1.9)	(1.9)
Share based compensation	—	1.0	—	—			1.0		1.0
As of July 31, 2021	48,559	$ 178.6	28,283	$ (134.1)	$ 1,753.9	$ (349.5)	$ 1,448.9	$ 58.6	$ 1,507.5

(in millions, except for shares which are in thousands)	Capital Stock: Common Shares	Capital Stock: Amount	Treasury Stock: Treasury Shares	Treasury Stock: Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Greif, Inc. Equity	Non controlling Interests	Total Equity
Nine Months Ended July 31, 2021									
As of October 31, 2020	48,450	$ 170.2	28,392	$ (134.4)	$ 1,543.9	$ (427.5)	$ 1,152.2	$ 48.5	$ 1,200.7
Net income					286.2		286.2	17.1	303.3
Other comprehensive income:									
Foreign currency translation						17.9	17.9	0.8	18.7
Derivative financial instruments, net of $3.6 million income tax expense						10.8	10.8		10.8
Minimum pension liability adjustment, net of $17.0 million income tax expense						49.3	49.3		49.3
Comprehensive income							364.2		382.1
Current period mark to redemption value of redeemable noncontrolling interest and other					2.2		2.2		2.2
Net income allocated to redeemable noncontrolling interests							—	(1.4)	(1.4)
Dividends paid to Greif, Inc. shareholders ($1.32 and $1.97 per Class A share and Class B share, respectively)					(78.4)		(78.4)		(78.4)
Dividends paid to noncontrolling interests and other							—	(6.4)	(6.4)
Long-term incentive shares issued	80	3.9	(80)	0.2			4.1		4.1
Share based compensation	—	3.2	—	—			3.2		3.2
Restricted stock, executive	3	0.1	(3)	—			0.1		0.1
Restricted stock, directors	26	1.2	(26)	0.1			1.3		1.3
As of July 31, 2021	48,559	$ 178.6	28,283	$ (134.1)	$ 1,753.9	$ (349.5)	$ 1,448.9	$ 58.6	$ 1,507.5

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 sheets as of July 31, 2022 and October 31, 2021, the interim condensed consolidated statements of income, comprehensive income and changes in shareholders' equity for the three and nine months ended July 31, 2022 and 2021 and the interim condensed consolidated statements of cash flows for the nine months ended July 31, 2022 and 2021 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, 2021 (the "2021 Form 10-K").

Newly Adopted Accounting Standards

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes", which is intended to simplify accounting for income taxes. This ASU is effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years, with early adoption permitted. The Company adopted this ASU on November 1, 2021. The adoption of this guidance did not have a material impact on the Company's financial position, results of operations, comprehensive income, cash flows or disclosures.

Recently Issued Accounting Standards

There have been no new accounting pronouncements issued since the filing of the 2021 Form 10-K that have significance, or potential significance, to the interim condensed consolidated financial statements.

NOTE 2 — RESTRUCTURING CHARGES

The following is a reconciliation of the beginning and ending restructuring reserve balances for the nine months ended July 31, 2022:

(in millions)	Employee Separation Costs	Other Costs	Total
Balance at October 31, 2021	$ 18.6	$ 1.7	$ 20.3
Costs incurred and charged to expense	5.2	5.1	10.3
Costs paid or otherwise settled	(12.2)	(5.7)	(17.9)
Balance at July 31, 2022	$ 11.6	$ 1.1	$ 12.7

The focus for restructuring activities in 2022 is to optimize operations and close under-performing assets.

During the three months ended July 31, 2022, the Company recorded restructuring charges of $3.1 million, as compared to $3.7 million of restructuring charges recorded during the three months ended July 31, 2021. The restructuring activity for the three months ended July 31, 2022 consisted of $1.3 million in employee separation costs and $1.8 million in other restructuring costs, primarily consisting of professional fees and other fees associated with restructuring activities.

During the nine months ended July 31, 2022, the Company recorded restructuring charges of $10.3 million, as compared to $18.8 million of restructuring charges recorded during the nine months ended July 31, 2021. The restructuring activity for the nine months ended July 31, 2022 consisted of $5.2 million in employee separation costs and $5.1 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 $10.5 million as of July 31, 2022:

(in millions)	Total Amounts Expected to be Incurred	Amounts Incurred During the Nine Months Ended July 31, 2022	Amounts Remaining to be Incurred
Global Industrial Packaging			
Employee separation costs	$ 9.5	$ 3.7	$ 5.8
Other restructuring costs	4.6	2.6	2.0
	14.1	6.3	7.8
Paper Packaging & Services			
Employee separation costs	2.5	1.5	1.0
Other restructuring costs	4.2	2.5	1.7
	6.7	4.0	2.7
	$ 20.8	$ 10.3	$ 10.5

NOTE 3 — LONG-TERM DEBT

Long-term debt is summarized as follows:

(in millions)	July 31, 2022	October 31, 2021
2022 Credit Agreement - Term Loans	$ 1,565.0	$ —
2019 Credit Agreement - Term Loans	—	1,247.3
Senior Notes due 2027	—	495.9
Accounts receivable credit facilities	402.0	391.1
2022 Credit Agreement - Revolving Credit Facility	78.4	—
2019 Credit Agreement - Revolving Credit Facility	—	50.5
Other debt	0.4	0.6
	2,045.8	2,185.4
Less: current portion	50.9	120.3
Less: deferred financing costs	8.8	10.3
Long-term debt, net	$ 1,986.1	$ 2,054.8

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 commencing on July 31, 2022 and continuing 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 commencing on July 31, 2022 and continuing 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 Company used the borrowings under the 2022 Credit Agreement on March 1, 2022, to redeem the $500.0 million of 6.5% Senior Notes due March 1, 2027 (the "Senior Notes due 2027"), and to repay and refinance all of the outstanding borrowings under the 2019 Credit Agreement, and will use the borrowings thereunder to fund ongoing working capital and capital expenditure needs and for general corporate purposes, including acquisitions, and to pay related fees and expenses. 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, the Company has an option to borrow additional funds under the 2022 Credit Agreement with the agreement of the lenders.

As of July 31, 2022, $1,643.4 million was outstanding under the 2022 Credit Agreement. The current portion was $50.9 million, and the long-term portion was $1,592.5 million. The weighted average interest rate for borrowings under the 2022 Credit Agreement was 1.85% for the nine months ended July 31, 2022. The actual interest rate for borrowings under the 2022 Credit Agreement was 3.12% as of July 31, 2022. The deferred financing costs associated with the term loan portion of the 2022 Credit Agreement totaled $8.8 million as of July 31, 2022 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 $4.8 million as of July 31, 2022 and are recorded within other long-term assets on the interim condensed consolidated balance sheets.

As a result of the refinancing, $0.7 million of unamortized deferred financing costs related to the 2019 Credit Agreement, and $2.8 million of newly incurred financing costs related to the 2022 Credit Agreement, were expensed as debt extinguishment charges in the interim condensed consolidated statements of income.

Senior Notes due 2027

On March 1, 2022, the Company redeemed all of its outstanding Senior Notes due 2027, which were issued by the Company on February 11, 2019, for $500.0 million. The total redemption price for the Senior Notes due 2027 was $516.3 million, which was equal to the aggregate principal payment outstanding of $500.0 million plus a call premium of $16.3 million. The premium was recognized as a debt extinguishment charges on the interim condensed consolidated statements of income. The payment of the redemption price was funded by borrowings under the 2022 Credit Agreement.

As a result of redeeming the Senior Notes due 2027, $1.8 million of unamortized deferred financing costs and $3.8 million of unamortized discount were expensed as debt extinguishment charges on the interim condensed consolidated statements of income.

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 July 31, 2022, there was $300.0 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 by exercising the renewal option in the applicable agreement or entering into new financing arrangements.

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 ($102.0 million as of July 31, 2022) secured by certain European accounts receivable. The $102.0 million outstanding on the European RFA as of July 31, 2022 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 by exercising the renewal option in the applicable agreement or entering into new financing arrangements.

NOTE 4 — 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 July 31, 2022 and October 31, 2021:

	July 31, 2022							
	Assets				Liabilities			
(in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	$ —	$ 25.3	$ —	$ 25.3	$ —	$ (3.4)	$ —	$ (3.4)
Foreign exchange hedges	—	1.6	—	1.6	—	(2.2)	—	(2.2)
Insurance annuity	—	—	18.4	18.4	—	—	—	—
Cross currency swap	—	41.5	—	41.5	—	—	—	—

	October 31, 2021							
	Assets				Liabilities			
(in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	$ —	$ 7.6	$ —	$ 7.6	$ —	$ (16.8)	$ —	$ (16.8)
Foreign exchange hedges	—	0.1	—	0.1	—	(0.1)	—	(0.1)
Insurance annuity	—	—	20.9	20.9	—	—	—	—
Cross currency swap	—	10.2	—	10.2	—	(1.2)	—	(1.2)

The carrying amounts of cash and cash equivalents, trade accounts receivable, accounts payable, current liabilities and short-term borrowings as of July 31, 2022 and October 31, 2021 approximate their fair values because of the short-term nature of these items and are not included in this table.

Interest Rate Derivatives

The Company has various borrowing facilities which charge interest based on the one-month U.S. dollar London Inter-Bank Offered Rate ("LIBOR") and SOFR rate plus a spread.

In 2022, the Company entered into three interest rate swaps with a total notional amount of $150.0 million that amortize to $30.0 million over a five-year term, maturing on March 1, 2027. The outstanding notional amount as of July 31, 2022 is $150.0 million. The Company receives variable rate interest payments based upon one-month U.S. dollar SOFR, and in return the Company is obligated to pay interest at a weighted-average interest rate of 2.21% plus a spread. This effectively converted the borrowing rate on an amount of debt equal to the outstanding notional amount of the interest rate swaps from a variable rate to a fixed rate. In 2022, the Company also entered into six forward starting interest rate swaps with a total notional amount of $300.0 million effective October 11, 2022, maturing on March 1, 2027. 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 interest rate of 2.63% plus a spread. This effectively will convert the borrowing rate on an amount of debt equal to the outstanding notional amount of the interest rate swaps from a variable rate to a fixed rate.

In 2020, the Company entered into four interest rate swaps with a total notional amount of $200.0 million, maturing on July 15, 2029. The Company receives variable rate interest payments based upon one-month U.S. dollar LIBOR, and in return the Company is obligated to pay interest at a weighted-average interest rate of 0.90% plus a spread. This effectively converted the borrowing rate on an amount of debt equal to the outstanding notional amount of the interest rate swaps from a variable rate to a fixed rate.

In 2019, the Company entered into six interest rate swaps with a total notional amount of $1,300.0 million that amortize to $200.0 million over a five-year term, maturing on March 11, 2024. The outstanding notional amount as of July 31, 2022 is $500.0 million. The Company receives variable rate interest payments based upon one-month U.S. dollar LIBOR, and in return the Company is obligated to pay interest at a weighted-average interest rate of 2.49% plus a spread. This effectively converted the borrowing rate on an amount of debt equal to the outstanding notional amount of the interest rate swaps from a variable rate to a fixed rate.

In 2017, the Company entered into three interest rate swaps with a notional amount of $300.0 million that matured on February 1, 2022. The Company received variable rate interest payments based upon one-month U.S. dollar LIBOR, and in return the Company was obligated to pay interest at a fixed rate of 1.19% plus a spread. This effectively converted the borrowing rate on an amount of debt equal to the outstanding 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 are 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 11 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 LIBOR and interest paid based upon a designated fixed rate over the life of the swap agreements.

Losses reclassified to earnings under these contracts were $2.0 million and $4.6 million for the three months ended July 31, 2022, and 2021, respectively. Losses reclassified to earnings under these contracts were $9.6 million and $13.3 million for the nine months ended July 31, 2022, and 2021, respectively. A derivative gain of $9.9 million, based upon interest rates at July 31, 2022, 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 July 31, 2022, and October 31, 2021, the Company had outstanding foreign currency forward contracts in the notional amount of $117.9 million and $81.8 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 July 31, 2022, and 2021, the Company recorded a realized loss of $1.9 million and $0.3 million under fair value contracts in other expense, net. For the nine months ended July 31, 2022, and 2021, the Company recorded realized gains (losses) of $(4.0) million and $1.1 million under fair value contracts in other expense, net.

For the three months ended July 31, 2022, and 2021, the Company recorded an unrealized net gain (loss) of $(2.2) million and $1.0 million in other expense, net. For the nine months ended July 31, 2022, and 2021, the Company recorded an unrealized loss of $0.6 million and $0.2 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.

In October 2021, the Company entered into two cross currency interest rate swap agreements that synthetically swap $116.8 million of fixed rate debt to Euro denominated fixed rate debt at a weighted average rate of 1.26%. These agreements are designated as cash flow hedges for accounting purposes and will mature on October 5, 2026.

In August 2021, the Company entered into two cross currency interest rate swap agreements that synthetically swap $117.6 million of fixed rate debt to Euro denominated fixed rate debt at a weighted average rate of 1.19%. These agreements are designated as net investment hedges for accounting purposes and will mature on August 10, 2026.

In March 2018, the Company entered into two cross currency interest rate swap agreements that synthetically swap $100.0 million of fixed rate debt to Euro denominated fixed rate debt at a rate of 2.35%. These agreements are designated as a net investment hedge for accounting purposes and will mature on March 6, 2023.

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 11 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 July 31, 2022 and 2021, gains recorded in interest expense, net under the cross currency swap agreements were $1.5 million and $0.6 million, respectively. For the nine months ended July 31, 2022 and 2021, gains recorded in interest expense, net under the cross currency swap agreements were $4.3 million and $1.8 million, respectively.

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 because 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 Company recognized asset impairment charges of $63.1 million and $1.5 million during the nine months ended July 31, 2022 and 2021, respectively.

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 nine months ended July 31, 2022 and 2021:

	Quantitative Information about Level 3 Fair Value Measurements			
(in millions)	**Impairment Amount**	**Valuation Technique**	**Unobservable Input**	**Range of Input Values**
July 31, 2022				
Net Assets Held for Sale	$ 62.4	Indicative Bids	Indicative Bids	N/A
Long Lived Assets	$ 0.7	Discounted Cash Flows; Indicative Bids	Discounted Cash Flows; Indicative Bids	N/A
Total	$ 63.1			
July 31, 2021				
Long Lived Assets	$ 1.5	Discounted Cash Flows; Indicative Bids	Discounted Cash Flows; Indicative Bids	N/A
Total	$ 1.5			

Assets and Liabilities Held for Sale

On December 31, 2021, 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. See Note 13 to the interim condensed consolidated financial statements for additional disclosures of the FPS Divestiture. During the nine months ended July 31, 2021, the Company recorded no impairment charges related to assets and liabilities held for sale.

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 $0.7 million impairment charges related to both properties, plants and equipment, net and intangible assets during the nine months ended July 31, 2022 and $1.5 million impairment charges related to both properties, plants and equipment, net and intangible assets during the nine months ended July 31, 2021, 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 5 – 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 99,006 RSUs on December 16, 2021, for the performance period commencing on November 1, 2021 and ending October 31, 2024. The weighted average fair value of the RSUs granted on that date was $60.54.

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 162,392 PSUs on December 16, 2021, for the performance period commencing on November 1, 2021 and ending October 31, 2024. 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 $60.08. The weighted average fair value of the PSUs at July 31, 2022 was $114.14.

NOTE 6 — 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 nine months ended July 31, 2022 and July 31, 2021, income tax expense was $105.4 million and $56.5 million, respectively. The $48.9 million increase in income tax expense for the nine months ended July 31, 2022 was primarily the result of an increase in pre-tax book earnings, changes in the expected mix of earnings among tax jurisdictions, including jurisdictions for which valuation allowances have been recorded, and the timing of recognition of the related tax expense under ASC 740-270. Net favorable discrete items for 2022 of $6.4 million are the result of releases of uncertain tax position reserves due to lapses of the statute of limitations and provision to return adjustments offset by the impact of statutory rate changes on deferred taxes and certain tax basis adjustments in tangible property and state basis differences. Additionally, a net $58.6 million book expense was recorded in 2022 related to the FPS Divestiture and disposition of other businesses on which there is expected to be no tax benefit.

NOTE 7 — POST RETIREMENT BENEFIT PLANS

The components of net periodic pension cost include the following:

	Three Months Ended July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Service cost	$ 2.9	$ 3.0	$ 8.9	$ 9.2
Interest cost	5.0	4.8	15.2	13.9
Expected return on plan assets	(8.2)	(7.8)	(24.7)	(23.8)
Amortization of prior service cost	(0.1)	—	(0.3)	(0.1)
Recognized net actuarial loss	1.9	2.5	5.9	10.0
Net periodic pension cost	$ 1.5	$ 2.5	$ 5.0	$ 9.2

As previously disclosed in the Company's Annual Report on Form 10-K for the year ended October 31, 2021, the Company expects to make employer contributions of $35.5 million, including benefits paid directly by the Company, during 2022.

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.

During the nine months ended July 31, 2021, an annuity contract for approximately $100.0 million was purchased with United States defined benefit plan assets and the pension obligation for certain retirees in the United States under that plan was irrevocably transferred from that plan to the annuity contract. Additionally, lump sum payments totaling $2.7 million and $10.2 million for the three and nine months ended July 31, 2021 were made from the defined benefit plan assets to certain participants who agreed to such payments, representing the current fair value of the participant's respective pension benefit. The settlement items described above resulted in a decrease in the fair value of both the plan assets and the projected benefit obligation of $110.2 million. The settlement also resulted in a non-cash pension settlement charge of $0.1 million and $8.7 million of unrecognized net actuarial loss included in accumulated other comprehensive loss for the three and nine months ended July 31, 2021.

NOTE 8 — 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 July 31, 2022, and October 31, 2021, the Company's environmental reserves were $20.3 million and $19.5 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 July 31, 2022 and October 31, 2021, the Company has accrued $11.0 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 July 31, 2022 and October 31, 2021 included $9.3 million and $8.5 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 9 — 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 July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Numerator for basic and diluted EPS				
Net income attributable to Greif, Inc.	$ 141.8	$ 113.0	$ 277.2	$ 286.2
Cash dividends	(27.4)	(26.2)	(82.0)	(78.4)
Undistributed earnings attributable to Greif, Inc.	$ 114.4	$ 86.8	$ 195.2	$ 207.8

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. to repurchase 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").

Under the ASR, 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, on June 24, 2022 with any remaining shares expected to be delivered by the end of the Company's first 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.

Repurchases under the OSR may be made on the open market over the next 12 to 18 months 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 July 31, 2022, there have been no shares repurchased under the OSR.

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
July 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	22,007,725	12,552,275
October 31, 2021				
Class A Common Stock	128,000,000	42,281,920	26,550,924	15,730,996
Class B Common Stock	69,120,000	34,560,000	22,007,725	12,552,275

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

	Three Months Ended July 31,		Nine Months Ended July 31,	
	2022	2021	2022	2021
Class A Common Stock:				
Basic shares	26,207,808	26,550,924	26,466,619	26,517,064
Assumed conversion of restricted shares	419,175	153,965	255,062	119,880
Diluted shares	26,626,983	26,704,889	26,721,681	26,636,944
Class B Common Stock:				
Basic and diluted shares	22,007,725	22,007,725	22,007,725	22,007,725

NOTE 10 — 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 20 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 straightline 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 July 31, 2022, the Company does not have material exposure to finance leases and has not entered into any significant leases which have not yet commenced.

The following table presents the lease expense components for the three and nine months ended July 31, 2022 and 2021:

	Three Months Ended July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Operating lease cost	$ 14.7	$ 16.8	$ 48.4	$ 51.3
Other lease cost*	6.4	7.1	18.4	19.8
Total lease cost	$ 21.1	$ 23.9	$ 66.8	$ 71.1

*includes variable, short-term, and finance lease costs

Future maturity for the Company's lease liabilities, during the next five years, and in the aggregate for the years thereafter, are as follows:

(in millions)	July 31, 2022
2022	$ 60.9
2023	54.9
2024	45.5
2025	39.8
2026	32.0
Thereafter	106.2
Total lease payments	$ 339.3
Less: interest	(83.2)
Lease liabilities	$ 256.1

The following table presents the weighted-average lease term and discount rate as of July 31, 2022 and 2021:

	July 31, 2022	July 31, 2021
Weighted-average remaining lease term (years) for operating lease liabilities	10.0	10.6
Weighted-average discount rate for operating lease liabilities	3.63 %	3.67 %

The following table presents other required lease related information for the three and nine months ended July 31, 2022 and 2021:

	Three Months Ended July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Operating cash flows used for operating liabilities	$ 15.3	$ 17.2	$ 49.4	$ 51.8
Leased assets obtained in exchange for new operating lease liabilities	3.9	1.7	15.9	15.3

NOTE 11 — COMPREHENSIVE INCOME (LOSS)

The following table provides the rollforward of accumulated other comprehensive income (loss) for the nine months ended July 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)	(104.5)	37.1	9.2	(58.2)
Foreign currency translation released from business divestment	113.1	—	—	113.1
Balance as of July 31, 2022	$ (286.8)	$ 33.5	$ (48.3)	$ (301.6)

The following table provides the rollforward of accumulated other comprehensive income (loss) for the nine months ended July 31, 2021:

(in millions)	Foreign Currency Translation	Derivative Financial Instruments	Minimum Pension Liability Adjustment	Accumulated Other Comprehensive Income (Loss)
Balance as of October 31, 2020	$ (294.9)	$ (24.7)	$ (107.9)	$ (427.5)
Other comprehensive income	17.9	10.8	49.3	78.0
Balance as of July 31, 2021	$ (277.0)	$ (13.9)	$ (58.6)	$ (349.5)

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

NOTE 12 — 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 2021 Form 10-K.

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

	Three Months Ended July 31, 2022			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 316.2	$ 424.5	$ 166.0	$ 906.7
Paper Packaging & Services	698.2	—	12.0	710.2
Land Management	5.2	—	—	5.2
Total net sales	$ 1,019.6	$ 424.5	$ 178.0	$ 1,622.1

	Nine Months Ended July 31, 2022			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 980.2	$ 1,340.9	$ 506.4	$ 2,827.5
Paper Packaging & Services	1,977.5	—	32.0	2,009.5
Land Management	16.7	—	—	16.7
Total net sales	$ 2,974.4	$ 1,340.9	$ 538.4	$ 4,853.7

The following tables present net sales disaggregated by geographic area for each reportable segment for the three and nine months ended July 31, 2021:

	Three Months Ended July 31, 2021			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 278.0	$ 463.0	$ 166.8	$ 907.8
Paper Packaging & Services	568.5	—	10.3	578.8
Land Management	4.2	—	—	4.2
Total net sales	$ 850.7	$ 463.0	$ 177.1	$ 1,490.8

	Nine Months Ended July 31, 2021			
(in millions)	United States	Europe, Middle East and Africa	Asia Pacific and Other Americas	Total
Global Industrial Packaging	$ 731.2	$ 1,204.0	$ 429.9	$ 2,365.1
Paper Packaging & Services	1,570.4	—	26.3	1,596.7
Land Management	16.1	—	—	16.1
Total net sales	$ 2,317.7	$ 1,204.0	$ 456.2	$ 3,977.9

The following segment information is presented for the periods indicated:

	Three Months Ended July 31,		Nine Months Ended July 31,	
(in millions)	2022	2021	2022	2021
Operating profit:				
Global Industrial Packaging	$ 107.2	$ 122.0	$ 246.2	$ 252.4
Paper Packaging & Services	96.7	47.5	215.1	89.1
Land Management	1.8	3.6	6.5	102.2
Total operating profit	$ 205.7	$ 173.1	$ 467.8	$ 443.7
Depreciation, depletion and amortization expense:				
Global Industrial Packaging	$ 17.1	$ 20.6	$ 56.5	$ 62.8
Paper Packaging & Services	33.6	36.7	106.7	110.8
Land Management	0.7	0.8	2.2	2.6
Total depreciation, depletion and amortization expense	$ 51.4	$ 58.1	$ 165.4	$ 176.2

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

(in millions)	July 31, 2022	October 31, 2021
Assets:		
Global Industrial Packaging	$ 2,498.6	$ 2,735.1
Paper Packaging & Services	2,518.8	2,506.5
Land Management	250.1	249.2
Total segments	5,267.5	5,490.8
Corporate and other	358.6	325.0
Total assets	$ 5,626.1	$ 5,815.8
Long lived assets, net:		
United States	$ 1,277.3	$ 1,321.8
Europe, Middle East and Africa	306.8	374.5
Asia Pacific and other Americas	96.2	114.3
Total long-lived assets, net	$ 1,680.3	$ 1,810.6

NOTE 13 — DIVESTITURES

During the second quarter of 2022, the Company completed the FPS Divestiture for $123.0 million, before preliminary adjustments at closing of $38.8 million and subject to final adjustments. The Company received net cash proceeds of $131.6 million, inclusive of $24.4 million of cash and cash equivalents deconsolidated as a result of the divestiture.

The gain on sale of businesses, net for the nine months ended July 31, 2022, was $4.2 million in the Global Industrial Packaging segment, consisting of $4.8 million gain on the sale of an equity method investment with an offsetting loss of $0.6 million due to the FPS divestiture. There was no gain on sale of business for the three months ended July 31, 2022 as no businesses were sold during that time.

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 our interim condensed consolidated balance sheets as of July 31, 2022 and October 31, 2021, and for the interim condensed consolidated statements of income for the three and nine months ended July 31, 2022 and 2021. 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, 2021 (the "2021 Form 10-K"). Readers are encouraged to review the entire 2021 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 COVID-19 pandemic could continue to impact any combination of our business, financial condition, results of operations and cash flows, (iv) the current and future challenging global economy and disruption and volatility of the financial and credit markets may adversely affect our business, (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 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) the frequency and volume of our timber and timberland sales will impact our financial performance, (xi) we may not successfully implement our business strategies, including achieving our growth objectives, (xii) we may encounter difficulties or liabilities arising from acquisitions or divestitures, (xiii) we may incur additional restructuring costs and there is no guarantee that our efforts to reduce costs will be successful, (xiv) several operations are conducted by joint ventures that we cannot operate solely for our benefit, (xv) certain of the agreements that govern our joint ventures provide our partners with put or call options, (xvi) our ability to attract, develop and retain talented and qualified employees, managers and executives is critical to our success, (xvii) our business may be adversely impacted by work stoppages and other labor relations matters, (xviii) 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, (xix) our business depends on the uninterrupted operations of our facilities, systems and business functions, including our information technology and other business systems, (xx) 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, (xxi) 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, (xxii) full realization of our deferred tax assets may be affected by a number of factors, (xxiii) we have a significant amount of goodwill and long-lived assets which, if impaired in the future, would adversely impact our results of operations, (xxiv) 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, (xxv) legislation/regulation related to environmental and health and safety matters and corporate social responsibility could negatively impact our operations and financial performance, (xxvi) product liability claims and other legal proceedings could adversely affect our operations and financial performance, (xxvii) 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, (xxviii) changing climate, global climate change regulations and greenhouse gas effects may adversely affect our operations and financial performance, and (xxix) we may be unable to achieve our greenhouse gas emission reduction targets by 2030.

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 most recently filed 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 segment, we are a leading global producer of industrial packaging products, such as steel, fibre and plastic drums, rigid intermediate bulk containers, 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 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 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.

In the Land Management 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, higher and better use ("HBU") land and development land. As of July 31, 2022, 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 2021 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 2021 Form 10-K.

Recently Issued and Newly Adopted Accounting Standards

See Note 1 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q for a detailed description of recently issued and newly adopted accounting standards.

RESULTS OF OPERATIONS

The following comparative information is presented for the three and nine months ended July 31, 2022 and 2021. 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 2021 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 any interest expense, net, plus any debt extinguishment charges, plus any income tax expense, plus any depreciation, depletion and amortization expense, and Adjusted EBITDA is defined as EBITDA plus any restructuring charges, plus any integration related costs, plus any non-cash asset impairment charges, plus any non-cash pension settlement charges, plus any incremental COVID-19 costs, net, plus any loss (gain) on disposal of properties, plants, equipment and businesses, net, less any timberland gains, net. Since we do not calculate net income by business segment, EBITDA and Adjusted EBITDA by business segment are reconciled to operating profit by business segment. In that case, EBITDA is defined as operating profit by business segment less any non-cash pension settlement charges, less any other (income) expense, net, less any equity earnings of unconsolidated affiliates, net of tax, plus any depreciation, depletion and amortization expense for that business segment, and Adjusted EBITDA is defined as EBITDA plus any restructuring charges, plus any integration related costs, plus any non-cash asset impairment charges, plus any non-cash pension settlement charges, plus any incremental COVID-19 costs, net, plus any (gain) loss on disposal of properties, plants, equipment and businesses, net, less any timberlands gains, net, for that business 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.

Third 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 July 31, 2022 and 2021:

(in millions)	Three Months Ended July 31, 2022	Three Months Ended July 31, 2021
Net sales:		
Global Industrial Packaging	$ 906.7	$ 907.8
Paper Packaging & Services	710.2	578.8
Land Management	5.2	4.2
Total net sales	$ 1,622.1	$ 1,490.8
Operating profit:		
Global Industrial Packaging	$ 107.2	$ 122.0
Paper Packaging & Services	96.7	47.5
Land Management	1.8	3.6
Total operating profit	$ 205.7	$ 173.1
EBITDA:		
Global Industrial Packaging	$ 118.3	$ 145.0
Paper Packaging & Services	130.6	84.1
Land Management	2.5	4.4
Total EBITDA	$ 251.4	$ 233.5
Adjusted EBITDA:		
Global Industrial Packaging	$ 117.1	$ 146.2
Paper Packaging & Services	131.8	89.9
Land Management	2.1	1.7
Total Adjusted EBITDA	$ 251.0	$ 237.8

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 July 31, 2022 and 2021:

(in millions)	Three Months Ended July 31, 2022	Three Months Ended July 31, 2021
Net income	$ 146.1	$ 118.4
Plus: interest expense, net	14.0	23.9
Plus: income tax expense	39.9	33.1
Plus: depreciation, depletion and amortization expense	51.4	58.1
EBITDA	$ 251.4	$ 233.5
Net income	$ 146.1	$ 118.4
Plus: interest expense, net	14.0	23.9
Plus: income tax expense	39.9	33.1
Plus: non-cash pension settlement charges	—	0.4
Plus: other expense (income), net	7.3	(0.6)
Plus: equity earnings of unconsolidated affiliates, net of tax	(1.6)	(2.1)
Operating profit	205.7	173.1
Less: non-cash pension settlement charges	—	0.4
Less: other expense (income), net	7.3	(0.6)
Less: equity earnings of unconsolidated affiliates, net of tax	(1.6)	(2.1)
Plus: depreciation, depletion and amortization expense	51.4	58.1
EBITDA	251.4	233.5
Plus: restructuring charges	3.1	3.7
Plus: integration related costs	2.2	2.4
Plus: non-cash asset impairment charges	0.7	—
Plus: non-cash pension settlement charges	—	0.4
Plus: incremental COVID-19 costs, net	—	0.8
Plus: gain on disposal of properties, plants, equipment, and businesses, net	(6.4)	(3.0)
Adjusted EBITDA	$ 251.0	$ 237.8

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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 July 31, 2022 and 2021:

(in millions)	Three Months Ended July 31, 2022	Three Months Ended July 31, 2021
Global Industrial Packaging		
Operating profit	$ 107.2	$ 122.0
Less: other expense (income), net	7.6	(0.6)
Less: non-cash pension settlement charges	—	0.3
Less: equity earnings of unconsolidated affiliates, net of tax	(1.6)	(2.1)
Plus: depreciation and amortization expense	17.1	20.6
EBITDA	118.3	145.0
Plus: restructuring charges	1.5	1.6
Plus: integration related costs	0.3	—
Plus: non-cash pension settlement charges	—	0.3
Plus: incremental COVID-19 costs, net	—	0.5
Plus: gain on disposal of properties, plants, equipment, and businesses, net	(3.0)	(1.2)
Adjusted EBITDA	$ 117.1	$ 146.2
Paper Packaging & Services		
Operating profit	$ 96.7	$ 47.5
Less: non-cash pension settlement charges	—	0.1
Less: other income, net	(0.3)	—
Plus: depreciation and amortization expense	33.6	36.7
EBITDA	130.6	84.1
Plus: restructuring charges	1.6	2.1
Plus: integration related costs	1.9	2.4
Plus: non-cash asset impairment charges	0.7	—
Plus: non-cash pension settlement charges	—	0.1
Plus: incremental COVID-19 costs, net	—	0.3
Plus: (gain) loss on disposal of properties, plants, equipment, and businesses, net	(3.0)	0.9
Adjusted EBITDA	$ 131.8	$ 89.9
Land Management		
Operating profit	$ 1.8	$ 3.6
Plus: depreciation and depletion expense	0.7	0.8
EBITDA	2.5	4.4
Plus: gain on disposal of properties, plants, equipment, and businesses, net	(0.4)	(2.7)
Adjusted EBITDA	$ 2.1	$ 1.7

Net Sales

Net sales were $1,622.1 million for the third quarter of 2022 compared with $1,490.8 million for the third quarter of 2021. The $131.3 million increase was primarily due to higher average sale prices and higher published containerboard and boxboard prices across the Global Industrial Packaging and the Paper Packaging & Services segments, respectively, partially offset by the impact to net sales resulting from the divestiture of the Flexibles Product & Services business in the second quarter of 2022 (the "FPS Divestiture"). See the "Segment Review" below for additional information on net sales by segment for the third quarter of 2022.

Gross Profit

Gross profit was $346.9 million for the third quarter of 2022 compared with $318.8 million for the third quarter of 2021. The $28.1 million increase was primarily due to the same factors that impacted net sales, partially offset by higher raw material, transportation, labor and utility costs. See the "Segment Review" below for additional information on gross profit by segment. Gross profit margin was 21.4 percent for both the third quarter of 2022 and 2021.

Selling, General and Administrative Expenses

Selling, general and administrative (“SG&A”) expenses were $141.6 million for the third quarter of 2022 and $142.6 million for the third quarter of 2021. SG&A expenses were 8.7 percent and 9.6 percent of net sales for the third quarter of 2022 and 2021, respectively.

Financial Measures

Operating profit was $205.7 million for the third quarter of 2022 compared with $173.1 million for the third quarter of 2021. Net income was $146.1 million for the third quarter of 2022 compared with $118.4 million for the third quarter of 2021. Adjusted EBITDA was $251.0 million for the third quarter of 2022 compared with $237.8 million for the third quarter of 2021. The reasons for the changes in operating profit, net income, and Adjusted EBITDA for each segment are described below in the "Segment Review."

Trends

The overall macro-economic environment for our fourth quarter is mixed. There are economic indicators that reflect strength, while others are negative. We experienced softening customer demand in July with continuation into August. We anticipate this softening to continue through the fourth quarter. We anticipate global steel costs will continue to decline at a moderate pace. Resin and old corrugated container prices are also expected to decline, but we anticipate other direct materials, such as transportation, labor and utilities, to continue to see inflationary pressure through the year.

We will continue to actively monitor the impact and consequences of the invasion of Ukraine by Russia. As of July 31, 2022, our operations in Russia account for approximately 3% of our total sales and approximately 2% of our total assets.

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, 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 $906.7 million for the third quarter of 2022 compared with $907.8 million for the third quarter of 2021. The $1.1 million decrease was primarily due to the impact to net sales resulting from the FPS Divestiture, foreign currency translation and lower volumes, offset by higher average selling prices.

Gross profit was $177.7 million for the third quarter of 2022 compared with $199.4 million for the third quarter of 2021. The $21.7 million decrease in gross profit was primarily due to the same factors that impacted net sales and higher raw material costs, partially offset by lower labor costs. Gross profit margin was 19.6 percent and 22.0 percent for the three months ended July 31, 2022 and 2021, respectively.

Operating profit was $107.2 million for the third quarter of 2022 compared with operating profit of $122.0 million for the third quarter of 2021. The $14.8 million decrease was primarily due to the same factors that impacted gross profit, partially offset by lower SG&A expenses. Adjusted EBITDA was $117.1 million for the third quarter of 2022 compared with $146.2 million for the third quarter of 2021. The $29.1 million decrease in Adjusted EBITDA was primarily due to the same factors that impacted operating profit.

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;
- Acquisition of businesses and facilities;
- Restructuring charges; and
- Divestiture of businesses and facilities.

Net sales were $710.2 million for the third quarter of 2022 compared with $578.8 million for the third quarter of 2021. The $131.4 million increase was primarily due to higher published containerboard and boxboard prices, partially offset by lower volumes.

Gross profit was $167.3 million for the third quarter of 2022 compared with $118.0 million for the third quarter of 2021. The $49.3 million increase in gross profit was primarily due to the same factors that impacted net sales, partially offset by higher raw material, transportation, labor and utility costs. Gross profit margin was 23.6 percent and 20.4 percent for the third quarter of 2022 and 2021, respectively.

Operating profit was $96.7 million for the third quarter of 2022 compared with $47.5 million for the third quarter of 2021. The $49.2 million increase was primarily due to the same factors that impacted gross profit. Adjusted EBITDA was $131.8 million for the third quarter of 2022 compared with $89.9 million for the third quarter of 2021. The $41.9 million increase in Adjusted EBITDA was primarily due to the same factors that impacted operating profit, partially offset by higher SG&A expenses.

Land Management

As of July 31, 2022, 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 $5.2 million for the third quarter of 2022 compared with $4.2 million for the third quarter of 2021.

Gross profit was $1.9 million for the third quarter of 2022 compared with $1.4 million for the third quarter of 2021.

Operating profit was $1.8 million for the third quarter of 2022 compared with $3.6 million for the third quarter of 2021. Adjusted EBITDA was $2.1 million and $1.7 million for the third quarter of 2022 and 2021, 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 July 31, 2022, 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 third quarter of 2022 was $39.9 million on $184.4 million of pretax income and income tax expense for the third quarter of 2021 was $33.1 million on $149.4 million of pretax income. The quarterly increase in income tax expense in 2022 was primarily attributable to an increase in pre-tax earnings. Changes in the expected mix of earnings among tax jurisdictions, including jurisdictions for which valuation allowances have been recorded, as well as the timing of recognition of the related tax expense under ASC 740-270 also contributed to the increase in tax expense in 2022. Increases in tax expense as a result of increased pre-tax book earnings were offset by net favorable discrete items in 2022 resulting in an additional $4.8 million tax benefit compared to 2021. Decreases in discrete tax expense of $6.2 million were the result of return to provision adjustments and the recognition of certain state basis adjustments and a decrease in withholding taxes, offset by an increase in discrete tax expense of $1.4 million resulting from the recognition of the impact of foreign and U.S. statutory tax rate changes on deferred tax liabilities.

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 $8.0 million. Actual results may differ materially from this estimate.

Year-to-Date Results

The following table sets forth the net sales, operating profit, EBITDA and Adjusted EBITDA for each of our business segments for the nine months ended July 31, 2022 and 2021:

(in millions)	Nine Months Ended July 31, 2022	Nine Months Ended July 31, 2021
Net sales:		
Global Industrial Packaging	$ 2,827.5	$ 2,365.1
Paper Packaging & Services	2,009.5	1,596.7
Land Management	16.7	16.1
Total net sales	$ 4,853.7	$ 3,977.9
Operating profit:		
Global Industrial Packaging	$ 246.2	$ 252.4
Paper Packaging & Services	215.1	89.1
Land Management	6.5	102.2
Total operating profit	$ 467.8	$ 443.7
EBITDA:		
Global Industrial Packaging	$ 301.1	$ 315.9
Paper Packaging & Services	322.1	191.1
Land Management	8.7	104.8
Total EBITDA	$ 631.9	$ 611.8
Adjusted EBITDA:		
Global Industrial Packaging	$ 362.2	$ 331.9
Paper Packaging & Services	329.7	214.3
Land Management	6.9	6.7
Total Adjusted EBITDA	$ 698.8	$ 552.9

The following table sets forth EBITDA and Adjusted EBITDA, reconciled to net income and operating profit, for our consolidated results for the nine months ended July 31, 2022 and 2021:

	Nine Months Ended July 31,	
(in millions)	2022	2021
Net income	$ 291.4	$ 303.3
Plus: interest expense, net	44.3	75.8
Plus: debt extinguishment charges	25.4	—
Plus: income tax expense	105.4	56.5
Plus: depreciation, depletion and amortization expense	165.4	176.2
EBITDA	$ 631.9	$ 611.8
Net income	$ 291.4	$ 303.3
Plus: interest expense, net	44.3	75.8
Plus: non-cash pension settlement charges	—	9.0
Plus: debt extinguishment charges	25.4	—
Plus: income tax expense	105.4	56.5
Plus: other expense, net	4.9	2.2
Plus: equity earnings of unconsolidated affiliates, net of tax	(3.6)	(3.1)
Operating profit	467.8	443.7
Less: other expense, net	4.9	2.2
Less: non-cash pension settlement charges	—	9.0
Less: equity earnings of unconsolidated affiliates, net of tax	(3.6)	(3.1)
Plus: depreciation, depletion and amortization expense	165.4	176.2
EBITDA	$ 631.9	$ 611.8
Plus: restructuring charges	10.3	18.8
Plus: timberland gains	—	(95.7)
Plus: integration related costs	5.8	6.2
Plus: non-cash asset impairment charges	63.1	1.5
Plus: non-cash pension settlement charges	—	9.0
Plus: incremental COVID-19 costs, net	—	2.6
Plus: gain on disposal of properties, plants, equipment, and businesses, net	(12.3)	(1.3)
Adjusted EBITDA	$ 698.8	$ 552.9

The following table sets forth EBITDA and Adjusted EBITDA for our business segments, reconciled to the operating profit for each segment, for the nine months ended July 31, 2022 and 2021:

(in millions)	Nine Months Ended July 31, 2022	Nine Months Ended July 31, 2021
Global Industrial Packaging		
Operating profit	$ 246.2	$ 252.4
Less: other expense, net	5.2	2.1
Less: non-cash pension settlement charges	—	0.3
Less: equity earnings of unconsolidated affiliates, net of tax	(3.6)	(3.1)
Plus: depreciation and amortization expense	56.5	62.8
EBITDA	$ 301.1	$ 315.9
Plus: restructuring charges	6.3	14.6
Plus: integration related costs	0.3	—
Plus: non-cash impairment charges	62.4	1.5
Plus: non-cash pension settlement charges	—	0.3
Plus: incremental COVID-19 costs, net	—	1.3
Plus: gain on disposal of properties, plants and equipment, and businesses, net	(7.9)	(1.7)
Adjusted EBITDA	$ 362.2	$ 331.9
Paper Packaging & Services		
Operating profit	$ 215.1	$ 89.1
Less: other (income) expense, net	(0.3)	0.1
Less: non-cash pension settlement charges	—	8.7
Plus: depreciation and amortization expense	106.7	110.8
EBITDA	$ 322.1	$ 191.1
Plus: restructuring charges	4.0	4.1
Plus: integration related costs	5.5	6.2
Plus: non-cash impairment charges	0.7	—
Plus: non-cash pension settlement charges	—	8.7
Plus: incremental COVID-19 costs, net	—	1.3
Plus: (gain) loss on disposal of properties, plants and equipment, and businesses, net	(2.6)	2.9
Adjusted EBITDA	$ 329.7	$ 214.3
Land Management		
Operating profit	$ 6.5	$ 102.2
Plus: depreciation and depletion expense	2.2	2.6
EBITDA	$ 8.7	$ 104.8
Plus: restructuring charges	—	0.1
Plus: timberland gains	—	(95.7)
Plus: gain on disposal of properties, plants and equipment, and businesses, net	(1.8)	(2.5)
Adjusted EBITDA	$ 6.9	$ 6.7

Net Sales

Net sales were $4,853.7 million for the first nine months of 2022 compared with $3,977.9 million for the first nine months of 2021. The $875.8 million increase was primarily due to higher average sale prices across the Global Industrial Packaging segment and higher published containerboard and boxboard prices in the Paper Packaging & Services segment, partially offset by the impact to net sales resulting from the FPS Divestiture. See the "Segment Review" below for additional information on net sales by segment during the first nine months of 2022.

Gross Profit

Gross profit was $975.3 million for the first nine months of 2022 compared with $796.9 million for the first nine months of 2021. The $178.4 million increase was primarily due to the same factors that impacted net sales, offset by higher raw material, transportation, labor and utility costs. See “Segment Review” below for additional information on gross profit by segment. Gross profit margin was 20.1 percent and 20.0 percent for first nine months of 2022 and 2021, respectively.

Selling, General and Administrative Expenses

SG&A expenses increased to $440.6 million for the first nine months of 2022 from $423.7 million for the first nine months of 2021. SG&A expenses were 9.1 percent and 10.7 percent of net sales for first nine months of 2022 and 2021, respectively. The increase in SG&A expenses was primarily due to increased incentive accruals.

Financial Measures

Operating profit was $467.8 million for the first nine months of 2022 compared with $443.7 million for the first nine months of 2021. Net income was $291.4 million for the first nine months of 2022 compared with $303.3 million for the first nine months of 2021. Adjusted EBITDA was $698.8 million for the first nine months of 2022 compared with $552.9 million for the first nine months of 2021. The reasons for the changes in operating profit, net income, and Adjusted EBITDA for each segment are described below in the "Segment Review."

Segment Review

Global Industrial Packaging

Net sales were $2,827.5 million for the first nine months of 2022 compared with $2,365.1 million for the first nine months of 2021. The $462.4 million increase in net sales was primarily due to higher average selling prices, partially offset by the impact to net sales resulting from the FPS Divestiture, lower volumes and foreign currency translation.

Gross profit was $540.1 million for the first nine months of 2022 compared with $499.8 million for the first nine months of 2021. The $40.3 million increase in gross profit was primarily due to the same factors that impacted net sales, partially offset by higher raw material costs. Gross profit margin was 19.1 percent and 21.1 percent for the first nine months of 2022 and 2021, respectively.

Operating profit was $246.2 million for the first nine months of 2022 compared with $252.4 million for the first nine months of 2021. The $6.2 million decrease in operating profit was primarily due to the $62.4 million non-cash impairment charge related to the FPS Divestiture, partially offset by the same factors that increased gross profit. Adjusted EBITDA was $362.2 million for the first nine months of 2022 compared with $331.9 million for the first nine months of 2021. The $30.3 million increase in Adjusted EBITDA was primarily due to the same factors that impacted gross profit.

Paper Packaging & Services

Net sales were $2,009.5 million for the first nine months of 2022 compared with $1,596.7 million for the first nine months of 2021. The $412.8 million increase in net sales was primarily due to higher published containerboard and boxboard prices.

Gross profit was $428.9 million for the first nine months of 2022 compared with $291.5 million for the first nine months of 2021. The $137.4 million increase in gross profit was primarily due to the same factors that impacted net sales, partially offset by higher raw material, transportation, labor and utility costs. Gross profit margin was 21.3 percent and 18.3 percent for the first nine months of 2022 and 2021, respectively.

Operating profit was $215.1 million for the first nine months of 2022 compared with $89.1 million for the first nine months of 2021. The $126.0 million increase in operating profit was primarily due to the same factors that impacted gross profit, partially offset by higher SG&A expenses. Adjusted EBITDA was $329.7 million for the first nine months of 2022 compared with $214.3 million for the first nine months of 2021. The $115.4 million increase in Adjusted EBITDA was primarily due to the same factors that impacted operating profit.

Land Management

Net sales were $16.7 million for the first nine months of 2022 compared with $16.1 million for the first nine months of 2021.

Gross profit was $6.3 million for the first nine months of 2022 compared with $5.6 million for the first nine months of 2021.

Operating profit decreased to $6.5 million for the first nine months of 2022 compared with $102.2 million for the first nine months of 2021. During the first nine months of 2021, we completed the sale of approximately 69,200 acres of timberlands in southwest Alabama (the "2021 Timberland Sale") which resulted in timberland gains of $95.7 million. Adjusted EBITDA was $6.9 million and $6.7 million for the first nine months of 2022 and 2021, respectively.

Income tax expense

Income tax expense for the quarter and year to date 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. Our 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.

Income tax expense for the first nine months of 2022 was $105.4 million on $393.2 million of pretax income and income tax expense for the first nine months of 2021 was $56.5 million on $356.7 million of pretax income. The $48.9 million increase in income tax expense in 2022 was primarily attributable to an increase in pre-tax earnings, excluding the gain on the 2021 Timberland Sale and the gain on the FPS Divestiture, the tax impact of which were recognized discretely. Changes in the expected mix of earnings among tax jurisdictions, including jurisdictions for which valuation allowances have been recorded, as well as the timing of recognition of the related tax expense under ASC 740-270 also contributed to the increase in tax expense in 2022. Additionally, favorable discrete items decreased by a net $1.7 million in 2022 compared to 2021. The net decrease in favorable discrete adjustments consists of an increase in tax expense of $5.4 million due to tax basis adjustments in certain tangible property and state basis differences; an increase in tax expense of $2.4 million related to the impact of statutory tax rate changes on deferred tax liabilities; and an increase in tax expense of $0.3 million related to other miscellaneous items; offset by a $3.6 million decrease in unrecognized tax liabilities primarily as a result of expiration of the statute of limitations; and a net $2.8 million tax expense decrease related to certain assumptions regarding capital losses that are expected to offset capital gains resulting from the 2021 Timberland Sale, return to provision adjustments, and prior year settlement of U.S. Federal and Canadian income tax audits. Additionally, a net $58.6 million book expense was recorded in 2022 related to the FPS Divestiture and the disposition of other businesses on which there is expected to be no tax benefit.

Other Comprehensive Income (Loss) Changes

Foreign currency translation

In accordance with ASC 830, “Foreign Currency Matters,” the assets and liabilities denominated in a foreign currency are translated into United States Dollars at the rate of exchange existing at the end of the current period, and revenues and expenses are translated at average exchange rates over the month in which they are incurred. The cumulative translation adjustments, which represent the effects of translating assets and liabilities of our international operations, are presented in the interim condensed consolidated statements of changes in equity in accumulated other comprehensive income (loss). During the first nine months of 2022, we completed the FPS Divestiture and $113.1 million of foreign currency translation adjustment was released.

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

Nine Months Ended July 31, *(in millions)*	**2022**	**2021**
Net cash provided by operating activities	$ 370.9	$ 258.7
Net cash provided by investing activities	34.7	86.2
Net cash used in financing activities	(343.8)	(354.1)
Effects of exchange rates on cash	(58.9)	3.1
Net (decrease) increase in cash and cash equivalents	2.9	(6.1)
Cash and cash equivalents at beginning of year	124.6	105.9
Cash and cash equivalents at end of period	$ 127.5	$ 99.8

Operating Activities

The $20.8 million decrease in accounts receivable to $868.7 million as of July 31, 2022 from $889.5 million as of October 31, 2021 was primarily due to the accounts receivable that were deconsolidated as a result of the FPS Divestiture, partially offset by higher average sale prices.

The $20.7 million decrease in inventories to $478.5 million as of July 31, 2022 from $499.2 million as of October 31, 2021 was primarily due to the inventories that were deconsolidated as result of the FPS Divestiture, partially offset by increased inventory to meet customer demand.

The $62.4 million decrease in accounts payable to $642.1 million as of July 31, 2022 from $704.5 million as of October 31, 2021 was primarily due to the accounts payable that were deconsolidated as result of the FPS Divestiture, as well as timing of payable settlements.

Investing Activities

During the first nine months of 2022 and 2021, we invested $112.2 million and $94.2 million, respectively, of cash in capital expenditures. Additionally, during the first nine months of 2022 we received $139.2 million of cash from sale of businesses, primarily from the FPS Divestiture. There was no activity for the sale of business for the comparable period in 2021.

Financing Activities

During the first nine months of 2022 and 2021, we paid cash dividends to stockholders of Greif, Inc. in the amount of $82.0 million and $78.4 million, respectively. We also paid down $153.0 million and $329.5 million of long-term debt, net of proceeds, for the first nine months of 2022 and 2021, respectively. During the first nine months of 2022 we paid $20.8 million of debt extinguishment charges and debt issuance costs related to our debt refinancing. As discussed below, we also paid $75.0 million under an accelerated share repurchase ("ASR") program during the first nine months of 2022. We did not have similar charges or activities for the same period in 2021.

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 the Company's Class A or Class B Common Stock or any combination thereof.

On June 23, 2022, we entered into a $75.0 million ASR agreement with Bank of America, N.A. to repurchase shares of the Company's Class A Common Stock. Under the ASR, 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, on June 24, 2022 with any remaining shares expected to be delivered by the end of our first 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 plan to repurchase an aggregate of $75.0 million of shares of Class A or Class B Common Stock, or any combination thereof, in open market purchases ("OSR"). Repurchases under the OSR may be made on the open market over the next 12 to 18 months 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 July 31, 2022, there have been no shares repurchased under the OSR.

See Note 9 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)	**July 31, 2022**	**October 31, 2021**
2022 Credit Agreement - Term Loans	$ 1,565.0	$ —
2019 Credit Agreement - Term Loans	—	1,247.3
Senior Notes due 2027	—	495.9
Accounts receivable credit facilities	402.0	391.1
2022 Credit Agreement - Revolving Credit Facility	78.4	—
2019 Credit Agreement - Revolving Credit Facility	—	50.5
Other debt	0.4	0.6
	2,045.8	2,185.4
Less: current portion	50.9	120.3
Less: deferred financing costs	8.8	10.3
Long-term debt, net	$ 1,986.1	$ 2,054.8

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 commencing on July 31, 2022 and continuing 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 commencing on July 31, 2022 and continuing 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.

We used the borrowings under the 2022 Credit Agreement on March 1, 2022, to redeem our senior notes due 2027 and to repay and refinance all of the outstanding borrowings under the 2019 Credit Agreement, and will use the borrowings thereunder to fund ongoing working capital and capital expenditure needs and for general corporate purposes, including acquisitions, and to pay related fees and expenses. 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 July 31, 2022, we had $721.6 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 July 31, 2022, we were in compliance with these covenants.

United States Trade Accounts Receivable Credit Facility

Greif Receivables Funding LLC, Greif Packaging LLC, and certain of our other U.S. subsidiaries are parties to an amended and restated U.S. receivables financing facility (the “U.S. Receivables Facility”). On May 17, 2022, the current U.S. Receivables Facility was amended to provide an accounts receivable financing facility of $300.0 million, with a maturity date of May 17, 2023. As of July 31, 2022, there was $300.0 million outstanding balance under the U.S. Receivables Facility that is reported as long-term debt on the interim condensed consolidated balance sheets because we intend to refinance these obligations on a long-term basis and has the intent and ability to consummate a long-term refinancing by exercising the renewal option in the applicable agreement or entering into new financing arrangements.

We may terminate the U.S. Receivables Facility at any time upon five days prior written notice. The U.S. Receivables Facility is secured by certain of our United States trade accounts receivables and bears interest at a variable rate based on the SOFR or an applicable base rate, plus a margin, or a commercial paper rate plus a margin. Interest is payable on a monthly basis and the principal balance is payable upon termination of the U.S. Receivables Facility. 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 July 31, 2022, 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

Cooperage Receivables Finance B.V. and Greif Services Belgium BV, an indirect wholly owned subsidiary of Greif, Inc., are parties to an amended and restated Nieuw Amsterdam Receivables Financing Agreement (the "European RFA"). 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 ($102.0 million as of July 31, 2022) secured by certain European accounts receivable. The $102.0 million outstanding on the European RFA as of July 31, 2022 is reported as long-term debt on the interim condensed 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 exercising the renewal option in the applicable agreement or entering into new financing arrangements.

We may terminate the European RFA at any time upon one calendar month prior written notice. The European RFA is secured by certain of our international trade accounts receivables and bears interest at a commercial paper rate plus a margin. Interest is payable on a monthly basis and the principal balance is payable upon termination of the European RFA. The European RFA also contains events of default and covenants, which are substantially the same as the covenants under the 2022 Credit Agreement. As of July 31, 2022, we were in compliance with these covenants. Proceeds of the European RFA are available for working capital and general corporate purposes.

Financial Instruments

Interest Rate Derivatives

In July 2022 and August 2022, we entered into seven forward starting interest rate swaps, effective October 11, 2022, with a total notional amount of $350.0 million, maturing on March 1, 2027. We receive variable rate interest payments based upon one-month U.S. dollar SOFR, and in return we are obligated to pay interest at a weighted-average interest rate of 2.61% plus a spread.

As of July 31, 2022, we have various interest rate swaps with a total notional amount of $850.0 million in which we receive variable interest rate payments and in return are obligated to pay interest at a weighted average fixed interest rate of 2.07%, plus an interest 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 are 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 July 31, 2022, and October 31, 2021, we had outstanding foreign currency forward contracts in the notional amount of $117.9 million, and $81.8 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 a mixture of net investment hedges and 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 4 to the interim condensed consolidated financial statements included in Item 1 of this Form 10-Q for additional disclosure 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 2021 Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES

Changes in Internal Control Over Financial Reporting

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 2021 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. to repurchase shares of the Company's Class A Common Stock. Under the ASR, 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, on June 24, 2022 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.

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"). Repurchases under the OSR may be made on the open market over the next 12 to 18 months 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 July 31, 2022, there have been no shares repurchased under the OSR.

See Note 9 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 July 31, 2022, the Company repurchased the following shares of its Class A and Class B Common Stock:

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
May 1, 2022 to May 31, 2022	—	$ —	—	$ —	—	$ —
June 1, 2022 to June 30, 2022	1,021,451	58.74	—	—	1,021,451	75,000,000
July 1, 2022 to July 31, 2022	—	—	—	—	—	75,000,000
Total	1,021,451	58.74	—	—	1,021,451	

*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.
101	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended July 31, 2022, 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: September 1, 2022

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

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: September 1, 2022

/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: September 1, 2022

/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 July 31, 2022, 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: September 1, 2022

/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 July 31, 2022, 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: September 1, 2022

/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.