Quad/Graphics, Inc.
Form 10-Q
May 01, 2019
Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2019
or
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number 001-34806
Quad/Graphics, Inc.
(Exact name of registrant as specified in its charter)

Wisconsin	39-1152983
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
N61 W23044 Harry's Way, Sussex, Wisconsin 53089-3995	(414) 566-6000
(Address of principal executive offices) (Zip Code)	(Registrant's telephone number, including area code)

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 x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer x	Accelerated filer o	
Non-accelerated filer o	Smaller reporting company o	
	Emerging growth company o	

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. o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ¨ No x
Indicate the number of shares outstanding of each of the issuer's classes of common stock as of the latest practicable date.

Class	Outstanding as of April 26, 2019
Class A Common Stock	37,979,598
Class B Common Stock	13,556,858

Class C Common Stock —

Table of Contents

QUAD/GRAPHICS, INC.
FORM 10-Q INDEX
For the Quarter Ended March 31, 2019

			Page No.
PART I	FINANCIAL INFORMATION		3
	ITEM 1.	Condensed Consolidated Financial Statements (Unaudited)	3
		Condensed Consolidated Statements of Operations (Unaudited)	3
		Condensed Consolidated Statements of Comprehensive Income (Loss) (Unaudited)	4
		Condensed Consolidated Balance Sheets (Unaudited)	5
		Condensed Consolidated Statements of Cash Flows (Unaudited)	6
		Notes to Condensed Consolidated Financial Statements (Unaudited)	8
	ITEM 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	43
	ITEM 3.	Quantitative and Qualitative Disclosures About Market Risk	66
	ITEM 4.	Controls and Procedures	68
PART II	OTHER INFORMATION		69
	ITEM 1.	Legal Proceedings	69
	ITEM 1A.	Risk Factors	69
	ITEM 2.	Unregistered Sales of Equity Securities and Use of Proceeds	69
	ITEM 6.	Exhibits	70
	Signatures		71

Table of Contents

PART I — FINANCIAL INFORMATION

ITEM 1. Condensed Consolidated Financial Statements (Unaudited)

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share data)
(UNAUDITED)

	Three Months Ended March 31,	
	2019	2018
Net sales		
Products	$805.1	$801.1
Services	199.6	166.4
Total net sales	1,004.7	967.5
Cost of sales		
Products	695.0	665.2
Services	142.1	127.2
Total cost of sales	837.1	792.4
Operating expenses		
Selling, general and administrative expenses	97.9	86.9
Depreciation and amortization	59.2	56.2
Restructuring, impairment and transaction-related charges	7.6	24.9
Total operating expenses	1,001.8	960.4
Operating income	2.9	7.1
Interest expense	21.8	17.3
Net pension income	(1.5)	(3.1)
Loss on debt extinguishment	15.9	—
Loss before income taxes and equity in loss (earnings) of unconsolidated entity	(33.3)	(7.1)
Income tax benefit	(10.6)	(3.3)
Loss before equity in loss (earnings) of unconsolidated entity	(22.7)	(3.8)
Equity in loss (earnings) of unconsolidated entity	0.1	(0.3)
Net loss	(22.8)	(3.5)
Less: net loss attributable to noncontrolling interests	(0.3)	—
Net loss attributable to Quad common shareholders	$(22.5)	$(3.5)
Loss per share attributable to Quad common shareholders		
Basic and diluted	$(0.45)	$(0.07)
Weighted average number of common shares outstanding		
Basic and diluted	49.6	50.1

See accompanying Notes to Condensed Consolidated Financial Statements (Unaudited).

Table of Contents

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in millions)
(UNAUDITED)

	Three Months Ended March 31,	
	2019	2018
Net loss	$(22.8)	$(3.5)
Other comprehensive (loss) income		
Translation adjustments	(0.3)	5.6
Interest rate swap adjustments	(3.7)	3.7
Other comprehensive (loss) income, before tax	(4.0)	9.3
Income tax impact related to items of other comprehensive (loss) income	0.9	(0.8)
Other comprehensive (loss) income, net of tax	(3.1)	8.5
Total comprehensive (loss) income	(25.9)	5.0
Less: comprehensive loss attributable to noncontrolling interests	(0.3)	—
Comprehensive (loss) income attributable to Quad common shareholders	$(25.6)	$5.0

See accompanying Notes to Condensed Consolidated Financial Statements (Unaudited).

Table of Contents

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in millions)
(UNAUDITED)

	March 31, 2019	December 31, 2018
ASSETS		
Cash and cash equivalents	$10.4	$ 69.5
Receivables, less allowances for doubtful accounts of $28.0 million at March 31, 2019, and $27.6 million at December 31, 2018	512.3	528.7
Inventories	283.0	300.6
Prepaid expenses and other current assets	50.2	47.8
Total current assets	855.9	946.6
Property, plant and equipment—net	1,235.9	1,257.4
Operating lease right-of-use assets—net	127.3	—
Goodwill	114.8	54.6
Other intangible assets—net	172.6	112.6
Equity method investment in unconsolidated entity	3.9	4.0
Other long-term assets	92.8	93.9
Total assets	$2,603.2	$ 2,469.1
LIABILITIES AND SHAREHOLDERS' EQUITY		
Accounts payable	$419.3	$ 511.0
Accrued liabilities	247.8	292.3
Short-term debt and current portion of long-term debt	52.4	42.9
Current portion of finance lease obligations	5.1	5.1
Current portion of operating lease obligations	33.6	—
Total current liabilities	758.2	851.3
Long-term debt	1,074.5	882.6
Finance lease obligations	9.8	10.3
Operating lease obligations	97.2	—
Deferred income taxes	19.9	32.1
Other long-term liabilities	223.7	232.6
Total liabilities	2,183.3	2,008.9
Commitments and contingencies (Note 8)		
Shareholders' equity		
Preferred stock	—	—
Common stock, Class A	1.0	1.0
Common stock, Class B	0.4	0.4
Common stock, Class C	—	—
Additional paid-in capital	836.2	861.3
Treasury stock, at cost	(29.9)	(56.6)
Accumulated deficit	(249.9)	(211.4)
Accumulated other comprehensive loss	(155.3)	(152.2)
Quad's shareholders' equity	402.5	442.5

Noncontrolling interests	17.4	17.7
Total shareholders' equity and noncontrolling interests	419.9	460.2
Total liabilities and shareholders' equity	$2,603.2	$ 2,469.1

See accompanying Notes to Condensed Consolidated Financial Statements (Unaudited).

Table of Contents

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(UNAUDITED)

	Three Months Ended March 31,	
	2019	2018
OPERATING ACTIVITIES		
Net loss	$(22.8)	$(3.5)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	59.2	56.2
Employee stock ownership plan contribution	—	22.3
Impairment charges	1.7	7.9
Amortization of debt issuance costs and original issue discount	1.1	0.9
Loss on debt extinguishment	15.9	—
Stock-based compensation	5.0	5.4
Gain from property insurance claims	(0.8)	(17.2)
Gain on the sale or disposal of property, plant and equipment	(3.0)	(2.2)
Deferred income taxes	(10.7)	0.9
Equity in loss (earnings) of unconsolidated entity	0.1	(0.3)
Changes in operating assets and liabilities—net of acquisitions	(104.3)	(68.2)
Net cash (used in) provided by operating activities	(58.6)	2.2
INVESTING ACTIVITIES		
Purchases of property, plant and equipment	(45.3)	(24.2)
Proceeds from the sale of property, plant and equipment	7.8	4.3
Proceeds from property insurance claims	0.3	13.4
Acquisition of businesses—net of cash acquired	(121.0)	(73.9)
Net cash used in investing activities	(158.2)	(80.4)
FINANCING ACTIVITIES		
Proceeds from issuance of long-term debt	490.4	—
Payments of long-term debt	(534.3)	(5.0)
Payments of finance lease obligations	(1.6)	(1.6)
Borrowings on revolving credit facilities	1,239.3	245.5
Payments on revolving credit facilities	(990.1)	(174.0)
Payments of debt issuance costs and financing fees	(20.2)	—
Proceeds from stock options exercised	—	4.0
Equity awards redeemed to pay employees' tax obligations	(6.6)	(7.5)
Payment of cash dividends	(19.2)	(17.2)
Net cash provided by financing activities	157.7	44.2
Effect of exchange rates on cash and cash equivalents	—	(0.2)
Net decrease in cash and cash equivalents	(59.1)	(34.2)
Cash and cash equivalents at beginning of period	69.5	64.4
Cash and cash equivalents at end of period	$10.4	$30.2

See accompanying Notes to Condensed Consolidated Financial Statements (Unaudited).

6

Table of Contents

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
AND NONCONTROLLING INTERESTS
(in millions)
(UNAUDITED)

Condensed Consolidated Statement of Shareholders' Equity For the Three Months Ended March 31, 2019

	Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive Loss	Shareholders' Equity	Noncontrolling Interests
	Shares	Amount		Shares	Amount				
Balance at January 1, 2019	54.3	$ 1.4	$ 861.3	(2.7)	$ (56.6)	$ (211.4)	$ (152.2)	$ 442.5	$ 17.7
Net loss	—	—	—	—	—	(22.5)	—	(22.5)	(0.3)
Foreign currency translation adjustments	—	—	—	—	—	—	(0.3)	(0.3)	—
Interest rate swap adjustments, net of tax	—	—	—	—	—	—	(2.8)	(2.8)	—
Cash dividends declared ($0.30 per common share)	—	—	—	—	—	(16.0)	—	(16.0)	—
Stock-based compensation	—	—	5.0	—	—	—	—	5.0	—
Issuance of share-based awards, net of other activity	—	—	(30.1)	1.7	33.3	—	—	3.2	—
Awards redeemed to pay employees' tax obligations	—	—	—	(0.5)	(6.6)	—	—	(6.6)	—
Balance at March 31, 2019	54.3	$ 1.4	$ 836.2	(1.5)	$ (29.9)	$ (249.9)	$ (155.3)	$ 402.5	$ 17.4

Condensed Consolidated Statement of Shareholders' Equity For the Three Months Ended March 31, 2018

	Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive Loss	Shareholders' Equity	Noncontrolling Interests
	Shares	Amount		Shares	Amount				
Balance at January 1, 2018	54.3	$ 1.4	$ 861.1	(2.3)	$ (52.8)	$ (156.8)	$ (127.3)	$ 525.6	$ —
Net loss	—	—	—	—	—	(3.5)	—	(3.5)	—
Consolidation of Rise	—	—	—	—	—	—	—	—	30.0
Foreign currency translation adjustments	—	—	—	—	—	—	5.6	5.6	—
Interest rate swap adjustments, net of tax	—	—	—	—	—	—	2.9	2.9	—
Cash dividends declared ($0.30 per common share)	—	—	—	—	—	(16.1)	—	(16.1)	—
Stock-based compensation	—	—	5.4	—	—	—	—	5.4	—
Employee stock ownership plan contribution	—	—	—	1.0	22.3	—	—	22.3	—
Stock options exercised	—	—	(3.3)	0.3	7.3	—	—	4.0	—
Issuance of share-based awards, net of other activity	—	—	(12.8)	0.6	12.8	—	—	—	—
Awards redeemed to pay employees' tax obligations	—	—	—	(0.3)	(7.5)	—	—	(7.5)	—

Balance at March 31, 2018	54.3	$ 1.4	$ 850.4	(0.7)	$ (17.9)	$ (176.4)	$ (118.8)	$ 538.7	$ 30.0

See accompanying Notes to Condensed Consolidated Financial Statements (Unaudited).

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements for Quad/Graphics, Inc. and its subsidiaries (the "Company" or "Quad") have been prepared by the Company pursuant to the rules and regulations for interim financial information of the United States Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") have been omitted pursuant to such SEC rules and regulations. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated annual financial statements as of and for the year ended December 31, 2018, and notes thereto included in the Company's latest Annual Report on Form 10-K filed with the SEC on February 20, 2019.

The Company is subject to seasonality in its quarterly results as net sales and operating income are higher in the third and fourth quarters of the calendar year as compared to the first and second quarters. The fourth quarter is typically the highest seasonal quarter for cash flows from operating activities due to the reduction of working capital requirements that reach peak levels during the third quarter. Seasonality is driven by increased magazine advertising page counts, retail inserts, catalogs and books primarily due to back-to-school and holiday-related advertising and promotions. The Company expects this seasonality impact to continue in future years.

The financial information contained herein reflects all adjustments, in the opinion of management, necessary for a fair presentation of the Company's results of operations for the three months ended March 31, 2019 and 2018. All of these adjustments are of a normal recurring nature, except as otherwise noted. All intercompany transactions have been eliminated in consolidation. These unaudited condensed consolidated financial statements include estimates and assumptions of management that affect the amounts reported in the condensed consolidated financial statements. Actual results could differ from these estimates.

Leases

On January 1, 2019, the Company adopted Accounting Standards Update 2016-02, "Leases (Topic 842)" ("Topic 842"), which establishes a right-of-use model requiring a lessee to record a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than twelve months. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition. The Company adopted Topic 842 using the modified retrospective approach and applied the new guidance to those contracts existing at, or entered into after, January 1, 2019. See Note 10, "Leases," for additional accounting policy and transition disclosures.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 2. Revenue Recognition

Revenue Disaggregation

The following table provides information about disaggregated revenue by the Company's operating segments and major products and services offerings for the three months ended March 31, 2019 and 2018:

	United States Print and Related Services	International	Total
Three months ended March 31, 2019			
Catalog, publications, retail inserts, and directories	$ 485.7	$ 71.3	$557.0
Direct mail, books and other printed products	211.1	30.4	241.5
Other	6.5	0.1	6.6
Total Products	703.3	101.8	805.1
Logistics services	100.3	4.1	104.4
Imaging, marketing services and other services	95.1	0.1	95.2
Total Services	195.4	4.2	199.6
Total Net Sales	$ 898.7	$ 106.0	$1,004.7
Three months ended March 31, 2018			
Catalog, publications, retail inserts, and directories	$ 510.1	$ 76.5	$586.6
Direct mail, books and other printed products	189.7	17.9	207.6
Other	6.8	0.1	6.9
Total Products	706.6	94.5	801.1
Logistics services	97.8	5.2	103.0
Imaging, marketing services and other services	63.4	—	63.4
Total Services	161.2	5.2	166.4
Total Net Sales	$ 867.8	$ 99.7	$967.5

Nature of Products and Services

The Company recognizes its products and services revenue based on when the transfer of control passes to the customer or when the service is completed and accepted by the customer.
The products offering is predominantly comprised of the Company's print operations which includes retail inserts, publications, catalogs, special interest publications, journals, direct mail, books, directories, in-store marketing and promotion, packaging, newspapers, custom print products, other commercial and specialty printed products and global paper procurement.
The Company considers its logistic operations as services, which include the delivery of printed material. The Services offering also includes revenues related to the Company's imaging operations, which include digital content management, photography, color services, page production, marketing services, media planning and placement,

facilities management and medical services.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Costs to Obtain Contracts

In accordance with Accounting Standards Codification ("ASC") 606 — Revenue from Contracts with Customers, the Company capitalizes certain sales incentives of the sales compensation packages for costs that are directly attributed to being awarded a customer contract or renewal and would not have been incurred had the contract not been obtained. The Company also defers certain contract acquisition costs paid to the customer at contract inception. Costs to obtain contracts with a duration of less than one year are expensed as incurred. For all contract costs with contracts over one year, the Company amortizes the costs to obtain contracts on a straight-line basis over the estimated life of the contract and reviews quarterly for impairment. Activity impacting costs to obtain contracts for the three months ended March 31, 2019, was as follows:

	Costs to Obtain Contracts
Balance at January 1, 2019	$ 21.7
Costs to obtain contracts	1.7
Amortization of costs to obtain contracts	(2.4)
Balance at March 31, 2019	$ 21.0

Remaining Performance Obligations

For certain performance obligations related to print contracts, the Company has elected not to disclose the value of unsatisfied performance obligations for the following: (1) contracts that have an original expected length of one year or less; (2) contracts where revenue is recognized as invoiced; or (3) contracts with variable consideration related to unsatisfied performance obligations. The Company had approximately $415.0 million in volume commitments in contracts that extend beyond one year as of March 31, 2019. The Company expects to recognize approximately 31% of these volume commitments in contracts as revenue by the end of 2019, an additional 38% by the end of 2021, and the balance thereafter.

Note 3. Acquisitions and Strategic Investments

2019 Acquisition of Periscope

On January 3, 2019, the Company completed the acquisition of Periscope, Inc. ("Periscope"), a creative agency headquartered in Minneapolis, Minnesota, for $121.0 million cash paid. Periscope provides a comprehensive service offering, including media buying and analytics, creative and account management. Periscope also has packaging design and premedia services that complement Quad's print-production capabilities. The preliminary purchase price of $134.0 million includes $9.8 million of acquired cash and non-cash equity incentive awards with a grant date fair value of $3.2 million. Included in the preliminary purchase price allocation are $70.5 million of identifiable other intangible assets, which are amortized over their estimated useful lives, ranging from five to six years, and $60.2 million of goodwill, all of which is deductible for tax purposes. The preliminary allocation of the purchase price is based on valuations performed to determine the fair value of the net assets as of the acquisition date. The purchase price, as well as the purchase price allocation, is subject to the final determination of acquired working capital and completion of the final valuation of the net assets acquired. The net assets acquired, excluding acquired cash, were

classified as Level 3 in the valuation hierarchy (see Note 12, “Financial Instruments and Fair Value Measurements,” for the definition of Level 3 inputs). Periscope’s operations are included in the United States Print and Related Services segment.

2018 Ivie & Associates, LLC Acquisition

The Company completed the acquisition of Ivie & Associates, LLC (“Ivie”) on February 21, 2018, for $90.0 million cash paid, which is subject to a potential earn-out of up to an additional $16.0 million, to the extent that certain financial metrics are achieved post-integration. Ivie is headquartered in Flower Mound, Texas and provides a full array of marketing services, including creative and production services, studio services, sourcing, procurement, staff enhancement, media services, public

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

relations, digital services, technology solutions and project management for many leading brands throughout the world. The purchase price of $105.4 million includes $13.6 million of acquired cash and an estimated $15.4 million of future cash payments related to the acquisition. Included in the purchase price allocation are $79.6 million of identifiable other intangible assets, which are amortized over their estimated useful lives, ranging from three to eight years, and $28.3 million of goodwill, of which $26.4 million is deductible for tax purposes. The final allocation of the purchase price was based on valuations performed to determine the fair value of the net assets as of the acquisition date. The net assets acquired, excluding acquired cash, were classified as Level 3 in the valuation hierarchy (see Note 12, “Financial Instruments and Fair Value Measurements,” for the definition of Level 3 inputs). Ivie’s operations are included in the United States Print and Related Services segment.

2018 Investment in Rise Interactive and Analytics, LLC

On March 14, 2018, the Company increased its equity position in Rise Interactive and Analytics, LLC (“Rise”) from 19% to 57% for the conversion of $9.3 million of loans to equity ownership and $8.7 million cash paid. The Company had historically accounted for Rise as a cost method investment. Rise is a digital marketing agency headquartered in Chicago, Illinois, that specializes in digital media, analytics and customer experience, and helps enterprise marketers see, shape, and act on opportunities in digital media. The Company has consolidated the results of Rise as of the date the Company obtained controlling financial interest in Rise and accounts for the 43% portion of Rise’s results not owned by the Company as noncontrolling interest in the condensed consolidated financial statements. The fair value of the assets and liabilities of, and noncontrolling interest in, Rise is estimated to be $48.5 million, including $13.7 million of acquired cash. Also included in the fair value allocation are $23.1 million of identifiable other intangible assets, which are amortized over their estimated useful lives, ranging from five to six years, and $26.3 million of goodwill, which is not deductible for tax purposes. The final allocation of the purchase price was based on valuations performed to determine the fair value of the net assets as of the acquisition date. The net assets acquired, excluding acquired cash, were classified as Level 3 in the valuation hierarchy (see Note 12, “Financial Instruments and Fair Value Measurements,” for the definition of Level 3 inputs). Rise’s operations are included in the United States Print and Related Services segment.

Note 4. Restructuring, Impairment and Transaction-Related Charges

The Company recorded restructuring, impairment and transaction-related charges for the three months ended March 31, 2019 and 2018, as follows:

	Three Months Ended March 31,	
	2019	2018
Employee termination charges	$4.3	$10.6
Impairment charges	1.7	7.9
Transaction-related charges	1.5	0.7
Integration costs	0.8	0.1
Other restructuring (income) charges	(0.7)	5.6
Total	$7.6	$24.9

The costs related to these activities have been recorded in the condensed consolidated statements of operations as restructuring, impairment and transaction-related charges. See Note 19, “Segment Information,” for restructuring, impairment and transaction-related charges by segment.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Restructuring Charges

The Company began a restructuring program in 2010 related to eliminating excess manufacturing capacity and properly aligning its cost structure. The Company has announced a total of 43 plant closures since 2010. The Company recorded the following charges as a result of plant closures and other restructuring programs:

- Employee termination charges of $4.3 million and $10.6 million were recorded during the three months ended March 31, 2019 and 2018, respectively. The Company reduced its workforce through facility consolidations and separation programs.

- Integration costs of $0.8 million and $0.1 million were recorded during the three months ended March 31, 2019 and 2018, respectively, primarily for the integration of acquired companies.

- Other restructuring (income) charges are presented net of the gains on the sale of facilities, including a $3.5 million gain on the sale of the Hazleton, Pennsylvania facility during the three months ended March 31, 2019, and a $2.2 million gain on the sale of the San Ixhuatepec, Mexico facility during the three months ended March 31, 2018. The components of other restructuring (income) charges consisted of the following during the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
Vacant facility carrying costs and lease exit charges	$1.3	$6.6
Equipment and infrastructure removal costs	0.1	0.8
Gains on the sale of facilities	(3.5)	(2.2)
Other restructuring activities	1.4	0.4
Other restructuring (income) charges	$(0.7)	$5.6

The restructuring charges recorded were based on plans that have been committed to by management and were, in part, based upon management’s best estimates of future events. Changes to the estimates may require future restructuring charges and adjustments to the restructuring liabilities. The Company expects to incur additional restructuring charges related to these and other initiatives.

Impairment Charges

The Company recognized impairment charges of $1.7 million during the three months ended March 31, 2019, primarily for machinery and equipment no longer being utilized in production as a result of facility consolidations, as well as other capacity reduction restructuring activities.

The Company recognized impairment charges of $7.9 million during the three months ended March 31, 2018, which consisted of $2.4 million of land and building impairment charges and $5.5 million of impairment charges for machinery and equipment no longer being utilized in production as a result of facility consolidations, as well as other

capacity reduction restructuring activities.

The fair values of the impaired assets were determined by the Company to be Level 3 under the fair value hierarchy (see Note 12, “Financial Instruments and Fair Value Measurements,” for the definition of Level 3 inputs) and were estimated based on internal discounted cash flow estimates, quoted market prices where available and independent appraisals, as appropriate. These assets were adjusted to their estimated fair values at the time of impairment. If estimated fair values subsequently decline, the carrying values of the assets are adjusted accordingly.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Transaction-Related Charges

The Company incurs transaction-related charges primarily consisting of professional service fees related to business acquisition and divestiture activities. Transaction-related charges of $1.5 million and $0.7 million were recorded during the three months ended March 31, 2019 and 2018, respectively. The transaction-related charges were expensed as incurred in accordance with the applicable accounting guidance on business combinations.

Restructuring Reserves

Activity impacting the Company's restructuring reserves for the three months ended March 31, 2019, was as follows:

	Employee Termination Charges	Impairment Charges	Transaction-Related Charges	Integration Costs	Other Restructuring (Income) Charges	Total
Balance at December 31, 2018	$ 9.3	$ —	$ 1.2	$ 0.2	$ 17.1	$27.8
Expense (income), net	4.3	1.7	1.5	0.8	(0.7)	7.6
Cash payments, net	(3.9)	—	(1.1)	(1.0)	(0.6)	(6.6)
Non-cash adjustments/reclassifications	(0.5)	(1.7)	0.6	—	(5.0)	(6.6)
Balance at March 31, 2019	$ 9.2	$ —	$ 2.2	$ —	$ 10.8	$22.2

The Company's restructuring reserves at March 31, 2019, included a short-term and a long-term component. The short-term portion included $19.5 million in accrued liabilities (see Note 13, "Accrued Liabilities and Other Long-Term Liabilities") and $2.5 million in accounts payable in the condensed consolidated balance sheets as the Company expects these reserves to be paid within the next twelve months. The long-term portion of $0.2 million is included in other long-term liabilities (see Note 13, "Accrued Liabilities and Other Long-Term Liabilities") in the condensed consolidated balance sheets. Included in the above table is a $2.0 million non-cash reclassification to transition lease liabilities previously accounted for under ASC 420 — Exit or Disposal Cost Obligations, to operating lease obligations, in accordance with the new guidance under Topic 842. See Note 10, "Leases," for additional accounting policy and transition disclosures.

Note 5. Goodwill and Other Intangible Assets

Goodwill

Goodwill represents the excess of the purchase price over the fair value of identifiable net assets acquired in a business combination. Goodwill is assigned to specific reporting units and is tested annually for impairment as of October 31 or more frequently if events or changes in circumstances indicate that it is more likely than not that the fair value of a reporting unit is below its carrying value.

The Company recorded $60.2 million of preliminary goodwill within the United States Print and Related Services segment related to the Periscope acquisition completed during the three months ended March 31, 2019. The amount of preliminary goodwill is subject to the final determination of acquired working capital and completion of the final valuation of the net assets acquired. There was no other activity impacting goodwill for the three months ended

March 31, 2019.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The accumulated goodwill impairment losses and the carrying value of goodwill at March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019			December 31, 2018		
	United States Print and Related Services	International	Total	United States Print and Related Services	International	Total
Goodwill	$893.1	$ 30.0	$923.1	$832.9	$ 30.0	$862.9
Accumulated goodwill impairment loss	(778.3)	(30.0)	(808.3)	(778.3)	(30.0)	(808.3)
Goodwill, net of accumulated goodwill impairment loss	$114.8	$ —	$114.8	$54.6	$ —	$54.6

Other Intangible Assets

The components of finite-lived intangible assets at March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019				December 31, 2018			
	Weighted Average Amortization Period (Years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Weighted Average Amortization Period (Years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Trademarks, patents, licenses and agreements	6	$ 68.9	$ (25.1)	$ 43.8	7	$ 59.8	$ (22.4)	$ 37.4
Capitalized software	5	15.4	(5.9)	9.5	5	15.3	(5.1)	10.2
Customer relationships	6	576.8	(457.5)	119.3	6	514.7	(449.7)	65.0
Total		$ 661.1	$ (488.5)	$ 172.6		$ 589.8	$ (477.2)	$ 112.6

During the three months ended March 31, 2019, the gross carrying amount of other intangible assets increased primarily due to $70.5 million of acquired identifiable finite-lived intangible assets as discussed in Note 3, “Acquisitions and Strategic Investments.” The gross carrying amount and accumulated amortization within other intangible assets—net in the condensed consolidated balance sheets at March 31, 2019, and December 31, 2018, differs from the value originally recorded at acquisition due to impairment charges recorded in prior years and the effects of currency fluctuations since the purchase date.

Other intangible assets are evaluated for potential impairment whenever events or circumstances indicate that the carrying value may not be recoverable. There were no impairment charges recorded on finite-lived intangible assets for the three months ended March 31, 2019 and 2018.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Amortization expense for other intangible assets was $11.6 million and $5.8 million for the three months ended March 31, 2019 and 2018, respectively. The estimated future amortization expense related to other intangible assets as of March 31, 2019, was as follows:

	Amortization Expense
Remainder of 2019	$ 33.4
2020	39.3
2021	31.0
2022	28.5
2023	24.2
2024 and thereafter	16.2
Total	$ 172.6

Note 6. Inventories

The components of inventories at March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019	December 31, 2018
Raw materials and manufacturing supplies	$ 162.2	$ 170.8
Work in process	47.5	48.9
Finished goods	73.3	80.9
Total	$ 283.0	$ 300.6

Note 7. Property, Plant and Equipment

The components of property, plant and equipment at March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019	December 31, 2018
Land	$112.9	$ 115.3
Buildings	884.6	908.5
Machinery and equipment	3,550.2	3,549.1
Other[(1)]	181.5	178.6
Construction in progress	48.5	42.0
Property, plant and equipment—gross	$4,777.7	$ 4,793.5
Less: accumulated depreciation	(3,541.8)	(3,536.1)
Property, plant and equipment—net	$1,235.9	$ 1,257.4

(1) Other consists of computer equipment, vehicles, furniture and fixtures, leasehold improvements and communication-related equipment.

The Company recorded impairment charges of $1.7 million and $7.9 million for the three months ended March 31, 2019, and 2018 respectively, to reduce the carrying amounts of certain property, plant and equipment no longer utilized in production to fair value (see Note 4, “Restructuring, Impairment and Transaction-Related Charges,” for

further discussion on impairment charges).

The Company recognized depreciation expense of $47.6 million and $50.4 million for the three months ended March 31, 2019 and 2018, respectively.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Assets Held for Sale

The Company considered certain closed facilities for held for sale classification on the condensed consolidated balance sheets. The net book value of assets held for sale was $3.9 million as of March 31, 2019, and there were no assets held for sale as of December 31, 2018. These assets are carried at the lesser of original cost or fair value, less the estimated costs to sell. The fair values were determined by the Company to be Level 3 under the fair value hierarchy (see Note 12, “Financial Instruments and Fair Value Measurements,” for the definition of Level 3 inputs) and were estimated based on internal discounted cash flow estimates, quoted market prices when available and independent appraisals as appropriate. Assets held for sale are included in prepaid expenses and other current assets in the condensed consolidated balance sheets.

Note 8. Commitments and Contingencies

Litigation

The Company is named as a defendant in various lawsuits in which claims are asserted against the Company in the normal course of business. The liabilities, if any, which ultimately result from such lawsuits are not expected by management to have a material impact on the condensed consolidated financial statements of the Company.

In April 2016, the Company self-reported to the SEC and to the United States Department of Justice (“DOJ”) certain Foreign Corrupt Practices Act (“FCPA”) issues, and a resulting internal investigation, related to its operations managed from Peru. These operations had approximate annual sales ranging from $95.0 million to $135.0 million from the date that the Company acquired those operations in July 2010 until the date the issues were discovered. The self-reported issues were identified by the Company’s financial internal controls. The Company, under the oversight of its Audit Committee and Board of Directors, proactively initiated an investigation into this matter with the assistance of external legal counsel and external forensic accountants. Additional compliance issues arising out of the Peru subsidiary have been identified during the course of the investigation and are known to the SEC and DOJ. During the course of its internal investigation, the Company has also identified, and self-reported to the DOJ and SEC, transactions raising similar issues involving certain sales made in its Quad/Tech China operations. For the period 2011 through 2015, the approximate annual sales of these China operations ranged from $2.0 million to $3.0 million. During the course of its internal investigation, the Company has also identified and informed the Office of Foreign Assets Control (“OFAC”), the DOJ and the SEC, of certain transactions involving Cuba, and continues to investigate the propriety of such transactions under United States trade sanctions. The Peruvian antitrust authority (“INDECOPI”) currently is conducting an investigation into certain alleged past collusive activities among printers in Peru, including Quad/Graphics Peru. In connection with these matters, the Company has made, and continues to evaluate, certain enhancements to its compliance program. The Company is fully cooperating with the OFAC, the SEC, the DOJ and INDECOPI. At this time, the Company does not anticipate any material adverse effect on its business or financial condition as a result of these matters.

Environmental Reserves

The Company is subject to various laws, regulations and government policies relating to health and safety, to the generation, storage, transportation, and disposal of hazardous substances, and to environmental protection in general. The Company provides for expenses associated with environmental remediation obligations when such amounts are probable and can be reasonably estimated. Such reserves are adjusted as new information develops or as circumstances change. The environmental reserves are not discounted. The Company believes it is in compliance with such laws, regulations and government policies in all material respects. Furthermore, the Company does not anticipate that maintaining compliance with such environmental statutes will have a material impact upon the Company's condensed consolidated financial position.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 9. Debt

The components of long-term debt as of March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019	December 31, 2018
Master note and security agreement	$94.4	$ 96.2
Term loan A	32.4	281.3
Term loan B	485.4	279.5
Revolving credit facility	250.7	—
Senior unsecured notes	243.5	243.5
International term loans	19.8	17.8
International revolving credit facilities	10.2	11.8
Other	2.3	2.6
Debt issuance costs	(11.8)	(7.2)
Total debt	$1,126.9	$ 925.5
Less: short-term debt and current portion of long-term debt	(52.4)	(42.9)
Long-term debt	$1,074.5	$ 882.6

Fair Value of Debt

Based upon the interest rates available to the Company for borrowings with similar terms and maturities, the fair value of the Company's total debt was approximately $1.1 billion and $0.9 billion at March 31, 2019, and December 31, 2018, respectively. The fair value determination of the Company's total debt was categorized as Level 2 in the fair value hierarchy (see Note 12, "Financial Instruments and Fair Value Measurements," for the definition of Level 2 inputs).

2019 Senior Secured Credit Facility Amendment

The Company completed the third amendment to the April 28, 2014 Senior Secured Credit Facility on January 31, 2019. This third amendment was completed to provide Quad with the liquidity and structural flexibility to consummate the proposed acquisition of LSC Communications, Inc. ("LSC") and to extend existing maturities by (a) increasing the aggregate amount of the existing revolving credit facility from $725.0 million to $800.0 million in two tranches, with the first tranche of approximately $82.8 million maturing on January 4, 2021, and the second tranche of approximately $717.2 million, with a term of five years, maturing on January 31, 2024; (b) increasing the aggregate amount of the existing Term Loan A from $375.0 million to $825.0 million in two tranches, with the first tranche of approximately $32.4 million maturing on January 4, 2021, and the second tranche of approximately $792.6 million, with a delayed draw feature and term of five years, maturing on January 31, 2024; and (c) increasing the aggregate amount of the existing Term Loan B from $300.0 million to $500.0 million with a term of seven years, maturing on January 31, 2026. The Company intends that the loans available under the amended revolving credit facility will be used to repay, refinance, repurchase, redeem, exchange or otherwise terminate LSC's existing indebtedness prior to, in connection with or following the consummation of the merger, and to pay transaction expenses. Certain amendments were made to the quarterly financial covenants to which the Company is subject (all financial terms, numbers and ratios are as defined in the Senior Secured Credit Facility, as amended by the third

amendment).

Borrowings under the revolving credit facility and delayed draw Term Loan A made under the Senior Secured Credit Facility will initially bear interest at 2.50% in excess of reserve adjusted London Interbank Offered Rate ("LIBOR"), or 1.50% in excess of an alternate base rate, and borrowing under the Term Loan B will initially bear interest at 5.00% in excess of reserve adjusted LIBOR, or 4.00% in excess of an alternative base rate at the Company's option.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The Senior Secured Credit Facility remains secured by substantially all of the unencumbered assets of the Company. The Senior Secured Credit Facility also requires the Company to provide additional collateral to the lenders in certain limited circumstances.

The Company incurred $20.2 million in debt issuance costs in conjunction with the third amendment to the Company's Senior Secured Credit Facility. In accordance with the accounting guidance for the treatment of debt issuance costs in a debt extinguishment, of the $20.2 million in new debt issuance costs, $6.0 million was classified as a reduction of long-term debt in the condensed consolidated balance sheets and $14.2 million was expensed and was classified as loss on debt extinguishment in the condensed consolidated statements of operations during the three months ended March 31, 2019. In addition, a new original issue discount of $15.0 million related to the Term Loan B of the Senior Secured Credit Facility was classified as a reduction of long-term debt in the condensed consolidated balance sheets.

Debt Issuance Costs and Original Issue Discount

Activity impacting the Company's debt issuance costs for the three months ended March 31, 2019, was as follows:

	Capitalized Debt Issuance Costs
Balance at December 31, 2018	$ 7.2
Debt issuance costs from January 31, 2019 debt financing arrangement	6.0
Loss on debt extinguishment from February 10, 2017 debt financing arrangement	(0.7)
Amortization of debt issuance costs	(0.7)
Balance at March 31, 2019	$ 11.8

Activity impacting the Company's original issue discount for the three months ended March 31, 2019, was as follows:

	Original Issue Discount
Balance at December 31, 2018	$ 1.0
Original issue discount from January 31, 2019 debt financing arrangement	15.0
Loss on debt extinguishment from February 10, 2017 debt financing arrangement	(1.0)
Amortization of original issue discount	(0.4)
Balance at March 31, 2019	$ 14.6

2019 Loss on Debt Extinguishment

The loss on debt extinguishment recorded during the three months ended March 31, 2019, was comprised of the following:

	Loss on Debt Extinguishment
Debt issuance costs:	
Debt issuance costs from February 10, 2017 debt financing arrangement	$ 0.7

Debt issuance costs from January 31, 2019 debt financing arrangement	14.2
Original issue discount:	
Original issue discount from February 10, 2017 debt financing arrangement	1.0
Total	$ 15.9

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Covenants and Compliance

The Company's various lending arrangements include certain financial covenants (all financial terms, numbers and ratios are as defined in the Company's debt agreements). Among these covenants, the Company was required to maintain the following as of March 31, 2019:

- Total Leverage Ratio. On a rolling twelve-month basis, the total leverage ratio, defined as total consolidated debt to consolidated EBITDA, shall not exceed 3.75 to 1.00 (for the twelve months ended March 31, 2019, the Company's total leverage ratio was 2.90 to 1.00).

- Liquidity. The Company is required to maintain liquidity, defined as unrestricted cash and permitted investments of the Company and its subsidiaries (subject to certain conditions) plus the aggregate amount of the unused revolving credit facility commitments, of not less than $300.0 million at any time during the period from six months prior to the maturity date of the Company's unsecured 7.0% senior notes maturing on May 1, 2022, (the "Senior Unsecured Notes") until the earlier of the date on which (a) such Senior Unsecured Notes are repaid in full or (b) the maturity date of such Senior Unsecured Notes is extended to a date that is at least 91 days later than the latest maturity date under the Senior Secured Credit Facility. As of March 31, 2019, the liquidity covenant is not applicable, as the Company is not within the six month period prior to the May 1, 2022, maturity date of the Senior Unsecured Notes.

- If there is any amount outstanding on the Revolving Credit Facility or Term Loan A, or if any lender has any revolving credit exposure or Term Loan A credit exposure, the Company is required to maintain the following:
  Senior Secured Leverage Ratio. On a rolling twelve-month basis, the senior secured leverage ratio, defined as senior secured net debt to consolidated EBITDA, shall not exceed 3.50 to 1.00 (for the twelve months ended March 31, 2019, the Company's senior secured leverage ratio was 2.26 to 1.00).
  Interest Coverage Ratio. On a rolling twelve-month basis, the interest coverage ratio, defined as consolidated EBITDA to consolidated cash interest expense, shall not be less than 3.00 to 1.00 (for the twelve months ended March 31, 2019, the Company's interest coverage ratio was 5.38 to 1.00).

The indenture underlying the Company's $300.0 million aggregate principal amount of Senior Unsecured Notes contains various covenants, including, but not limited to, covenants that, subject to certain exceptions, limit the Company's and its restricted subsidiaries' ability to incur and/or guarantee additional debt; pay dividends, repurchase stock or make certain other restricted payments; enter into agreements limiting dividends and certain other restricted payments; prepay, redeem or repurchase subordinated debt; grant liens on assets; enter into sale and leaseback transactions; merge, consolidate, transfer or dispose of substantially all of the Company's consolidated assets; sell, transfer or otherwise dispose of property and assets; and engage in transactions with affiliates.

In addition to those covenants, the Senior Secured Credit Facility also includes certain limitations on acquisitions, indebtedness, liens, dividends and repurchases of capital stock, including the following:

- If the Company's total leverage ratio is greater than 2.75 to 1.00 (as defined in the Senior Secured Credit Facility), the Company is prohibited from making greater than $120.0 million of annual dividend payments, capital stock repurchases and certain other payments. If the total leverage ratio is less than 2.75 to 1.00, there are no such restrictions. As the Company's total leverage ratio as of March 31, 2019, was 2.90 to 1.00, the limitations described

above are currently applicable.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

- If the Company's senior secured leverage ratio is greater than 3.00 to 1.00 or the Company's total leverage ratio is greater than 3.50 to 1.00 (these ratios as defined in the Senior Secured Credit Facility), the Company is prohibited from voluntarily prepaying any of the Senior Unsecured Notes and from voluntarily prepaying any other unsecured or subordinated indebtedness, with certain exceptions (including any mandatory prepayments on the Senior Unsecured Notes or any other unsecured or subordinated debt). If the senior secured leverage ratio is less than 3.00 to 1.00 and the total leverage ratio is less than 3.50 to 1.00, there are no such restrictions.

Note 10. Leases

The Company determines if an arrangement is or contains a lease at contract inception. The Company recognizes a right-of-use ("ROU") asset and a lease liability at the lease commencement date.

For operating and finance leases, the lease liability is initially measured at the present value of the unpaid lease payments at the lease commencement date, and is subsequently measured at amortized cost using the effective interest method.

Key estimates and judgments include how the Company determines (1) the discount rate, (2) lease term and (3) lease payments.

- Topic 842 requires a lessee to discount its unpaid lease payments using the interest rate implicit in the lease or, if that rate cannot be readily determined, its incremental borrowing rate. Generally, the Company cannot determine the implicit interest rate as it does not have access to the lessor's estimated residual value or the amount of the lessor's deferred initial direct costs. Therefore, the Company generally uses its incremental borrowing rate as the discount rate for the lease. The Company's incremental borrowing rate for a lease is the rate of interest it would have to pay on a collateralized basis to borrow an amount equal to the lease payments under similar terms based on the published United States Treasury rates as well as the Company's credit rating at implementation or at the lease inception date.

- The lease term for all of the Company's leases includes the noncancelable period of the lease, plus or minus any additional periods covered by an option to extend or terminate the lease that the Company is reasonably certain to exercise.

- Lease payments included in the lease liability are comprised of fixed payments as well as any exercise price of a Company option to purchase the underlying asset if the Company is reasonably certain to exercise. The Company's leases do not contain variable lease payments.

ROU assets are initially measured at cost, which comprises the initial amount of the lease liability adjusted for lease payments made at or before the lease commencement date, plus any initial direct costs incurred less any lease incentives received. For Operating leases, the ROU asset is subsequently amortized by the straight-line lease expense adjusted by the lease liability accretion over the lease term.

For finance leases, the ROU asset is subsequently amortized on a straight-line basis from the lease commencement date to the earlier of the end of its useful life or the end of the lease term. Amortization of the ROU asset is recognized and presented separately from interest expense on the lease liability.

The Company's ROU assets for both operating and finance leases are reviewed for impairment losses on a quarterly basis in line with ASC 360-10 — Property, Plant, and Equipment — Overall. The Company has not recognized any impairment losses to date.

The Company also monitors its leases for events or changes in circumstances that require a reassessment of the lease. When a reassessment results in the remeasurement of a lease liability, a corresponding adjustment is made to the carrying amount of the ROU asset.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Operating leases are included in operating lease right-of-use assets, other current liabilities, and operating lease liabilities in our consolidated balance sheets. Finance leases are included in property and equipment, net, current portion of finance lease obligations, and finance lease obligations in our condensed consolidated balance sheets.

The Company has elected not to recognize ROU assets and lease liabilities for short-term leases that have an original lease term of 12 months or less. Therefore, the Company recognizes the lease payments associated with these short-term leases as an expense over the lease term on the consolidated statement of operations.

Adoption of Topic 842 — Transition Approach

The Company adopted Topic 842 as of January 1, 2019 using the additional optional transition method pursuant to ASU 2018-11, meaning that restatement of prior period consolidated financial statements or presentation of comparative disclosures is not necessary. During adoption, the Company elected the following practical expedients allowed:

- The Company elected the practical expedient package and therefore did not reassess for any existing leases:
  whether contracts are or contain leases;
  the lease classification for any existing leases; and
  any initial direct costs.

- The Company elected the practical expedient related to land easements, allowing to carry forward the accounting treatment for land easements on existing agreements.

- The Company used “hindsight” judgments that impact the lease term.

- The Company elected to combine lease and non-lease components into one lease component for select underlying lease asset categories. Real estate leases are accounted for separately while all other leases, primarily equipment, leases with separate lease and non-lease components are accounted for as a single lease component.

Adoption of the new standard resulted in the recording of operating lease right-of-use assets and operating lease obligations of $130.8 million and $132.4 million, respectively, as of January 1, 2019. The transition had no impact to the condensed consolidated statement of operations.

Leases Financial Information

The Company enters into various lease agreements for real estate, such as office space and manufacturing facilities, as well as equipment leases, including press, finishing and transportation equipment. Many of these leases provide the Company with options to renew, terminate, or in the case of equipment leases, purchase the related equipment at the termination value, as defined, and at various early buyout dates during the term of the lease. In general, the Company has determined these options were not reasonably certain to be exercised, and therefore are not included in the determination of the lease term.

21

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The following summarizes certain lease information for the three months ended, March 31, 2019:

	Three Months Ended March 31, 2019
Lease cost	
Finance lease cost:	
Amortization of right-of-use assets	$1.4
Interest on lease liabilities	0.2
Operating lease cost	10.9
Short-term lease cost	0.1
Sublease income	(0.6)
Total lease cost	$12.0
Other information	
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from finance leases	$—
Operating cash flows from operating leases	11.3
Financing cash flows from finance leases	1.6
Right-of-use assets obtained in exchange for new finance lease liabilities	1.1
Right-of-use assets obtained in exchange for new operating lease liabilities	6.0
Weighted-average remaining lease term — finance leases	3.1 years
Weighted-average remaining lease term — operating leases	5.4 years
Weighted-average discount rate — finance leases	6.5 %
Weighted-average discount rate — operating leases	6.7 %

Future maturities of lease liabilities at March 31, 2019 were as follows:

	Future Maturities of Operating Leases	Future Maturities of Finance Leases
Remainder of 2019	$ 32.9	$ 4.5
2020	36.0	5.1
2021	24.7	4.4
2022	18.2	2.0
2023	14.0	0.2
2024 and thereafter	31.9	—
Total minimum payments	157.7	16.2

Less: present value discount	(26.9)	(1.3)
Lease liability	$ 130.8	$ 14.9

The following tables summarize certain lease information for the year ended December 31, 2018, prior to the implementation of Topic 842.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The components of finance lease assets at December 31, 2018, were as follows:

	2018
Leased equipment—gross	$33.4
Less: accumulated depreciation	(18.9)
Leased equipment—net	$14.5

The future maturities of finance leases at December 31, 2018, were as follows:

	Future Maturities of Finance Leases
2019	$ 5.9
2020	4.9
2021	4.1
2022	2.0
2023	0.2
2024 and thereafter	—
Total minimum payments	17.1
Less: amounts representing interest	(1.7)
Present value of minimum payments	15.4
Less: current portion	(5.1)
Long-term finance lease obligations	$ 10.3

The Company has various operating lease agreements. Future minimum rental commitments under non-cancelable leases at December 31, 2018, were as follows:

	Future Minimum Rental Commitments
2019	$ 38.2
2020	33.4
2021	23.9
2022	17.8
2023	13.7
2024 and thereafter	31.1
Total	$ 158.1

Note 11. Income Taxes

The Company records income tax (benefit) expense on an interim basis. The estimated effective income tax rate is adjusted quarterly, and items discrete to a specific quarter are reflected in income tax (benefit) expense for that interim period.

The effective income tax rate for the interim period can differ from the statutory tax rate, as it reflects discrete items, such as changes in the liability for unrecognized tax benefits related to the establishment and settlement of income tax exposures and benefits related to share-based compensation.

The Company’s liability for unrecognized tax benefits as of March 31, 2019, was $14.3 million. The Company anticipates a $4.6 million decrease to its liability for unrecognized tax benefits within the next twelve months due to the resolution of income tax audits or statute expirations.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 12. Financial Instruments and Fair Value Measurements

Certain assets and liabilities are required to be recorded at fair value on a recurring basis, while other assets and liabilities are recorded at fair value on a nonrecurring basis, generally as a result of acquisitions or impairment charges. Fair value is determined based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. GAAP also classifies the inputs used to measure fair value into the following hierarchy:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Quoted prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability.

Level 3: Unobservable inputs for the asset or liability. There were no Level 3 recurring measurements of assets or liabilities as of March 31, 2019.

Interest Rate Swaps

The Company currently holds two interest rate swap contracts designated as cash flow hedges, as the purpose is to reduce the variability of cash flows from interest payments related to a portion of Quad's variable-rate debt. The swaps effectively convert the notional value of the Company's variable rate debt based on one-month LIBOR to a fixed rate, including a spread on underlying debt, and a monthly reset in the variable interest rate. The key terms of the interest rate swaps are as follows:

	March 19, 2019 Interest Rate Swap	February 7, 2017 Interest Rate Swap
Effective date	March 29, 2019	February 28, 2017
Termination date	March 28, 2024	February 28, 2022
Term	5 years	5 years
Notional amount	$130.0	$250.0
Fixed swap rate	2.43%	1.89%

The Company classifies the interest rate swaps as Level 2 because the inputs into the valuation model are observable or can be derived or corroborated utilizing observable market data at commonly quoted intervals. The fair value of the interest rate swaps classified as Level 2 as of March 31, 2019, and December 31, 2018, were as follows:

	Balance Sheet Location	March 31, 2019	December 31, 2018
Interest rate swap assets	Prepaid expenses and other current assets	$ 2.1	$ 4.3
Interest rate swap liabilities	Other long-term liabilities	$ (1.5)	$ —

24

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The interest rate swaps were highly effective as of March 31, 2019. No amount of ineffectiveness has been recorded into earnings related to these cash flow hedges. The cash flows associated with the interest rate swaps have been recognized as an adjustment to interest expense (income) in the condensed consolidated statements of operations, and the changes in the fair value of the interest rate swaps have been included in other comprehensive income (loss) in the condensed consolidated statements of comprehensive income:

	Three Months Ended March 31,	
	2019	2018
Net interest paid (received)	$(0.4)	$0.2
Gain (loss) recognized in other comprehensive income (loss)	$(3.7)	$3.7

Foreign Exchange Contracts

The Company has operations in countries that have transactions outside their functional currencies and periodically enters into foreign exchange contracts. These contracts are used to hedge the net exposures of changes in foreign currency exchange rates and are designated as either cash flow hedges or fair value hedges. Gains or losses on net foreign currency hedges are intended to offset losses or gains on the underlying net exposures in an effort to reduce the earnings volatility resulting from fluctuating foreign currency exchange rates. There were no open foreign currency exchange contracts as of March 31, 2019.

Natural Gas Forward Contracts

The Company periodically enters into natural gas forward purchase contracts to hedge against increases in commodity costs. The Company’s commodity contracts qualified for the exception related to normal purchases and sales during the three months ended March 31, 2019 and 2018, as the Company takes delivery in the normal course of business.

Debt

The Company measures fair value on its debt instruments using interest rates available to the Company for borrowings with similar terms and maturities and is categorized as Level 2. See Note 9, “Debt,” for the fair value of the Company’s debt as of March 31, 2019.

Nonrecurring Fair Value Measurements

In addition to assets and liabilities that are recorded at fair value on a recurring basis, the Company is required to record certain assets and liabilities at fair value on a nonrecurring basis, generally as a result of acquisitions or the remeasurement of assets resulting in impairment charges. See Note 3, “Acquisitions and Strategic Investments,” for further discussion on acquisitions. See Note 4, “Restructuring, Impairment and Transaction-Related Charges” and Note 7, “Property, Plant and Equipment” for further discussion on impairment charges recorded as a result of the remeasurement of certain long-lived assets.

Other Estimated Fair Value Measurements

The Company records the fair value of its forward contracts and pension plan assets on a recurring basis. The fair value of cash and cash equivalents, receivables, inventories, accounts payable and accrued liabilities approximate their carrying values as of March 31, 2019, and December 31, 2018.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 13. Accrued Liabilities and Other Long-Term Liabilities

The components of accrued and other long-term liabilities as of March 31, 2019, and December 31, 2018, were as follows:

	March 31, 2019			December 31, 2018		
	Accrued Liabilities	Other Long-Term Liabilities	Total	Accrued Liabilities	Other Long-Term Liabilities	Total
Employee-related liabilities [1]	$95.0	$ 62.7	$157.7	$126.4	$ 62.8	$189.2
Single employer pension plan obligations	1.7	79.2	80.9	1.7	80.9	82.6
Multiemployer pension plans – withdrawal liability	8.5	40.7	49.2	8.4	42.5	50.9
Tax-related liabilities	30.5	7.8	38.3	29.6	8.1	37.7
Restructuring liabilities	19.5	0.2	19.7	23.1	2.9	26.0
Interest and rent liabilities	11.3	0.5	11.8	6.0	1.4	7.4
Other	81.3	32.6	113.9	97.1	34.0	131.1
Total	$247.8	$ 223.7	$471.5	$292.3	$ 232.6	$524.9

[1] Employee-related liabilities consist primarily of payroll, bonus, vacation, health and workers' compensation.

Note 14. Employee Retirement Plans

Defined Contribution Plans

The Quad/Graphics, Inc. Employee Stock Ownership Plan ("ESOP") holds profit sharing contributions of Company stock, which are made at the discretion of the Company's Board of Directors. The Company made a non-cash contribution of 1,006,061 shares of Company class A common stock at a stock price of $22.18 per share for a total value of $22.3 million to the ESOP during the three months ended March 31, 2018. There were no profit sharing contributions during the three months ended March 31, 2019.

Pension Plans

The Company assumed various funded and unfunded frozen pension plans for a portion of its full-time employees in the United States as part of the acquisition of World Color Press Inc. ("World Color Press") in 2010. Benefits are generally based upon years of service and compensation. These plans are funded in conformity with the applicable government regulations. The Company funds at least the minimum amount required for all qualified plans using actuarial cost methods and assumptions acceptable under government regulations.

The components of net pension income for the three months ended March 31, 2019 and 2018, were as follows:

	Three Months Ended March 31,	
	2019	2018
Interest cost	$(4.4)	$(4.0)

Expected return on plan assets	5.9	7.1
Net pension income	$1.5	$3.1

The Company made $0.3 million in benefit payments to its non-qualified defined benefit pension plans and made no contributions to its qualified defined benefit pension plans during the three months ended March 31, 2019.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Multiemployer Pension Plans ("MEPPs")

The Company has withdrawn from all significant MEPPs and replaced these union sponsored "promise to pay in the future" defined benefit plans with a Company sponsored "pay as you go" defined contribution plan. The two MEPPs, the Graphic Communications International Union – Employer Retirement Fund ("GCIU") and the Graphic Communications Conference of the International Brotherhood of Teamsters National Pension Fund ("GCC"), are significantly underfunded, and require the Company to pay a withdrawal liability to fund its pro rata share of the underfunding as of the plan year the full withdrawal was completed. As a result of the decision to withdraw, the Company accrued a withdrawal liability based on information provided by each plan's trustee. The Company has reserved $49.2 million for the total MEPPs withdrawal liability as of March 31, 2019, of which $40.7 million was recorded in other long-term liabilities and $8.5 million was recorded in accrued liabilities in the condensed consolidated balance sheets. The Company is scheduled to make payments to the GCIU and GCC until April 2032 and February 2024, respectively. The Company made payments totaling $2.6 million and $3.9 million for the three months ended March 31, 2019 and 2018, respectively.

Note 15. Loss Per Share Attributable to Quad Common Shareholders

Basic earnings (loss) per share attributable to Quad common shareholders is computed as net earnings (loss) attributable to Quad common shareholders divided by the basic weighted average common shares outstanding. The calculation of diluted earnings (loss) per share attributable to Quad common shareholders includes the effect of any dilutive equity incentive instruments. The Company uses the treasury stock method to calculate the effect of outstanding dilutive equity incentive instruments, which requires the Company to compute total proceeds as the sum of the amount the employee must pay upon exercise of the award and the amount of unearned stock-based compensation costs attributable to future services.

Equity incentive instruments for which the total employee proceeds from exercise exceed the average fair value of the same equity incentive instrument over the period have an anti-dilutive effect on earnings per share during periods with net earnings, and accordingly, the Company excludes them from the calculation. Due to the net loss incurred during the three months ended March 31, 2019 and 2018, the assumed exercise of all equity incentive instruments was anti-dilutive and therefore, not included in the diluted loss per share calculation for that period.

Reconciliations of the numerator and the denominator of the basic and diluted per share computations for the Company's common stock, for the three months ended March 31, 2019 and 2018, are summarized as follows:

	Three Months Ended March 31,	
	2019	2018
Numerator		
Net loss attributable to Quad common shareholders	$(22.5)	$(3.5)
Denominator		
Basic weighted average number of common shares outstanding for all classes of common shares	49.6	50.1

Plus: effect of dilutive equity incentive instruments	—	—
Diluted weighted average number of common shares outstanding for all classes of common shares	49.6	50.1
Loss per share attributable to Quad common shareholders		
Basic and diluted	$(0.45)	$(0.07)
Cash dividends paid per common share for all classes of common shares	$0.30	$0.30

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 16. Equity Incentive Programs

The shareholders of the Company approved the Quad/Graphics, Inc. 2010 Omnibus Incentive Plan ("Omnibus Plan") for two complementary purposes: (1) to attract and retain outstanding individuals to serve as directors, officers and employees; and (2) to increase shareholder value. The Omnibus Plan provides for an aggregate 10,871,652 shares of class A common stock reserved for issuance under the Omnibus Plan. Awards under the Omnibus Plan may consist of incentive awards, stock options, stock appreciation rights, performance shares, performance share units, shares of class A common stock, restricted stock ("RS"), restricted stock units ("RSU"), deferred stock units ("DSU") or other stock-based awards as determined by the Company's Board of Directors. Each stock option granted has an exercise price of no less than 100% of the fair market value of the class A common stock on the date of grant. The Board of Directors is seeking approval from the Company's shareholders at the annual meeting of shareholders to be held in May 2019 of an amendment to the Omnibus Plan to increase the number of shares of class A common stock authorized for issuance under the 2010 Plan by 1,800,000 shares, which would leave 1,606,490 shares available for issuance under the Omnibus Plan as of March 31, 2019. Authorized unissued shares or treasury shares may be used for issuance under the Company's equity incentive programs. The Company plans to either use treasury shares of its class A common stock or issue shares of class A common stock to meet the stock requirements of its awards in the future.

The Company recognizes compensation expense based on estimated grant date fair values for all share-based awards issued to employees and non-employee directors, including stock options, performance shares, performance share units, RS awards, RSU awards and DSU awards. The Company recognizes these compensation costs for only those awards expected to vest, on a straight-line basis over the requisite three to four year service period of the awards, except deferred stock units, which are fully vested and expensed on the grant date. The Company estimated the number of awards expected to vest based, in part, on historical forfeiture rates and also based on management's expectations of employee turnover within the specific employee groups receiving each type of award. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods, if actual forfeitures differ from those estimates.

Equity Incentive Compensation Expense

The total compensation expense recognized related to all equity incentive programs was $5.0 million and $5.4 million for the three months ended March 31, 2019 and 2018, respectively, and was recorded primarily in selling, general and administrative expenses in the condensed consolidated statements of operations. Total future compensation expense related to all equity incentive programs granted as of March 31, 2019, was estimated to be $26.3 million, which consists entirely of expense for RS and RSU awards. Estimated future compensation expense is $10.5 million for the remainder of 2019, $9.8 million for 2020, $5.3 million for 2021 and $0.7 million for 2022.

Stock Options

Options vest over four years, with no vesting in the first year and one-third vesting upon the second, third and fourth anniversary dates. As defined in the individual grant agreements, acceleration of vesting may occur under a change in control, death, disability or normal retirement of the grantee. Options expire no later than the tenth anniversary of the grant date, 24 months after termination for death, 36 months after termination for normal retirement or disability and

90 days after termination of employment for any other reason. Options are not credited with dividend declarations, except for the November 18, 2011 grants. Stock options are only to be granted to employees.

There were no stock options granted, and no compensation expense was recognized related to stock options for the three months ended March 31, 2019 and 2018. There is no future compensation expense for stock options as of March 31, 2019.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The following table is a summary of the stock option activity for the three months ended March 31, 2019:

	Shares Under Option	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (millions)
Outstanding at December 31, 2018	942,315	$ 24.31	1.8	$ —
Granted	—	—		
Exercised	—	—		
Canceled/forfeited/expired	(144,900)	18.27		
Outstanding and exercisable at March 31, 2019	797,415	$ 25.41	1.8	$ —

The intrinsic value of options outstanding and exercisable at March 31, 2019, and December 31, 2018, was based on the fair value of the stock price. All outstanding options are vested as of March 31, 2019.

The following table is a summary of the stock option exercise activity for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31, 2019	2018
Total intrinsic value of stock options exercised	$ —	$ 3.6
Proceeds from stock options exercised	—	4.0

Restricted Stock and Restricted Stock Units

Restricted stock and restricted stock unit awards consist of shares or the rights to shares of the Company’s class A common stock which are awarded to employees of the Company. The awards are restricted such that they are subject to substantial risk of forfeiture and to restrictions on their sale or other transfer by the employee. RSU awards are typically granted to eligible employees outside of the United States. As defined in the individual grant agreements, acceleration of vesting may occur under a change in control, death, disability or normal retirement of the grantee. Grantees receiving RS awards are able to exercise full voting rights and receive full credit for dividends during the vesting period. All such dividends will be paid to the RS grantee within 45 days of full vesting. Grantees receiving RSU awards are not entitled to vote, but do earn dividends. Upon vesting, RSU awards will be settled either through cash payment equal to the fair market value of the RSU awards on the vesting date or through issuance of the Company’s class A common stock.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The following table is a summary of RS and RSU award activity for the three months ended March 31, 2019:

	Restricted Stock			Restricted Stock Units		
	Shares	Weighted-Average Grant Date Fair Value Per Share	Weighted-Average Remaining Contractual Term (years)	Units	Weighted-Average Grant Date Fair Value Per Share	Weighted-Average Remaining Contractual Term (years)
Nonvested at December 31, 2018	2,335,916	$ 17.36	1.0	107,092	$ 16.70	0.8
Granted [1]	1,500,434	12.32		186,807	12.33	
Vested	(1,118,071)	9.46		(57,500)	9.30	
Forfeited	(963)	26.88		(963)	26.88	
Nonvested at March 31, 2019	2,717,316	$ 17.83	2.3	235,436	$ 15.00	2.6

(1) Includes 1,238,757 RS awards and 49,923 RSU awards granted that are contingent upon shareholder approval at the annual meeting of shareholders to be held in May 2019.

In the first quarter of 2019, the Company issued RSU awards in connection with the acquisition of Periscope that are accounted for as a liability and will vest on March 1, 2022. The awards were recorded at fair value on the initial issuance date and are adjusted to fair value at each reporting period, with the change in fair value being recorded in selling, general and administrative expense in the condensed consolidated statements of operations. As of March 31, 2019, the fair value of the RSU awards classified as a liability was $1.6 million and was included in other long-term liabilities on the condensed consolidated balance sheets.

In general, RS and RSU awards will vest on the third anniversary of the grant date, provided the holder of the share is continuously employed by the Company until the vesting date. Compensation expense recognized for RS and RSU awards was $4.1 million and $4.5 million for the three months ended March 31, 2019 and 2018, respectively.

Deferred Stock Units

Deferred stock units are awards of rights to shares of the Company’s class A common stock and are awarded to non-employee directors of the Company. The following table is a summary of DSU award activity for the three months ended March 31, 2019:

	Deferred Stock Units	
	Units	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2018	236,561	$ 19.40
Granted [1]	72,464	12.32
Dividend equivalents granted [2]	7,572	12.22
Settled	(30,676)	22.53
Outstanding at March 31, 2019	285,921	$ 17.08

(1) Includes 72,464 DSU awards granted that are contingent upon shareholder approval at the annual meeting of shareholders to be held in May 2019.

(2) Includes 1,776 dividend equivalents granted that are contingent upon shareholder approval at the annual meeting of shareholders to be held in May 2019.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Each DSU award entitles the grantee to receive one share of class A common stock upon the earlier of the separation date of the grantee or the second anniversary of the grant date, but could be subject to acceleration for a change in control, death or disability as defined in the individual DSU grant agreement. Grantees of DSU awards may not exercise voting rights, but are credited with dividend equivalents, and those dividend equivalents will be converted into additional DSU awards based on the closing price of the class A common stock. Compensation expense recognized for DSU awards was $0.9 million during the three months ended March 31, 2019 and 2018. As DSU awards are fully vested on the grant date, all compensation expense was recognized at the date of grant.

Note 17. Shareholders' Equity

The Company has three classes of common stock as follows (share data in millions):

		Issued Common Stock		
	Authorized Shares	Outstanding	Treasury	Total Issued Shares
Class A stock ($0.025 par value)	80.0			
March 31, 2019		39.3	1.0	40.3
December 31, 2018		38.1	2.2	40.3
Class B stock ($0.025 par value)	80.0			
March 31, 2019		13.5	—	13.5
December 31, 2018		13.5	—	13.5
Class C stock ($0.025 par value)	20.0			
March 31, 2019		—	0.5	0.5
December 31, 2018		—	0.5	0.5

In accordance with the Articles of Incorporation, each class A common share has one vote per share and each class B and class C common share has ten votes per share on all matters voted upon by the Company's shareholders. Liquidation rights are the same for all three classes of common stock.

The Company also has 0.5 million shares of $0.01 par value preferred stock authorized, of which none were issued at March 31, 2019, and December 31, 2018. The Company has no present plans to issue any preferred stock.

On September 6, 2011, the Company's Board of Directors authorized a share repurchase program of up to $100.0 million of the Company's outstanding class A common stock. On July 30, 2018, the Company's Board of Directors discontinued the remainder of the September 6, 2011 share repurchase program and authorized a new share repurchase program of up to $100.0 million of the Company's outstanding class A common stock. There were no shares repurchased during the three months ended March 31, 2019. As of March 31, 2019, there were $100.0 million of authorized repurchases remaining under the program.

On February 16, 2018, the Company's Board of Directors authorized the issuance of 1,006,061 shares of Company class A common stock from treasury to the Company's ESOP, at a stock price of $22.18 per share for a total value of

$22.3 million.

In March 2018, 284,845 shares of class B common stock were converted to class A common stock, and the class B common shares were canceled and returned to the status of authorized but unissued shares.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

In accordance with the Articles of Incorporation, dividends are paid equally for all three classes of common shares. The dividend activity related to the then outstanding shares for the three months ended March 31, 2019 and 2018, was as follows:

	Declaration Date	Record Date	Payment Date	Dividend Amount per Share
2019				
Q1 Dividend	February 19, 2019	February 25, 2019	March 8, 2019	$ 0.30
2018				
Q1 Dividend	February 21, 2018	March 19, 2018	March 30, 2018	$ 0.30

Note 18. Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss by component, net of tax, for the three months ended March 31, 2019, were as follows:

	Translation Adjustments	Interest Rate Swap Adjustments	Pension Benefit Plan Adjustments	Total
Balance at January 1, 2019	$ (130.0)	$ 3.3	$ (25.5)	$(152.2)
Other comprehensive loss before reclassifications	(0.3)	(2.8)	—	(3.1)
Amounts reclassified from accumulated other comprehensive loss to net loss	—	—	—	—
Net other comprehensive loss	(0.3)	(2.8)	—	(3.1)
Balance at March 31, 2019	$ (130.3)	$ 0.5	$ (25.5)	$(155.3)

The changes in accumulated other comprehensive loss by component, net of tax, for the three months ended March 31, 2018, were as follows:

	Translation Adjustments	Interest Rate Swap Adjustments	Pension Benefit Plan Adjustments	Total
Balance at January 1, 2018	$ (117.0)	$ 1.6	$ (11.9)	$(127.3)
Other comprehensive income before reclassifications	5.6	2.9	—	8.5
Amounts reclassified from accumulated other comprehensive loss to net loss	—	—	—	—
Net other comprehensive income	5.6	2.9	—	8.5
Balance at March 31, 2018	$ (111.4)	$ 4.5	$ (11.9)	$(118.8)

Note 19. Segment Information

As a worldwide marketing solutions partner dedicated to creating a better way, Quad uses its data-driven, integrated marketing solutions platform to help clients reduce complexity, increase efficiency and enhance marketing spend effectiveness. The Company’s operating and reportable segments are aligned with how the chief operating decision

maker of the Company currently manages the business. The Company's operating and reportable segments, including their product and service offerings, and a "Corporate" category are as follows:

•United States Print and Related Services
•International
•Corporate

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

United States Print and Related Services

The United States Print and Related Services segment is predominantly comprised of the Company's United States printing operations and is managed as one integrated platform. This includes retail inserts, publications, catalogs, special interest publications, journals, direct mail, books, directories, in-store marketing and promotion, packaging, newspapers, custom print products, other commercial and specialty printed products and global paper procurement, together with marketing and other complementary services, including consumer insights, audience targeting, personalization, media planning and placement, process optimization, campaign planning and creation, pre-media production, videography, photography, digital execution, print execution and logistics. This segment also includes the manufacture of ink.

International

The International segment consists of the Company's printing operations in Europe and Latin America, including operations in England, France, Germany, Poland, Argentina, Colombia, Mexico and Peru, as well as investments in printing operations in Brazil and India. This segment provides printed products and marketing and other complementary services consistent with the United States Print and Related Services segment. Unrestricted subsidiaries as defined in the Company's Senior Unsecured Notes indenture represent less than 2.0% of total consolidated assets as of March 31, 2019, and less than 2.0% of total consolidated net sales for the three months ended March 31, 2019.

Corporate

Corporate consists of unallocated general and administrative activities and associated expenses including, in part, executive, legal and finance, as well as certain expenses and income from frozen employee retirement plans, such as pension benefit plans.

The following is a summary of segment information for the three months ended March 31, 2019 and 2018:

	Net Sales			
	Products	Services	Operating Income (Loss)	Restructuring, Impairment and Transaction-Related Charges
Three months ended March 31, 2019				
United States Print and Related Services	$703.3	$ 195.4	$ 15.8	$ 4.5
International	101.8	4.2	1.9	1.6
Total operating segments	805.1	199.6	17.7	6.1
Corporate	—	—	(14.8)	1.5
Total	$805.1	$ 199.6	$ 2.9	$ 7.6
Three months ended March 31, 2018				
United States Print and Related Services	$706.6	$ 161.2	$ 20.3	$ 20.4

International	94.5	5.2	5.7	1.0
Total operating segments	801.1	166.4	26.0	21.4
Corporate	—	—	(18.9)	3.5
Total	$801.1	$166.4	$ 7.1	$ 24.9

Restructuring, impairment and transaction-related charges for the three months ended March 31, 2019 and 2018, are further described in Note 4, “Restructuring, Impairment and Transaction-Related Charges,” and are included in the operating income (loss) results by segment above.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

A reconciliation of operating income to loss before income taxes and equity in loss (earnings) of unconsolidated entity as reported in the condensed consolidated statements of operations for the three months ended March 31, 2019 and 2018, was as follows:

	Three Months Ended March 31,	
	2019	2018
Operating income	$2.9	$7.1
Less: interest expense	21.8	17.3
Less: net pension income	(1.5)	(3.1)
Less: loss on debt extinguishment	15.9	—
Loss before income taxes and equity in loss (earnings) of unconsolidated entity	$(33.3)	$(7.1)

Note 20. Separate Financial Information of Subsidiary Guarantors of Indebtedness

On April 28, 2014, Quad completed an offering of the Senior Unsecured Notes (see Note 9, “Debt,” for further details on the Senior Unsecured Notes). Each of the Company’s Guarantor Subsidiaries fully and unconditionally guarantee or, in the case of future subsidiaries, will guarantee, on a joint and several basis, the Senior Unsecured Notes. All of the current Guarantor Subsidiaries are 100% owned by the Company. Guarantor Subsidiaries will be automatically released from these guarantees upon the occurrence of certain events, including the following:

- the designation of any of the Guarantor Subsidiaries as an unrestricted subsidiary;
- the release or discharge of any guarantee or indebtedness that resulted in the creation of the guarantee of the Senior Unsecured Notes by any of the Guarantor Subsidiaries; or
- the sale or disposition, including the sale of substantially all the assets, of any of the Guarantor Subsidiaries.

The following condensed consolidating financial information reflects the summarized financial information of Quad, the Company’s Guarantor Subsidiaries on a combined basis and the Company’s non-guarantor subsidiaries on a combined basis.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Statement of Operations
For the Three Months Ended March 31, 2019

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
Net sales	$ 397.7	$ 584.2	$ 126.9	$ (104.1)	$ 1,004.7
Cost of sales	324.0	511.5	102.9	(101.3)	837.1
Selling, general and administrative expenses	61.4	26.5	12.8	(2.8)	97.9
Depreciation and amortization	23.1	29.2	6.9	—	59.2
Restructuring, impairment and transaction-related charges	1.7	4.0	1.9	—	7.6
Total operating expenses	410.2	571.2	124.5	(104.1)	1,001.8
Operating income (loss)	$ (12.5)	$ 13.0	$ 2.4	$ —	$ 2.9
Interest expense (income)	20.3	0.2	1.3	—	21.8
Net pension income	—	(1.5)	—	—	(1.5)
Loss (gain) on debt extinguishment	15.9	—	—	—	15.9
Earnings (loss) before income taxes and equity in (earnings) loss of consolidated and unconsolidated entities	(48.7)	14.3	1.1	—	(33.3)
Income tax expense (benefit)	(16.6)	5.3	0.7	—	(10.6)
Earnings (loss) before equity in (earnings) loss of consolidated and unconsolidated entities	(32.1)	9.0	0.4	—	(22.7)
Equity in (earnings) loss of consolidated entities	(9.6)	(1.4)	—	11.0	—
Equity in (earnings) loss of unconsolidated entity	—	—	0.1	—	0.1
Net earnings (loss)	(22.5)	10.4	0.3	(11.0)	(22.8)
Less: net earnings (loss) attributable to noncontrolling interests	—	—	(0.3)	—	(0.3)
Net earnings (loss) attributable to Quad common shareholders	$ (22.5)	$ 10.4	$ 0.6	$ (11.0)	$ (22.5)

Condensed Consolidating Statement of Comprehensive Income (Loss)
For the Three Months Ended March 31, 2019

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
Net earnings (loss)	$ (22.5)	$ 10.4	$ 0.3	$ (11.0)	$ (22.8)
Other comprehensive income (loss), net of tax	(3.1)	(0.8)	(0.5)	1.3	(3.1)
Total comprehensive income (loss)	(25.6)	9.6	(0.2)	(9.7)	(25.9)
Less: comprehensive earnings (loss) attributable to noncontrolling interests	—	—	(0.3)	—	(0.3)
Comprehensive income (loss) attributable to Quad common shareholders	$ (25.6)	$ 9.6	$ 0.1	$ (9.7)	$ (25.6)

35

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Statement of Operations
For the Three Months Ended March 31, 2018

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
Net sales	$ 410.7	$ 546.4	$ 111.7	$ (101.3)	$967.5
Cost of sales	331.5	472.3	87.5	(98.9)	792.4
Selling, general and administrative expenses	53.8	25.1	10.4	(2.4)	86.9
Depreciation and amortization	25.1	25.3	5.8	—	56.2
Restructuring, impairment and transaction-related charges	18.0	6.1	0.8	—	24.9
Total operating expenses	428.4	528.8	104.5	(101.3)	960.4
Operating income (loss)	$ (17.7)	$ 17.6	$ 7.2	$ —	$7.1
Interest expense (income)	15.7	0.9	0.7	—	17.3
Net pension income	—	(3.1)	—	—	(3.1)
Earnings (loss) before income taxes and equity in (earnings) loss of consolidated and unconsolidated entities	(33.4)	19.8	6.5	—	(7.1)
Income tax expense (benefit)	(8.5)	4.4	0.8	—	(3.3)
Earnings (loss) before equity in (earnings) loss of consolidated and unconsolidated entities	(24.9)	15.4	5.7	—	(3.8)
Equity in (earnings) loss of consolidated entities	(21.4)	(1.5)	—	22.9	—
Equity in (earnings) loss of unconsolidated entity	—	—	(0.3)	—	(0.3)
Net earnings (loss)	(3.5)	16.9	6.0	(22.9)	(3.5)
Less: net earnings (loss) attributable to noncontrolling interests	—	—	—	—	—
Net earnings (loss) attributable to Quad common shareholders	$ (3.5)	$ 16.9	$ 6.0	$ (22.9)	$(3.5)

Condensed Consolidating Statement of Comprehensive Income (Loss)
For the Three Months Ended March 31, 2018

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
Net earnings (loss)	$ (3.5)	$ 16.9	$ 6.0	$ (22.9)	$(3.5)
Other comprehensive income (loss), net of tax	8.5	(0.5)	3.9	(3.4)	8.5
Total comprehensive income (loss)	5.0	16.4	9.9	(26.3)	5.0
Less: comprehensive earnings (loss) attributable to noncontrolling interests	—	—	—	—	—
Comprehensive income (loss) attributable to Quad common shareholders	$ 5.0	$ 16.4	$ 9.9	$ (26.3)	$5.0

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Balance Sheet
As of March 31, 2019

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
ASSETS					
Cash and cash equivalents	$ 2.8	$ 3.9	$ 3.7	$ —	$ 10.4
Receivables, less allowances for doubtful accounts	357.9	69.3	85.1	—	512.3
Intercompany receivables	—	100.0	25.7	(125.7)	—
Inventories	105.6	124.3	53.1	—	283.0
Other current assets	30.9	9.8	9.5	—	50.2
Total current assets	497.2	307.3	177.1	(125.7)	855.9
Property, plant and equipment—net	641.5	441.0	153.4	—	1,235.9
Investment in consolidated entities	891.8	18.1	—	(909.9)	—
Goodwill and intangible assets—net	2.2	233.0	52.2	—	287.4
Intercompany loan receivable	68.8	—	—	(68.8)	—
Other long-term assets	68.2	101.0	54.8	—	224.0
Total assets	$ 2,169.7	$ 1,100.4	$ 437.5	$ (1,104.4)	$ 2,603.2
LIABILITIES AND SHAREHOLDERS' EQUITY					
Accounts payable	$ 233.0	$ 108.7	$ 77.6	$ —	$ 419.3
Intercompany accounts payable	125.7	—	—	(125.7)	—
Short-term debt and current portion of long-term debt and lease obligations	44.7	27.2	19.2	—	91.1
Other current liabilities	141.9	65.0	40.9	—	247.8
Total current liabilities	545.3	200.9	137.7	(125.7)	758.2
Long-term debt and lease obligations	1,079.2	78.7	23.6	—	1,181.5
Intercompany loan payable	—	—	68.8	(68.8)	—
Other long-term liabilities	125.3	110.8	7.5	—	243.6
Total liabilities	1,749.8	390.4	237.6	(194.5)	2,183.3
Total shareholders’ equity and noncontrolling interests	419.9	710.0	199.9	(909.9)	419.9
Total liabilities and shareholders’ equity	$ 2,169.7	$ 1,100.4	$ 437.5	$ (1,104.4)	$ 2,603.2

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Balance Sheet
As of December 31, 2018

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
ASSETS					
Cash and cash equivalents	$ 60.3	$ 2.9	$ 6.3	$—	$69.5
Receivables, less allowances for doubtful accounts	378.0	63.3	87.4	—	528.7
Intercompany receivables	—	153.9	28.8	(182.7)	—
Inventories	108.6	121.0	71.0	—	300.6
Other current assets	34.3	4.3	9.2	—	47.8
Total current assets	581.2	345.4	202.7	(182.7)	946.6
Property, plant and equipment—net	647.7	451.6	158.1	—	1,257.4
Investment in consolidated entities	757.0	16.7	—	(773.7)	—
Goodwill and intangible assets—net	1.7	111.3	54.2	—	167.2
Intercompany loan receivable	109.7	—	—	(109.7)	—
Other long-term assets	42.5	10.4	45.0	—	97.9
Total assets	$ 2,139.8	$ 935.4	$ 460.0	$(1,066.1)	$2,469.1
LIABILITIES AND SHAREHOLDERS' EQUITY					
Accounts payable	$ 265.5	$ 137.8	$ 107.7	$—	$511.0
Intercompany accounts payable	182.7	—	—	(182.7)	—
Short-term debt and current portion of long-term debt and finance lease obligations	29.7	0.7	17.6	—	48.0
Other current liabilities	182.6	64.7	45.0	—	292.3
Total current liabilities	660.5	203.2	170.3	(182.7)	851.3
Long-term debt and finance lease obligations	878.8	1.0	13.1	—	892.9
Intercompany loan payable	—	42.0	67.7	(109.7)	—
Other long-term liabilities	140.3	115.4	9.0	—	264.7
Total liabilities	1,679.6	361.6	260.1	(292.4)	2,008.9
Total shareholders' equity and noncontrolling interests	460.2	573.8	199.9	(773.7)	460.2
Total liabilities and shareholders' equity	$ 2,139.8	$ 935.4	$ 460.0	$(1,066.1)	$2,469.1

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Statement of Cash Flows
For the Three Months Ended March 31, 2019

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
OPERATING ACTIVITIES					
Net cash from (used in) operating activities	$ 23.9	$ (79.7)	$ (2.8)	$ —	$(58.6)
INVESTING ACTIVITIES					
Purchases of property, plant and equipment	(18.4)	(22.1)	(4.8)	—	(45.3)
Acquisition related investing activities	—	(120.7)	(0.3)	—	(121.0)
Intercompany investing activities	(169.8)	10.4	(0.1)	159.5	—
Other investing activities	3.6	4.2	0.3	—	8.1
Net cash from (used in) investing activities	(184.6)	(128.2)	(4.9)	159.5	(158.2)
FINANCING ACTIVITIES					
Proceeds from issuance of long-term debt	485.0	—	5.4	—	490.4
Payments of long-term debt and finance lease obligations	(532.5)	(0.4)	(3.0)	—	(535.9)
Borrowings on revolving credit facilities	1,230.5	—	8.8	—	1,239.3
Payments on revolving credit facilities	(979.8)	—	(10.3)	—	(990.1)
Payment of cash dividends	(19.2)	—	—	—	(19.2)
Intercompany financing activities	(54.0)	209.3	4.2	(159.5)	—
Other financing activities	(26.8)	—	—	—	(26.8)
Net cash from (used in) financing activities	103.2	208.9	5.1	(159.5)	157.7
Effect of exchange rates on cash and cash equivalents	—	—	—	—	—
Net increase (decrease) in cash and cash equivalents	(57.5)	1.0	(2.6)	—	(59.1)
Cash and cash equivalents at beginning of period	60.3	2.9	6.3	—	69.5
Cash and cash equivalents at end of period	$ 2.8	$ 3.9	$ 3.7	$ —	$10.4

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Condensed Consolidating Statement of Cash Flows
For the Three Months Ended March 31, 2018

	Quad/Graphics, Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Total
OPERATING ACTIVITIES					
Net cash from (used in) operating activities	$ 26.4	$ (27.8)	$ 3.6	$ —	$2.2
INVESTING ACTIVITIES					
Purchases of property, plant and equipment	(4.1)	(12.2)	(7.9)	—	(24.2)
Acquisition related investing activities	—	(78.8)	4.9	—	(73.9)
Intercompany investing activities	(139.4)	14.5	(0.1)	125.0	—
Other investing activities	13.5	0.2	4.0	—	17.7
Net cash from (used in) investing activities	(130.0)	(76.3)	0.9	125.0	(80.4)
FINANCING ACTIVITIES					
Payments of long-term debt and finance lease obligations	(4.0)	(0.4)	(2.2)	—	(6.6)
Borrowings on revolving credit facilities	238.6	—	6.9	—	245.5
Payments on revolving credit facilities	(168.6)	—	(5.4)	—	(174.0)
Payment of cash dividends	(17.2)	—	—	—	(17.2)
Intercompany financing activities	11.8	105.2	8.0	(125.0)	—
Other financing activities	(3.5)	—	—	—	(3.5)
Net cash from (used in) financing activities	57.1	104.8	7.3	(125.0)	44.2
Effect of exchange rates on cash and cash equivalents	—	—	(0.2)	—	(0.2)
Net increase (decrease) in cash and cash equivalents	(46.5)	0.7	11.6	—	(34.2)
Cash and cash equivalents at beginning of period	51.7	2.0	10.7	—	64.4
Cash and cash equivalents at end of period	$ 5.2	$ 2.7	$ 22.3	$ —	$30.2

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

Note 21. New Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2018-15 "Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract" ("ASU 2018-15"), which aligns the requirements for capitalizing implementation costs incurred in a cloud computing arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This guidance is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Entities are allowed to apply either a retrospective or prospective transition approach to adopt the guidance. The Company is evaluating the impact of the adoption of ASU 2018-15 on the condensed consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-14 "Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans" ("ASU 2018-14"), which adds, removes and clarifies year-end disclosure requirements related to defined benefit pension and other postretirement plans. This guidance is effective for annual periods ending after December 15, 2020, with early adoption permitted. This new guidance will require a retrospective adoption approach. The Company is evaluating the impact of the adoption of ASU 2018-14 on the notes to the condensed consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-13 "Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement" ("ASU 2018-13"), which changes the requirements on fair value measurements by removing, modifying or adding certain disclosures. This guidance is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted. Entities electing to early adopt are permitted to early adopt the eliminated or modified disclosure requirements and delay the adoption of all the new disclosure requirements until their effective date. The adoption of ASU 2018-13 requires the application of a combination of the prospective and retrospective methods of transition, depending on the topic of disclosure. The Company is evaluating the impact of the adoption of ASU 2018-13 on the notes to the condensed consolidated financial statements.

In June 2016, the FASB issued Accounting Standards Update 2016-13 "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" ("ASU 2016-13"), which changes the impairment model for most financial assets and certain other instruments. Under the new guidance, entities will be required to measure expected credit losses for financial instruments, including trade receivables, based on historical experience, current conditions and reasonable forecasts. This guidance is effective for interim and annual periods beginning after December 15, 2019, with early adoption permitted for interim and annual periods beginning after December 15, 2018. This new guidance will require a modified retrospective transition approach, where the entity will need to apply a cumulative-effect adjustment to retained earnings (accumulated deficit) as of the beginning of the first reporting period in which the guidance is adopted. The Company is evaluating the impact of the adoption of ASU 2016-13 on the condensed consolidated financial statements.

Note 22. Subsequent Events

Acquisition of LSC Communications, Inc.

As previously disclosed, on October 30, 2018, the Company and LSC entered into a definitive agreement, pursuant to which Quad will acquire LSC in an all-stock transaction valued at approximately $1.3 billion, including the refinancing of LSC's debt and assumption of other obligations. The acquisition is subject to customary closing conditions including regulatory approval.

On December 13, 2018, Quad and LSC each received a request for additional information and documentary material (the "Second Request") from the DOJ in connection with the DOJ's review of the transactions contemplated by the definitive agreement. The Hart-Scott-Rodino Act ("HSR Act") provides that the issuance of the Second Request extends the waiting period under the HSR Act until either 30 days after both Quad and LSC have substantially complied with the Second Request or such later time as agreed to by the parties with the DOJ, unless the waiting period is terminated earlier by the DOJ.

Table of Contents

QUAD/GRAPHICS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)
FOR THE THREE MONTHS ENDED MARCH 31, 2019
(In millions, except share and per share data and unless otherwise indicated)

The Company's Registration Statement on Form S-4, including as a part thereof the joint proxy statement/prospectus of Quad and LSC, was effective on February 4, 2019. At the special meeting of shareholders on February 22, 2019, approximately 99.7% of the votes cast by the holders of the Company's class A and class B common stock were voted in favor of the issuance of shares of Quad class A common stock in connection with the acquisition of LSC. In addition, LSC separately announced that its stockholders voted to adopt the agreement and plan of merger pursuant to which the Company will acquire LSC.

If the acquisition is consummated, LSC's stockholders will be entitled to receive, for each issued and outstanding share of LSC common stock owned immediately prior to the effective time of the acquisition, 0.625 shares of Quad class A common stock.

Quad and LSC cannot consummate the acquisition unless, among other things, the expiration of the waiting period under the HSR Act and other required regulatory approvals, and the satisfaction or waiver of the other closing conditions specified in the agreement, have been completed.

Quad continues to expect the acquisition to be consummated in mid-2019.

Declaration of Quarterly Dividend

On April 30, 2019, the Company declared a quarterly dividend of $0.30 per share, which will be paid on June 7, 2019, to shareholders of record as of May 20, 2019.

Table of Contents

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of the financial condition and results of operations of Quad should be read together with (1) the Quad condensed consolidated financial statements for the three months ended March 31, 2019 and 2018, including the notes thereto, included in Item 1, "Condensed Consolidated Financial Statements (Unaudited)," of this Quarterly Report on Form 10-Q; and (2) the audited consolidated annual financial statements as of and for the year ended December 31, 2018, and notes thereto included in the Company's Annual Report on Form 10-K, filed with the SEC on February 20, 2019.

Management's discussion and analysis of financial condition and results of operations is provided as a supplement to the Company's condensed consolidated financial statements and accompanying notes to help provide an understanding of the Company's financial condition, the changes in the Company's financial condition and the Company's results of operations. This discussion and analysis is organized as follows:

- Cautionary Statement Regarding Forward-Looking Statements.

- Overview. This section includes a general description of the Company's business and segments, an overview of key performance metrics the Company's management measures and utilizes to evaluate business performance, and an overview of trends affecting the Company, including management's actions related to the trends.

- Results of Operations. This section contains an analysis of the Company's results of operations by comparing the results for the three months ended March 31, 2019, to the three months ended March 31, 2018. The comparability of the Company's results of operations between periods was impacted by the 2019 acquisition of Periscope, the 2018 acquisition of Ivie and the 2018 additional investment in and consolidation of Rise. The results of operations of these acquisitions and investments are included in the Company's condensed consolidated results prospectively from their respective dates of acquisition or consolidation. Forward-looking statements providing a general description of recent and projected industry and Company developments that are important to understanding the Company's results of operations are included in this section. This section also provides a discussion of EBITDA and EBITDA margin, financial measures that the Company uses to assess the performance of its business that are not prepared in accordance with GAAP.

- Liquidity and Capital Resources. This section provides an analysis of the Company's capitalization, cash flows, a statement about off-balance sheet arrangements and a discussion of outstanding debt and commitments. Forward-looking statements important to understanding the Company's financial condition are included in this section. This section also provides a discussion of Free Cash Flow and Debt Leverage Ratio, non-GAAP financial measures that the Company uses to assess liquidity and capital allocation and deployment.

- New Accounting Pronouncements.

Table of Contents

Cautionary Statement Regarding Forward-Looking Statements

To the extent any statements in this Quarterly Report on Form 10-Q contain information that is not historical, these statements are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements relate to, among other things, the objectives, goals, strategies, beliefs, intentions, plans, estimates, prospects, projections and outlook of the Company, and can generally be identified by the use of words such as “may,” “will,” “expect,” “intend,” “estimate,” “anticipate,” “plan,” “foresee,” “believe” or “continue” or t of these terms, variations on them and other similar expressions. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements.

These forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties and other factors, some of which are beyond the control of the Company. These risks, uncertainties and other factors could cause actual results to differ materially from those expressed or implied by those forward-looking statements. Among risks, uncertainties and other factors that may impact Quad are those described in Part I, Item 1A, “Risk Factors,” of the Company’s 2018 Annual Report on Form 10-K, filed with the SEC on February 20, 2019, as such may be amended or supplemented in Part II, “Other Information,” Item 1A, “Risk Factors,” of the Company’s subsequently filed Quarterly Reports on Form 10-Q (including this report), and the following:

- The impact of decreasing demand for printed materials and significant overcapacity in a highly competitive environment creates downward pricing pressures and potential under-utilization of assets;
- The impact of digital media and similar technological changes, including digital substitution by consumers;
- The impact of fluctuations in costs (including labor and labor-related costs, energy costs, freight rates and raw materials) and the impact of fluctuations in the availability of raw materials;
- The failure to successfully identify, manage, complete and integrate acquisitions and investments, including the proposed acquisition of LSC;
- The inability of the Company to reduce costs and improve operating efficiency rapidly enough to meet market conditions;
- The impact of increased business complexity as a result of the Company’s transformation to a marketing solutions provider;
- The impact of regulatory matters and legislative developments or changes in laws, including changes in cyber-security, privacy and environmental laws;
- The impact of changing future economic conditions;
- The failure of clients to perform under contracts or to renew contracts with clients on favorable terms or at all;
- The failure to attract and retain qualified talent across the enterprise;
- Significant capital expenditures may be needed to maintain the Company’s platforms and processes and to remain technologically and economically competitive;
- The impact of changes in postal rates, service levels or regulations;

- The fragility and decline in overall distribution channels, including newspaper distribution channels;

- The impact of the various restrictive covenants in the Company's debt facilities on the Company's ability to operate its business;

- The impact of risks associated with the operations outside of the United States, including costs incurred or reputational damage suffered due to improper conduct of its employees, contractors or agents;

Table of Contents

- The impact on the holders of Quad's class A common stock of a limited active market for such shares and the inability to independently elect directors or control decisions due to the voting power of the class B common stock;

- The impact of an other than temporary decline in operating results and enterprise value that could lead to non-cash impairment charges due to the impairment of property, plant and equipment and other intangible assets; and

- The impacts that the proposed acquisition of LSC may have on the Company, both prior to and following consummation of that acquisition.

Quad cautions that the foregoing list of risks, uncertainties and other factors is not exhaustive, and you should carefully consider the other factors detailed from time to time in Quad's filings with the SEC and other uncertainties and potential events when reviewing the Company's forward-looking statements.

Because forward-looking statements are subject to assumptions and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. You are cautioned not to place undue reliance on such statements, which speak only as of the date of this Quarterly Report on Form 10-Q. Except to the extent required by the federal securities laws, Quad undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Table of Contents

Overview

Business Overview

As a worldwide marketing solutions partner dedicated to creating a better way, Quad uses its data-driven, integrated marketing solutions platform to help clients reduce complexity, increase efficiency and enhance marketing spend effectiveness. Quad provides its clients with unmatched scale for client on-site services and expanded subject expertise in marketing strategy, creative solutions, media deployment and marketing management services. With a client-centric approach, that drives its expanded offering, combined with leading-edge technology and single-source simplicity, the Company believes it has the resources and knowledge to help a wide variety of clients in multiple vertical industries, including retail, publishing and healthcare.

Quad believes employee pride, combined with a relentless quest to create a better way, builds the opportunity to invent the future as a preferred marketing solutions partner, helping its clients win every day. To accomplish this vision, Quad remains focused on its consistent strategic priorities as follows:

Walk in the Shoes of Clients

The Company encourages all employees, regardless of job title, to walk in the shoes of clients by putting a priority on listening to clients' needs and challenges, doing what they can to make it easy to work with Quad, and making the client experience enjoyable at every touchpoint. In Quad 3.0, the Company is focused on evolving client print-production conversations to conversations encompassing consultative, enterprise-wide solutions that will create more value for clients. To accomplish this, a key component of Quad's client-facing strategy is to strengthen relationships at higher levels within a client's organization so the Company can better understand, anticipate and satisfy the organization's needs. In Quad 3.0, Quad seeks to become an invaluable strategic marketing partner for its clients, helping them successfully navigate today's constantly evolving media landscape through innovative data-driven solutions, produced and deployed across multiple media channels. The Company also believes its proactive thought leadership in the key issues facing its clients, including data-driven marketing and postal reform, will foster loyalty to the Quad brand.

Grow the Business Profitably

This strategy centers on Quad's ability to grow its business at a time when significant media disruption and print industry headwinds continue. Key components of this strategy are as follows:

- Quad 3.0, in which the Company serves as a comprehensive marketing solution partner to its clients. The Company believes its integrated end-to-end marketing solutions platform will create more value than the traditional agency approach that operates in silos and is focused on profit by media channel. Quad's integrated marketing solutions platform removes the complexity Quad's clients' face when working with multiple agency partners, providing a streamlined and simplified approach to help them achieve their marketing goals. In doing so, the Company believes it will increase client efficiencies through workflow re-engineering, content production and process optimization; and improve their client's overall marketing spend effectiveness through customer insights and analytics, creative services and enhanced personalization leading to more real-time and actionable measurement.

- Organic growth, in which the Company leverages knowledge from existing client relationships in key growth vertical industries to develop complementary products and services that help brand owners market more efficiently and effectively across media channels. Quad is also focused on ensuring it has the right talent in the right positions to facilitate strategic marketing conversations with its clients that lead to a better understanding of their needs, developing tailored solutions and growing market share.

- Disciplined acquisitions, that take many different forms. For example, the Company intends to continue to pursue value-driven industry consolidating acquisitions as well as acquisitions and investments that help accelerate the Company's transformation in Quad 3.0, such as the proposed acquisition of LSC.

Table of Contents

Strengthen the Core

Quad uses a disciplined return on capital framework and historically has made significant investments in its print manufacturing platform and data management capabilities that have resulted in what it believes is the most integrated, automated, efficient, innovative and modern manufacturing platform and distribution network in the printing industry. The Company's continued focus to strengthen its core manufacturing platform through investments that streamline, automate and improve efficiencies and throughput, while reducing labor costs, promotes sustainable cash flow and continued value creation. Further, Quad's disciplined culture of holistic Continuous Improvement and commitment to Lean Manufacturing methodologies is a high priority throughout the Company and supports its goal of strengthening the production and distribution functions for core product lines so that Quad can remain the printing industry's high-quality, low-cost producer.

Empower Employees

Quad's strategy to empower employees throughout their career journey builds on key aspects of the Company's distinct corporate culture, which the Company uses to fuel its ongoing Quad 3.0 transformation. These aspects include strong and lasting Company values and an organization-wide entrepreneurial spirit and opportunity-seeking mentality. Employees are encouraged to take pride and ownership in their work, take advantage of continuous learning programs to advance in their careers and improve leadership skills, share knowledge by mentoring others and innovate solutions to drive performance. With the encouragement to do things differently, to be something greater and to create a better way, the Company believes its employees are more fully engaged in producing better results for clients and advancing the Company's strategic goals, while supporting community activities, initiatives and organizations that impact the quality of life near Quad's facilities. As Quad continues to expand its integrated marketing platform in Quad 3.0, the Company believes this creates possibilities for each employee that are advantageously distinct from other employers.

Enhance Financial Strength and Create Shareholder Value

Quad follows a disciplined approach to maintaining and enhancing financial strength to create shareholder value, which is essential given ongoing media disruption and printing industry challenges. This strategy is centered on the Company's ability to maximize net earnings, Free Cash Flow and operating margins; maintain consistent financial policies to ensure a strong balance sheet, liquidity level and access to capital; and retain the financial flexibility needed to strategically allocate and deploy capital as circumstances change. The priorities for capital allocation and deployment are adjusted based on prevailing circumstances and what the Company thinks is best for shareholder value creation at any particular point in time. Those priorities currently include the following: (1) deleveraging the Company's balance sheet through debt and pension liability reductions; (2) making compelling investments that drive profitable organic growth and productivity in the Company's print manufacturing and distribution operations, as well as executing on acquisitions through a disciplined approach that includes continued expansion into higher-growth marketing services that help accelerate the Company's transformation in Quad 3.0, and pursuing value-driven industry consolidation; and (3) returning capital to shareholders through dividends and share repurchases.

To provide ongoing improvement in manufacturing productivity, the Company applies holistic Continuous Improvement and Lean Manufacturing methodologies to simplify and streamline processes and to ultimately maximize operating margins. These same methodologies are applied to its selling, general and administrative functions to create a truly Lean Enterprise. The Company has been working diligently to lower its cost structure by consolidating its manufacturing platform into its most efficient facilities, as well as realizing purchasing, mailing and logistics efficiencies by centralizing and consolidating print manufacturing volumes and eliminating redundancies in its administrative and corporate operations. Quad believes that its focused efforts to be the high-quality, low-cost producer generates increased Free Cash Flow and allows the Company to maintain a strong balance sheet through debt and pension liability reductions. The Company's disciplined financial approach also allows it to maintain sufficient

liquidity and to reduce refinancing risk, with the nearest significant debt maturity not occurring until January 2021.

Table of Contents

Segments

The Company's operating and reportable segments are aligned with how the chief operating decision maker of the Company currently manages the business. The Company's operating and reportable segments, including their product and service offerings, and a "Corporate" category are summarized below.

- The United States Print and Related Services segment is predominantly comprised of the Company's United States printing operations and is managed as one integrated platform. This includes retail inserts, publications, catalogs, special interest publications, journals, direct mail, books, directories, in-store marketing and promotion, packaging, newspapers, custom print products, other commercial and specialty printed products and global paper procurement, together with marketing and other complementary services, including consumer insights, audience targeting, personalization, media planning and placement, process optimization, campaign planning and creation, pre-media production, videography, photography, digital execution, print execution and logistics. This segment also includes the manufacture of ink. The United States Print and Related Services segment accounted for approximately 89% of the Company's consolidated net sales during the three months ended March 31, 2019.

- The International segment consists of the Company's printing operations in Europe and Latin America, including operations in England, France, Germany, Poland, Argentina, Colombia, Mexico and Peru, as well as investments in printing operations in Brazil and India. This segment provides printed products and marketing and other complementary services consistent with the United States Print and Related Services segment. The International segment accounted for approximately 11% of the Company's consolidated net sales during the three months ended March 31, 2019.

- Corporate consists of unallocated general and administrative activities and associated expenses including, in part, executive, legal and finance, as well as certain expenses and income from frozen employee retirement plans, such as pension benefit plans.

Key Performance Metrics Overview

The Company's management believes the ability to generate net sales growth, profit increases and positive cash flow, while maintaining the appropriate level of debt, are key indicators of the successful execution of the Company's business strategy and will increase shareholder value. The Company uses period over period net sales growth, EBITDA, EBITDA margin, net cash provided by operating activities, Free Cash Flow and Debt Leverage Ratio as metrics to measure operating performance, financial condition and liquidity. EBITDA, EBITDA margin, Free Cash Flow and Debt Leverage Ratio are non-GAAP financial measures (see the definitions of EBITDA, EBITDA margin and the reconciliation of net earnings (loss) attributable to Quad common shareholders to EBITDA in the "Results of Operations" section below, and see the definitions of Free Cash Flow and Debt Leverage Ratio, the reconciliation of net cash provided by operating activities to Free Cash Flow, and the calculation of Debt Leverage Ratio in the "Liquidity and Capital Resources" section below).

Net sales growth. The Company uses period over period net sales growth as a key performance metric. The Company's management assesses net sales growth based on the ability to generate increased net sales through increased sales to existing clients, sales to new clients, sales of new or expanded solutions to existing and new clients and opportunities to expand sales through strategic investments, including acquisitions.

EBITDA and EBITDA margin. The Company uses EBITDA and EBITDA margin as metrics to assess operating performance. The Company's management assesses EBITDA and EBITDA margin based on the ability to increase revenues while controlling variable expense growth.

Net cash provided by operating activities. The Company uses net cash provided by operating activities as a metric to assess liquidity. The Company's management assesses net cash provided by operating activities based on the ability to meet recurring cash obligations while increasing available cash to fund cash restructuring requirements related to cost reduction activities, as well as to fund capital expenditures, debt service requirements, World Color Press single employer pension plan contributions, World Color Press MEPPs withdrawal liabilities, acquisitions and other investments in future growth, shareholder dividends and share repurchases. Net cash provided by operating activities can be significantly impacted by the timing of non-recurring or infrequent receipts or expenditures.

Table of Contents

Free Cash Flow. The Company uses Free Cash Flow as a metric to assess liquidity and capital deployment. The Company's management assesses Free Cash Flow as a measure to quantify cash available for strengthening the balance sheet (debt and pension liability reduction), for strategic capital allocation and deployment through investments in the business (acquisitions and strategic investments) and for returning capital to the shareholders (dividends and share repurchases). The Company's priorities for capital allocation and deployment will change as circumstances dictate for the business, and Free Cash Flow can be significantly impacted by the Company's restructuring activities and other unusual items.

Debt Leverage Ratio. The Company uses the Debt Leverage Ratio as a metric to assess liquidity and the flexibility of its balance sheet. Consistent with other liquidity metrics, the Company monitors the Debt Leverage Ratio as a measure to determine the appropriate level of debt the Company believes is optimal to operate its business, and accordingly, to quantify debt capacity available for strategic capital allocation and deployment through investments in the business (capital expenditures, acquisitions and strategic investments), for strengthening the balance sheet (pension liability reduction), and for returning capital to the shareholders (dividends and share repurchases). The priorities for capital allocation and deployment will change as circumstances dictate for the business, and the Debt Leverage Ratio can be significantly impacted by the amount and timing of large expenditures requiring debt financing, as well as changes in profitability.

The Company remains disciplined with its debt leverage. The Company's consolidated debt and finance leases increased $201 million during the three months ended March 31, 2019, primarily to fund the acquisition of Periscope. Since the Company completed the World Color Press acquisition in July 2010, the Company has reduced debt and finance leases by $598 million and has reduced the obligations for pension, postretirement and MEPPs by $432 million, for a total obligation reduction since July of 2010 of over $1.0 billion.

The Company believes that a disciplined approach for capital management and a strong balance sheet are critical to be able to invest in profitable growth opportunities and technological advances, thereby providing the highest return for shareholders. Management balances the use of cash between deleveraging the Company's balance sheet (through reduction in debt and pension obligations), compelling investment opportunities (through capital expenditures, acquisitions and strategic investments) and returns to shareholders (through share repurchases and a quarterly dividend of $0.30 per share).

The Company is subject to seasonality in its quarterly results as net sales and operating income are higher in the third and fourth quarters of the calendar year as compared to the first and second quarters. The fourth quarter is typically the highest seasonal quarter for cash flows from operating activities and Free Cash Flow due to the reduction of working capital requirements that reach peak levels during the third quarter. Seasonality is driven by increased magazine advertising page counts, retail inserts, catalogs and books primarily due to back-to-school and holiday-related advertising and promotions. The Company expects this seasonality impact to continue in future years.

Overview of Trends Affecting Quad

As consumer media consumption habits change, marketing services providers face increased demand to offer end-to-end marketing services, from strategy and creative through execution, across all media channels. As new marketing and advertising channels emerge, marketing services providers must expand their services beyond traditional channels such as for television, newspapers, print publications and radio, to digital channels such as mobile, internet search, internet display and video, to create effective multichannel campaigns for their clients. This trend greatly influences Quad's ongoing efforts to redefine the future of integrated marketing and create greater value for its clients who are looking for less complexity, greater transparency and accountability from their business partners.

In Quad 3.0, the Company leverages its data-driven print expertise as part of an integrated marketing solutions platform that helps its clients not only plan and produce marketing programs, but also deploy, manage and measure them across all media channels. Competition in the printing industry remains highly fragmented and intense, and the Company believes that there are indicators of heightened competitive pressures. The industry has excess manufacturing capacity created by continued declines in industry volumes which, in turn, has created accelerated downward pricing pressures. In addition, digital delivery of documents and data, including the online distribution and hosting of media content and mobile technologies, offer alternatives to traditional delivery of printed documents. Increasing consumer acceptance of digital delivery of content has resulted in marketers and publishers allocating their marketing and advertising spend across the expanding selection of digital delivery options, which further reduces printing demand and contributes to industry overcapacity. The Company also faces competition from print management firms, which look to streamline processes and reduce the overall print spend of the Company’s clients, as well as from strategic marketing firms focused on helping businesses integrate multiple channels into their marketing campaigns.

Table of Contents

The Company continues to make progress on integrating and streamlining all aspects of its business, thereby lowering its cost structure by consolidating its manufacturing platform into its most efficient facilities, as well as realizing purchasing, mailing and logistics efficiencies by centralizing and consolidating print manufacturing volumes and eliminating redundancies in its administrative and corporate operations. The Company has continued to evolve its manufacturing platform, equipping facilities to be product line agnostic, which enables the Company to maximize equipment utilization. Quad believes that the large plant size of certain of its key printing facilities allows the Company to drive savings in certain product lines (such as publications and catalogs) due to economies of scale and from investments in automation and technology. The Company continues to focus on proactively aligning its cost structure to the realities of the top-line pressures it faces in the printing industry through Lean Manufacturing and sustainable continuous improvement programs. Restructuring actions initiated by the Company beginning in 2010 have resulted in the announcement of 43 plant closures through March 31, 2019.

The Company believes it will continue to drive productivity improvements and sustainable cost reduction initiatives into the future through an engaged workforce and ongoing adoption of the latest manufacturing automation and technology. Through this strategy, the Company believes it can maintain the strongest, most efficient print manufacturing platform to remain a high-quality, low-cost producer.

Integrated distribution with the postal service is an important component of the Company's business. Any material change in the current service levels provided by the postal service could impact the demand that clients have for print services. The United States Postal Service ("USPS") continues to experience financial problems. Without increased revenues or action by Congress to reform the USPS' cost structure, these losses will continue into the future. Because of these financial difficulties, the USPS has come under increased pressure to adjust its postal rates and service levels. Additional price increases may result in customers reducing mail volumes and exploring the use of alternative methods for delivering a larger portion of their products, such as continued diversion to the internet and other alternative media channels to ensure that they stay within their expected postage budgets.

Current federal law limits postal rate increases (outside of an "exigent circumstance") to the increase in the Consumer Price Index ("CPI"). This cap works to ensure funding stability and predictability for mailers. However, that same federal statute requires the Postal Regulatory Commission ("PRC") to conduct a review of the overall rate-making structure for the USPS. The PRC proposed a new rate-making structure that would provide the USPS with additional pricing flexibility over the current CPI cap, and which may result in a substantially altered rate structure for mailers. Any newly revised rates that would be effective because of new rules issued by the PRC may include a higher rate cap, or potentially the elimination of a rate cap altogether, which will result in no restrictions on the USPS' ability to increase rates from year to year. This may lead to price spikes for mailers and may also reduce the incentive for the USPS to continue to take out costs and instead continue to rely on postage to cover the costs of an outdated postal service that does not reflect the industry's ability or willingness to pay. The result may be reduced demand for printed products as customers may move more aggressively into other delivery methods, such as the many digital and mobile options now available to consumers.

On April 12, 2018, an executive order was issued for a presidential task force to review the USPS with a provided time frame of 120 days. The recommendations stemming from the presidential task force were published on December 4, 2018, which were wide in scope and will require additional input from a variety of stakeholders, including the United States Congress. The Company expects that with the publication of the report, both postal reform legislation and the PRC's proposed rate structure changes will be further investigated within the next year.

Table of Contents

In 2019, the Company has continued to fuel its Quad 3.0 transformation through acquisitions focused on building out its integrated marketing solutions platform:

- The Company acquired Minneapolis-based creative agency, Periscope, on January 3, 2019, for a preliminary purchase price of $121 million, excluding acquired cash and non-cash equity awards granted. Periscope's comprehensive offering includes media buying and analytics, creative and account management, as well as packaging design and premedia services that complement Quad's print-production capabilities. With Periscope, the Company now has a highly efficient global platform for creating marketing campaigns and programs, from strategy and creative through execution, across all media channels. This integrated, end-to-end marketing platform creates more value for clients than the traditional agency approach that operates in silos by reducing complexity and improving process efficiencies and marketing spend effectiveness.

- On October 30, 2018, the Company entered into a definitive agreement to acquire Chicago-based LSC in an all-stock transaction valued at approximately $1.3 billion, including the refinancing of LSC's debt and assumption of other obligations. The acquisition, which is subject to customary closing conditions, including regulatory approval, is expected to close in mid-2019. The acquisition is expected to create more value for all stakeholders by leveraging a strong print foundation as part of a much larger, more robust integration marketing solutions offering, while broadening Quad's client base and revenue-generating potential. The transaction presents a compelling opportunity for achieving significant net synergies through the elimination of duplicative functions, capacity rationalization, greater operational efficiencies and greater efficiencies in supply chain management. The Company believes the significant level of synergies will result in a more profitable combined company, and that the all-stock transaction structure is expected to allow Quad to maintain a strong balance sheet, which is expected to create future value for all shareholders.

Table of Contents

Results of Operations for the Three Months Ended March 31, 2019, Compared to the Three Months Ended March 31, 2018

Summary Results

The Company's operating income, operating margin, net loss attributable to Quad common shareholders (computed using a 25% normalized tax rate for all items subject to tax) and diluted loss per share attributable to Quad common shareholders for the three months ended March 31, 2019, changed from the three months ended March 31, 2018, as follows (dollars in millions, except margin and per share data):

	Operating Income	Operating Margin	Net Loss Attributable to Quad Common Shareholders	Diluted Loss Per Share Attributable to Quad Common Shareholders
For the three months ended March 31, 2018	$ 7.1	0.7 %	$ (3.5)	$ (0.07)
Restructuring, impairment and transaction-related charges [1]	17.3	1.8 %	13.0	0.26
Interest expense [2]	N/A	N/A	(3.4)	(0.07)
Net pension income [3]	N/A	N/A	(1.2)	(0.03)
2019 loss on debt extinguishment [4]	N/A	N/A	(11.9)	(0.24)
Income taxes [5]	N/A	N/A	0.8	0.02
Investments in unconsolidated entity and noncontrolling interests, net of tax [6]	N/A	N/A	(0.1)	(0.01)
Operating income [7]	(21.5)	(2.2)%	(16.2)	(0.31)
For the three months ended March 31, 2019	$ 2.9	0.3 %	$ (22.5)	$ (0.45)

(1) Restructuring, impairment and transaction-related charges of $7.6 million, decreased $17.3 million ($13.0 million, net of tax) during the three months ended March 31, 2019, and included the following:

a. A $6.3 million decrease in employee termination charges from $10.6 million during the three months ended March 31, 2018, to $4.3 million during the three months ended March 31, 2019;

b. A $6.2 million decrease in impairment charges from $7.9 million during the three months ended March 31, 2018, to $1.7 million during the three months ended March 31, 2019;

c. A $0.8 million increase in transaction-related charges from $0.7 million during the three months ended March 31, 2018, to$1.5 million during the three months ended March 31, 2019;

d. A $0.7 million increase in integration costs from $0.1 million during the three months ended March 31, 2018, to $0.8 million during the three months ended March 31, 2019; and

e. A $6.3 million decrease in various other restructuring charges from $5.6 million of other restructuring charges during the three months ended March 31, 2018, to $0.7 million of other restructuring income during the three months ended March 31, 2019.

The Company expects to incur additional restructuring and integration costs in future reporting periods in connection with eliminating excess manufacturing capacity and properly aligning its cost structure in conjunction with the Company's acquisitions and strategic investments, and other cost reduction programs.

(2) Interest expense increased $4.5 million ($3.4 million, net of tax) during the three months ended March 31, 2019, to $21.8 million. This change was due to a higher average debt levels and higher weighted average interest rate on borrowings in the three months ended March 31, 2019, as compared to the three months ended March 31, 2018.

(3) Net pension income decreased $1.6 million ($1.2 million, net of tax) during the three months ended March 31, 2019, to $1.5 million. This was due to a $1.2 million decrease from the change in the expected long-term return on pension plan assets assumption to 6.25% from 6.50%, and a $0.4 million increase from interest cost on pension plan liabilities.

(4) A $15.9 million loss on debt extinguishment ($11.9 million, net of tax) was recognized during the three months ended March 31, 2019, from the refinancing of the Senior Secured Credit Facility, completed on January 31, 2019.

Table of Contents

(5) The $0.8 million increase in income tax benefit as calculated in the following table is primarily due to a $1.4 million increased tax benefit from equity award activity, partially offset by a $1.0 million decreased tax benefit from a decrease in the Company's liability for unrecognized tax benefits.

	Three Months Ended March 31,		
	2019	2018	$ Change
Earnings before income taxes and equity in loss of unconsolidated entity	$(33.3)	$(7.1)	$(26.2)
Normalized tax rate	25.0 %	25.0 %	
Income tax expense at normalized tax rate	(8.3)	(1.8)	(6.5)
Income tax benefit from the condensed consolidated statements of operations	(10.6)	(3.3)	(7.3)
Impact of income taxes	$2.3	$1.5	$0.8

(6) The decrease from investments in unconsolidated entity and noncontrolling interests, net of tax, of $0.1 million during the three months ended March 31, 2019, was primarily related to a $0.4 million decrease in earnings at the Company's investment in Plural, partially offset by a favorable impact from the adjustment of the $0.3 million net loss attributed to noncontrolling interests in the Company's condensed consolidated statements of operations related to the Company's 57% ownership of Rise.

(7) Operating income, excluding restructuring, impairment and transaction-related charges, decreased $21.5 million ($16.2 million, net of tax impact) during the three months ended March 31, 2019, primarily due to the following: (1) lower print volume and pricing due to ongoing industry pressures; (2) a $16.4 million net benefit in 2018 in gains from property insurance claims; and (3) a $5.0 million benefit in 2018 from changes in employee vacation policies. These decreases were partially offset by the following: (1) a $22.3 million non-cash expense related to a special employee retirement contribution in 2018 resulting from the benefit of tax reform that did not repeat in 2019; (2) savings from cost reduction initiatives, including employee-related costs; and (3) earnings from the Ivie and Periscope acquisitions and investment in Rise.

Operating Results

The following table sets forth certain information from the Company's condensed consolidated statements of operations on an absolute dollar basis and as a relative percentage of total net sales for each noted period, together with the relative percentage change in such information between the periods set forth below:

	Three Months Ended March 31,					
	2019		2018			
	(dollars in millions)					
	Amount	% of Sales	Amount	% of Sales	$ Change	% Change
Net sales:						
Products	$805.1	80.1 %	$801.1	82.8 %	$ 4.0	0.5 %
Services	199.6	19.9 %	166.4	17.2 %	33.2	20.0 %
Total net sales	1,004.7	100.0%	967.5	100.0%	37.2	3.8 %
Cost of sales:						
Products	695.0	69.2 %	665.2	68.8 %	29.8	4.5 %
Services	142.1	14.1 %	127.2	13.1 %	14.9	11.7 %
Total cost of sales	837.1	83.3 %	792.4	81.9 %	44.7	5.6 %

Selling, general & administrative expenses	97.9	9.7	%	86.9	9.0	%	11.0	12.7 %
Depreciation and amortization	59.2	5.9	%	56.2	5.8	%	3.0	5.3 %
Restructuring, impairment and transaction-related charges	7.6	0.8	%	24.9	2.6	%	(17.3)	(69.5)%
Total operating expenses	1,001.8	99.7	%	960.4	99.3	%	41.4	4.3 %
Operating income	$2.9	0.3	%	$7.1	0.7	%	$ (4.2)	(59.2)%

Table of Contents

Net Sales

Product sales increased $4.0 million, or 0.5%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $22.8 million increase from pass-through paper sales, partially offset by a $10.9 million decrease in sales in the Company's print product lines due to ongoing industry volume and pricing pressures and $7.9 million in unfavorable foreign exchange impacts.

Service sales, which primarily consist of imaging, logistics, distribution and medical services, increased $33.2 million, or 20.0%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $42.8 million increase in net sales from the Ivie and Periscope acquisitions and the investment in Rise and a $1.4 million increase in logistics sales, partially offset by a $11.0 million decrease in print management and imaging services.

Cost of Sales

Cost of product sales increased $29.8 million, or 4.5%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to an increase in pass-through paper costs and an increase in employee-related costs, primarily due to an increase in production wages. These increases were partially offset by the following: (1) lower print volume and cost reduction initiatives; (2) a $14.0 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019; and (3) a $5.0 million net benefit in 2018 from changes in employee vacation policies.

Cost of product sales as a percentage of total net sales increased to 69.2% for the three months ended March 31, 2019, from 68.8% for the three months ended March 31, 2018, primarily due to the reasons provided above.

Cost of service sales increased $14.9 million, or 11.7%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to the Ivie and Periscope acquisitions and the investment in Rise, partially offset by a $2.6 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019.

Cost of service sales as a percentage of total net sales increased to 14.1% for the three months ended March 31, 2019, from 13.1% for the three months ended March 31, 2018, primarily due to the reasons provided above.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased $11.0 million, or 12.7%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $16.4 million net benefit in 2018 in gains from property insurance claims, partially offset by a $5.7 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019 and savings from cost reduction initiatives. Selling, general and administrative expenses as a percentage of net sales increased from 9.0% for the three months ended March 31, 2018, to 9.7% for the three months ended March 31, 2019, primarily due to the reasons stated above.

Depreciation and Amortization

Depreciation and amortization increased $3.0 million, or 5.3%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, due to a $5.8 million increase in amortization expense primarily related to amortization expense for intangible assets acquired through the Ivie and Periscope acquisitions and the investment in Rise, partially offset by a $2.8 million decrease in depreciation expense from property, plant and equipment becoming fully depreciated over the past year.

54

Table of Contents

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges decreased $17.3 million, or 69.5%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to the following:

	Three Months Ended March 31,		
	2019	2018	$ Change
Employee termination charges	$4.3	$10.6	$(6.3)
Impairment charges [a]	1.7	7.9	(6.2)
Transaction-related charges	1.5	0.7	0.8
Integration costs	0.8	0.1	0.7
Other restructuring (income) charges			
Vacant facility carrying costs and lease exit charges	1.3	6.6	(5.3)
Equipment and infrastructure removal costs	0.1	0.8	(0.7)
Gains on the sale of facilities [b]	(3.5)	(2.2)	(1.3)
Other restructuring activities	1.4	0.4	1.0
Other restructuring (income) charges	(0.7)	5.6	(6.3)
Total restructuring, impairment and transaction-related charges	$7.6	$24.9	$(17.3)

(a) Includes $1.7 million and $5.5 million of impairment charges for machinery and equipment no longer being utilized in production as a result of facility consolidations, as well as other capacity reduction restructuring activities during the three months ended March 31, 2019 and March 31, 2018, respectively, and $2.4 million of land and building impairment charges during the three months ended March 31, 2018.

(b) Includes a $3.5 million gain on the sale of the Hazleton, Pennsylvania facility during the three months ended March 31, 2019, and a $2.2 million gain on the sale of the San Ixhuatepec, Mexico facility during the three months ended March 31, 2018.

EBITDA and EBITDA Margin—Consolidated

EBITDA and EBITDA margin for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, were as follows:

	Three Months Ended March 31,			
	2019		2018	
	Amount	% of Net Sales	Amount	% of Net Sales
	(dollars in millions)			
EBITDA and EBITDA margin (non-GAAP)	$47.9	4.8 %	$66.7	6.9 %

EBITDA decreased $18.8 million for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to the following: (1) lower print volume and pricing due to ongoing industry pressures; (2) a $16.4 million net benefit in 2018 in gains from property insurance claims; and (3) a $5.0 million benefit in 2018 from changes in employee vacation policies. These impacts were partially offset by the following: (1) a $22.3 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019; (2) $17.3 million of decreased restructuring, impairment and transaction-related charges; (3) savings from cost reduction initiatives; and (4) earnings from the Ivie and Periscope acquisitions and the investment in Rise.

55

Table of Contents

EBITDA is defined as net earnings (loss) attributable to Quad common shareholders, excluding (1) interest expense, (2) income tax expense (benefit) and (3) depreciation and amortization. EBITDA margin represents EBITDA as a percentage of net sales. EBITDA and EBITDA margin are presented to provide additional information regarding Quad's performance. Both are important measures by which Quad gauges the profitability and assesses the performance of its business. EBITDA and EBITDA margin are non-GAAP financial measures and should not be considered alternatives to net earnings (loss) as a measure of operating performance, or to cash flows provided by operating activities as a measure of liquidity. Quad's calculation of EBITDA and EBITDA margin may be different from the calculations used by other companies, and therefore, comparability may be limited.

A reconciliation of EBITDA to net loss attributable to Quad common shareholders for the three months ended March 31, 2019 and 2018, was as follows:

	Three Months Ended March 31,	
	2019	2018
	(dollars in millions)	
Net loss attributable to Quad common shareholders [1]	$ (22.5)	$ (3.5)
Interest expense	21.8	17.3
Income tax benefit	(10.6)	(3.3)
Depreciation and amortization	59.2	56.2
EBITDA (non-GAAP)	$ 47.9	$ 66.7

[1] Net loss attributable to Quad common shareholders included the following:

a. Restructuring, impairment and transaction-related charges of $7.6 million and $24.9 million for the three months ended March 31, 2019 and 2018, respectively;

b. Employee stock ownership plan non-cash expense related to a special employee retirement contribution of $22.3 million for the three months ended March 31, 2018;

c. Net pension income of $1.5 million and $3.1 million for the three months ended March 31, 2019 and 2018, respectively;

d. Loss on debt extinguishment of $15.9 million for the three months ended March 31, 2019;

e. Equity in loss of unconsolidated entity of $0.1 million and equity in earnings of unconsolidated entity of $0.3 million for the three months ended March 31, 2019 and 2018, respectively; and

f. Net loss attributable to noncontrolling interests of $0.3 million for the three months ended March 31, 2019.

United States Print and Related Services

The following table summarizes net sales, operating income, operating margin and certain items impacting comparability within the United States Print and Related Services segment:

	Three Months Ended March 31,			
	2019	2018		
	(dollars in millions)			
	Amount	Amount	$ Change	% Change
Net sales:				
Products	$703.3	$706.6	$ (3.3)	(0.5)%
Services	195.4	161.2	34.2	21.2 %
Operating income (including restructuring, impairment and transaction-related charges)	15.8	20.3	(4.5)	(22.2)%
Operating margin	1.8 %	2.3 %	N/A	N/A
Restructuring, impairment and transaction-related charges	$4.5	$20.4	$ (15.9)	(77.9)%

56

Table of Contents

Net Sales

Product sales for the United States Print and Related Services segment decreased $3.3 million, or 0.5%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $19.4 million decrease in sales in the Company's print product lines (predominantly due to ongoing volume and pricing pressures from excess capacity in the printing industry), partially offset by a $16.1 million increase in pass-through paper sales.

Service sales for the United States Print and Related Services segment increased $34.2 million, or 21.2%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $42.8 million increase in net sales from the Ivie and Periscope acquisitions and the investment in Rise and a $2.5 million increase in logistics sales, partially offset by a $11.1 million decrease in print management and imaging services.

Operating Income

Operating income for the United States Print and Related Services segment decreased $4.5 million, or 22.2%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to the following: (1) lower print volume and pricing due to ongoing industry pressures; (2) a $16.4 million net benefit in 2018 in gains from property insurance claims; and (3) a $5.0 million benefit in 2018 from the change in employee vacation policies. These impacts were partially offset by the following: (1) a $15.9 million decrease in restructuring, impairment and transaction-related charges; (2) savings from cost reduction initiatives, including employee-related costs; (3) a $21.9 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019; and (4) earnings from the Ivie and Periscope acquisitions and the investment in Rise.

Operating margin for the United States Print and Related Services segment decreased to 1.8% for the three months ended March 31, 2019, compared to 2.3% for the three months ended March 31, 2018, primarily due to the reasons provided above.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the United States Print and Related Services segment for the three months ended March 31, 2019, were $4.5 million, consisting of the following: (1) $4.1 million of employee termination charges related to workforce reductions through facility consolidations and separation programs; (2) $1.7 million of impairment charges for machinery and equipment no longer being utilized in production as a result of facility consolidations, as well as other capacity reduction restructuring activities; (3) $0.8 million of acquisition-related integration costs primarily related to the integration of acquired companies; and (4) $2.1 million of other restructuring income, including a $3.5 million gain from the sale of the Hazleton, Pennsylvania facility, net of various other restructuring charges to maintain and exit closed facilities.

Restructuring, impairment and transaction-related charges for the United States Print and Related Services segment for the three months ended March 31, 2018, were $20.4 million, consisting of the following: (1) $7.0 million of employee termination charges related to workforce reductions through facility consolidations and separation programs; (2) $5.5 million of impairment charges for machinery and equipment no longer being utilized in production as a result of facility consolidations, as well as other capacity reduction restructuring activities; (3) $0.1 million of acquisition-related integration costs primarily related to the integration of acquired companies; (4) $7.8 million of various other restructuring charges to maintain and exit closed facilities.

Table of Contents

International

The following table summarizes net sales, operating income, operating margin, certain items impacting comparability and equity in loss (earnings) of unconsolidated entity within the International segment:

	Three Months Ended March 31,			
	2019	2018		
	(dollars in millions)			
	Amount	Amount	$ Change	% Change
Net sales:				
Products	$101.8	$94.5	$ 7.3	7.7 %
Services	4.2	5.2	(1.0)	(19.2)%
Operating income (including restructuring, impairment and transaction-related charges)	1.9	5.7	(3.8)	(66.7)%
Operating margin	1.8 %	5.7 %	N/A	N/A
Restructuring, impairment and transaction-related charges	$1.6	$1.0	$ 0.6	60.0 %
Equity in loss (earnings) of unconsolidated entity	0.1	(0.3)	(0.4)	133.3 %

Net Sales

Product sales for the International segment increased $7.3 million, or 7.7%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to an $8.5 million increase in volume, primarily in Peru, and a $6.7 million increase in pass-through paper sales, partially offset by $7.9 million in unfavorable foreign exchange impacts.

Service sales for the International segment decreased $1.0 million, or 19.2%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a decrease in logistics sales in Europe.

Operating Income

Operating income for the International segment decreased $3.8 million, or 66.7%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $3.2 million decrease in operating income, primarily in Europe, Peru and Colombia, and a $0.6 million increase in restructuring, impairment and transaction-related charges.

Restructuring, Impairment and Transaction-Related Charges

Restructuring, impairment and transaction-related charges for the International segment for the three months ended March 31, 2019, were $1.6 million, consisting of $0.3 million of employee termination charges related to workforce reductions through facility consolidations and separation programs and $1.3 million of other restructuring charges, including $1.1 million in charges from foreign currency losses as a result of the economy in Argentina being classified as highly inflationary.

Restructuring, impairment and transaction-related charges for the International segment for the three months ended March 31, 2018, were $1.0 million, consisting of the following: (1) $0.7 million of employee termination charges related to workforce reductions through facility consolidations and separation programs; (2) $2.4 million of impairment charges for land and building; and (3) $2.1 million of various other restructuring income, primarily related to a $2.2 million gain from the sale of the San Ixhuatepec, Mexico facility, partially offset by charges to maintain and exit closed facilities.

Equity in Loss (Earnings) of Unconsolidated Entity

Investments in entities where Quad has the ability to exert significant influence, but not control, are accounted for using the equity method of accounting. The Company holds a 49% ownership interest in Plural, a commercial printer based in São Paulo, Brazil. The equity in loss of unconsolidated entity in the International segment increased $0.4 million for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, due to a decrease in earnings at the Company’s investment in Plural.

Table of Contents

Unrestricted Subsidiaries

Unrestricted subsidiaries as defined in the Senior Unsecured Notes indenture represented less than 2.0% of total consolidated net sales for the three months ended March 31, 2019.

Corporate

The following table summarizes unallocated operating expenses presented as Corporate:

	Three Months Ended March 31,			
	2019	2018		
	(dollars in millions)			
	Amount	Amount	$ Change	% Change
Operating expenses (including restructuring, impairment and transaction-related charges)	$14.8	$ 18.9	$ (4.1)	(21.7)%
Restructuring, impairment and transaction-related charges	1.5	3.5	(2.0)	(57.1)%

Operating Expenses

Corporate operating expenses decreased $4.1 million, or 21.7%, for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $2.0 million decrease in restructuring, impairment and transaction-related charges, a $1.3 million decrease in legal expenses and a $0.4 million non-cash expense related to a special employee retirement contribution in 2018 that did not repeat in 2019.

Restructuring, Impairment and Transaction-Related Charges

Corporate restructuring, impairment and transaction-related charges for the three months ended March 31, 2019, were $1.5 million, consisting of transaction-related charges which primarily included professional service fees.

Corporate restructuring, impairment and transaction-related charges for the three months ended March 31, 2018, were $3.5 million, consisting of the following: (1) $2.9 million of employee termination charges related to workforce reductions through separation programs; (2) $0.7 million of transaction-related charges which primarily included professional service fees; and (3) $0.1 million of other restructuring income.

Liquidity and Capital Resources

The Company utilizes cash flows from operating activities and borrowings under its credit facilities to satisfy its liquidity and capital requirements. At March 31, 2019, the Company had cash and cash equivalents of $10.4 million. In addition to cash and cash equivalents, the Company had $515.6 million of unused capacity under its revolving credit arrangement at March 31, 2019, which was net of $33.7 million of issued letters of credit. The Company believes its expected future cash flows from operating activities, $515.6 million of unused capacity under the revolving credit arrangement and available cash on hand provide sufficient resources to fund ongoing operating requirements and the integration and restructuring requirements related to acquired operations, as well as future capital expenditures, debt and pension service requirements, investments in future growth to create value for its shareholders, shareholder dividends and share repurchases. Borrowings under the $800.0 million revolving credit facility were $250.7 million as of March 31, 2019, and peak borrowings were $350.5 million during the three months ended March 31, 2019.

59

Table of Contents

Net Cash (Used in) Provided by Operating Activities

Three Months Ended March 31, 2019, Compared to Three Months Ended March 31, 2018

Net cash (used in) provided by operating activities decreased $60.8 million, from net cash provided by operating activities of $2.2 million for the three months ended March 31, 2018, to net cash used in operating activities of $58.6 million for the three months ended March 31, 2019. This decrease was due to a $36.1 million decrease in cash flows from changes in operating assets and liabilities, primarily due to the reduction in accounts payable, and a $24.7 million decrease in cash from earnings.

Net Cash Used in Investing Activities

Three Months Ended March 31, 2019, Compared to Three Months Ended March 31, 2018

Net cash used in investing activities increased $77.8 million, from $80.4 million for the three months ended March 31, 2018, to $158.2 million for the three months ended March 31, 2019. The increase was primarily due to the following: (1) a $47.1 million increase from the acquisition of businesses; (2) a $21.1 million increase in purchases of property, plant and equipment; and (3) a $13.1 million decrease in proceeds from property insurance claims. These increases were partially offset by a $3.5 million increase in proceeds from the sale of property, plant, and equipment.

Net Cash Provided by Financing Activities

Three Months Ended March 31, 2019, Compared to Three Months Ended March 31, 2018

Net cash provided by financing activities increased $113.5 million, from $44.2 million for the three months ended March 31, 2018, to $157.7 million for the three months ended March 31, 2019. The increase was primarily due to a $138.8 million increase in net borrowings of debt and lease obligations in 2019 as compared to 2018 and a $0.9 million decrease in equity awards redeemed to pay employees' tax obligations. These increases were partially offset by the following: (1) a $20.2 million increase in payments of debt issuance costs and financing fees; (2) a $4.0 million decrease in proceeds from stock options exercised; and (3) a $2.0 million increase in payments of cash dividends.

Free Cash Flow

Free Cash Flow is defined as net cash provided by operating activities less purchases of property, plant and equipment, plus LSC-related payments.

The Company's management assesses Free Cash Flow as a measure to quantify cash available for (1) strengthening the balance sheet (debt reduction), (2) strategic capital allocation and deployment through investments in the business (acquisitions and strategic investments) and (3) returning capital to the shareholders (dividends and share repurchases). The priorities for capital allocation and deployment will change as circumstances dictate for the business, and Free Cash Flow can be significantly impacted by the Company's restructuring activities and other unusual items.

Free Cash Flow is a non-GAAP financial measure and should not be considered an alternative to cash flows provided by operating activities as a measure of liquidity. Quad's calculation of Free Cash Flow may be different from similar calculations used by other companies, and therefore, comparability may be limited.

60

Table of Contents

Free Cash Flow for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, was as follows:

	Three Months Ended March 31,	
	2019	2018
	(dollars in millions)	
Net cash (used in) provided by operating activities	$ (58.6)	$ 2.2
Less: purchases of property, plant and equipment	(45.3)	(24.2)
Plus: LSC-related payments [1]	3.3	—
Free Cash Flow (non-GAAP)	$ (100.6)	$ (22.0)

[1] LSC-related payments includes the incremental interest payments associated with the 2019 amended debt refinancing and payments for transaction-related costs associated with the proposed acquisition of LSC.

Free Cash Flow decreased $78.6 million for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, primarily due to a $60.8 million decrease in net cash provided by operating activities and a $21.1 million increase in capital expenditures, partially offset by a $3.3 million increase in LSC-related payments. See the “Net Cash Provided by Operating Activities” section above for further explanations of the change in operating cash flows and the “Net Cash Used in Investing Activities” section above for further explanations of the changes in purchases of property, plant and equipment.

Debt Leverage Ratio

The Debt Leverage Ratio is defined as total debt and finance lease obligations divided by the trailing twelve months Adjusted EBITDA, comprised of the sum of the following: (1) the last twelve months of EBITDA (see the definition of EBITDA and the reconciliation of net earnings (loss) attributable to Quad common shareholders to EBITDA in the “Results of Operations” section above); (2) restructuring, impairment and transaction-related charges; (3) net pension income; (4) employee stock ownership plan contribution; (5) loss (gain) on debt extinguishment; (6) equity in (earnings) loss of unconsolidated entity; (7) Adjusted EBITDA for unconsolidated equity method investments (calculated in a consistent manner with the calculation for Quad); and (8) net earnings (loss) attributable to noncontrolling interests.

The Company uses the Debt Leverage Ratio as a metric to assess liquidity and the flexibility of its balance sheet. Consistent with other liquidity metrics, the Company monitors the Debt Leverage Ratio as a measure to determine the appropriate level of debt the Company believes is optimal to operate its business, and accordingly, to quantify debt capacity available for strategic capital allocation and deployment through investments in the business (capital expenditures, acquisitions and strategic investments), for strengthening the balance sheet (pension liability reduction), and for returning capital to the shareholders (dividends and share repurchases). The priorities for capital allocation and deployment will change as circumstances dictate for the business, and the Debt Leverage Ratio can be significantly impacted by the amount and timing of large expenditures requiring debt financing, as well as changes in profitability.

The Debt Leverage Ratio is a non-GAAP measure and should not be considered an alternative to cash flows provided by operating activities as a measure of liquidity. Quad’s calculation of the Debt Leverage Ratio may be different from similar calculations used by other companies and, therefore, comparability may be limited.

The Debt Leverage Ratio calculated below differs from both the total leverage ratio and the senior secured leverage ratio included in the Company’s debt covenant calculations (see Note 9, “Debt,” to the condensed consolidated financial

statements in Item 1, “Condensed Consolidated Financial Statements (Unaudited),” of this Quarterly Report on Form 10-Q for further information on debt covenants). The total leverage ratio included in the Company’s debt covenants includes letters of credit and surety bonds as debt, excludes non-cash stock-based compensation expense from EBITDA and includes the equity in (earnings) loss of unconsolidated entity, the Adjusted EBITDA for unconsolidated equity method investments and net income (loss) attributable to noncontrolling interests in EBITDA. Similarly, the senior secured leverage ratio included in the Company’s debt covenants includes and excludes the same adjustments as the total leverage ratio, in addition to the exclusion of the outstanding balance of the Senior Unsecured Notes, surety bonds and domestic unrestricted cash.

Table of Contents

The Debt Leverage Ratio at March 31, 2019, and December 31, 2018, was as follows:

	March 31, 2019	December 31, 2018
	(dollars in millions)	
Total debt and finance lease obligations on the condensed consolidated balance sheets	$1,141.8	$ 940.9
Divided by:		
Trailing twelve months Adjusted EBITDA for Quad (non-GAAP)	$374.0	$ 414.6
Pro forma Adjusted EBITDA for acquired companies (non-GAAP) [1]	7.8	2.9
Trailing twelve months Adjusted EBITDA (non-GAAP)	$381.8	$ 417.5
Debt Leverage Ratio (non-GAAP)	2.99 x	2.25 x
Debt Leverage Ratio—net of excess cash (Non-GAAP)[2]	2.99 x	2.11 x

(1) As permitted by the Company's senior secured credit facility, certain pro forma financial information related to the acquisitions of Periscope and Ivie were included in calculating the Debt Leverage Ratio as of March 31, 2019, and December 31, 2018:

(a) As the acquisition of Periscope was completed on January 3, 2019, the $7.8 million pro forma Adjusted EBITDA represents the period from April 1, 2018, to January 2, 2019. Adjusted EBITDA for Periscope was calculated in a consistent manner with the calculation above for Quad. Periscope's financial information has been consolidated within Quad's financial results since the date of acquisition. If the nine months of pro forma Adjusted EBITDA for Periscope was not included in the calculation, the Company's Debt Leverage Ratio would have been 3.05x as of March 31, 2019.

(b) As the acquisition of Ivie was completed on February 21, 2018, the $2.9 million pro forma Adjusted EBITDA represents the period from January 1, 2018, to February 20, 2018. Adjusted EBITDA for Ivie was calculated in a consistent manner with the calculation above for Quad. Ivie's financial information has been consolidated within Quad's financial results since the date of acquisition. If the two months of pro forma Adjusted EBITDA for Ivie was not included in the calculation, the Company's Debt Leverage Ratio would have been 2.27x as of December 31, 2018.

(2) The Company had $70 million in cash and cash equivalents at December 31, 2018. Based on the Company's typical year-end cash balance of approximately $10 million, Quad had $60 million of excess cash at December 31, 2018. If the excess cash was used to further pay down debt, the Debt Leverage Ratio would have been 2.11x at December 31, 2018.

Table of Contents

The calculation of Adjusted EBITDA for the trailing twelve months ended March 31, 2019, and December 31, 2018, was as follows:

	Year Ended	Add Three Months Ended	Subtract	Trailing Twelve Months Ended
	December 31, 2018 [1]	March 31, 2019	March 31, 2018	March 31, 2019
Net earnings (loss) attributable to Quad common shareholders	$ 8.5	$(22.5)	$ (3.5)	$ (10.5)
Interest expense	73.3	21.8	17.3	77.8
Income tax benefit	(9.8)	(10.6)	(3.3)	(17.1)
Depreciation and amortization	230.7	59.2	56.2	233.7
EBITDA (non-GAAP)	$ 302.7	$47.9	$ 66.7	$ 283.9
Restructuring, impairment and transaction-related charges	103.6	7.6	24.9	86.3
Net pension income	(12.4)	(1.5)	(3.1)	(10.8)
Employee stock ownership plan contribution	22.3	—	22.3	—
Loss on debt extinguishment	—	15.9	—	15.9
Other [2]	(1.6)	—	(0.3)	(1.3)
Adjusted EBITDA (non-GAAP)	$ 414.6	$69.9	$ 110.5	$ 374.0

(1) Financial information for the year ended December 31, 2018, is included as reported in the Company's 2018 Annual Report on Form 10-K filed with the SEC on February 20, 2019.

(2) Other is comprised of equity in loss (earnings) of unconsolidated entity, Adjusted EBITDA for unconsolidated equity method investments and net earnings (loss) attributable to noncontrolling interests.

The Debt Leverage Ratio, net of excess cash, as of December 31, 2018, increased 0.88x at March 31, 2019, compared to December 31, 2018, primarily due to a $200.9 million increase in debt and finance lease obligations, primarily related to the cash paid for the Periscope acquisition and a $21.1 million increase in purchases of property, plant and equipment. The Debt Leverage Ratio at March 31, 2019, of 2.99x is above management's desired target Debt Leverage Ratio range of 2.0x to 2.5x; however, the Company operates at times above the Debt Leverage Ratio target range depending on the timing of compelling strategic investment opportunities like the Periscope acquisition and proposed acquisition of LSC, as well as seasonal working capital needs.

Debt Obligations

The Company completed the third amendment to the April 28, 2014 Senior Secured Credit Facility on January 31, 2019. This third amendment was completed to provide Quad with the liquidity and structural flexibility to consummate the proposed acquisition of LSC and to extend existing maturities by (a) increasing the aggregate amount of the existing revolving credit facility from $725.0 million to $800.0 million in two tranches, with the first tranche of approximately $82.8 million maturing on January 4, 2021, and the second tranche of approximately $717.2 million, with a term of five years, maturing on January 31, 2024; (b) increasing the aggregate amount of the existing Term Loan A from $375.0 million to $825.0 million in two tranches, with the first tranche of approximately $32.4 million maturing on January 4, 2021, and the second tranche of approximately $792.6 million, with a delayed draw feature and term of five years, maturing on January 31, 2024; and (c) increasing the aggregate amount of the existing Term Loan B from $300.0 million to $500.0 million with a term of seven years, maturing on January 31, 2026. The Company intends that the loans available under the amended revolving credit facility will be used to repay, refinance, repurchase, redeem, exchange or otherwise terminate LSC's existing indebtedness prior to, in connection with or following the consummation of the merger, and to pay transaction expenses. The amendment resulted in a loss on debt

extinguishment of $15.9 million during the three months ended March 31, 2019. In addition, certain amendments were made to the quarterly financial covenants to which the Company is subject (all financial terms, numbers and ratios are as defined in the Senior Secured Credit Facility, as amended by the third amendment).

Table of Contents

Borrowings under the revolving credit facility and delayed draw Term Loan A made under the Senior Secured Credit Facility will initially bear interest at 2.50% in excess of reserve adjusted LIBOR, or 1.50% in excess of an alternate base rate, and borrowing under the Term Loan B will initially bear interest at 5.00% in excess of reserve adjusted LIBOR, or 4.00% in excess of an alternative base rate at the Company's option.

The Senior Secured Credit Facility remains secured by substantially all of the unencumbered assets of the Company. The Senior Secured Credit Facility also requires the Company to provide additional collateral to the lenders in certain limited circumstances. See Note 9, "Debt," to the condensed consolidated financial statements in Item 1, "Condensed Consolidated Financial Statements (Unaudited)," of this Quarterly Report on Form 10-Q for additional information.

As of March 31, 2019, the Company utilized a combination of debt instruments to fund cash requirements, including the following:

- Senior Secured Credit Facility:

  Revolving credit facility ($250.7 million outstanding as of March 31, 2019);

  Term Loan A ($32.4 million outstanding as of March 31, 2019); and

  Term Loan B ($485.4 million outstanding as of March 31, 2019);

- Senior Unsecured Notes ($243.5 million outstanding as of March 31, 2019); and

- Master Note and Security Agreement ($94.4 million outstanding as of March 31, 2019).

Covenants and Compliance

The Company's various lending arrangements include certain financial covenants (all financial terms, numbers and ratios are as defined in the Company's debt agreements). Among these covenants, the Company was required to maintain the following as of March 31, 2019:

- Total Leverage Ratio. On a rolling twelve-month basis, the total leverage ratio, defined as total consolidated debt to consolidated EBITDA, shall not exceed 3.75 to 1.00 (for the twelve months ended March 31, 2019, the Company's total leverage ratio was 2.90 to 1.00).

- Liquidity. The Company is required to maintain liquidity, defined as unrestricted cash and permitted investments of the Company and its subsidiaries (subject to certain conditions) plus the aggregate amount of the unused revolving credit facility commitments, of not less than $300.0 million at any time during the period from six months prior to the maturity date of the Company's Senior Unsecured Notes until the earlier of the date on which (a) such Senior Unsecured Notes are repaid in full or (b) the maturity date of such Senior Unsecured Notes is extended to a date that is at least 91 days later than the latest maturity date under the Senior Secured Credit Facility. The maturity date of the Company's Senior Unsecured Notes is currently May 1, 2022. As of March 31, 2019, the liquidity covenant is not applicable, as the Company is not within the six month period prior to the May 1, 2022, maturity date of the Senior Unsecured Notes.

- If there is any amount outstanding on the Revolving Credit Facility or Term Loan A, or if any lender has any revolving credit exposure or Term Loan A credit exposure, the Company is required to maintain the following: Senior Secured Leverage Ratio. On a rolling twelve-month basis, the senior secured leverage ratio, defined as senior secured net debt to consolidated EBITDA, shall not exceed 3.50 to 1.00 (for the twelve months ended March 31,

2019, the Company's senior secured leverage ratio was 2.26 to 1.00).
Interest Coverage Ratio. On a rolling twelve-month basis, the interest coverage ratio, defined as consolidated EBITDA to consolidated cash interest expense, shall not be less than 3.00 to 1.00 (for the twelve months ended March 31, 2019, the Company's interest coverage ratio was 5.38 to 1.00).

Table of Contents

The indenture underlying the Senior Unsecured Notes contains various covenants, including, but not limited to, covenants that, subject to certain exceptions, limit the Company's and its restricted subsidiaries' ability to incur and/or guarantee additional debt; pay dividends, repurchase stock or make certain other restricted payments; enter into agreements limiting dividends and certain other restricted payments; prepay, redeem or repurchase subordinated debt; grant liens on assets; enter into sale and leaseback transactions; merge, consolidate, transfer or dispose of substantially all of the Company's consolidated assets; sell, transfer or otherwise dispose of property and assets; and engage in transactions with affiliates.

The Company was in compliance with all financial covenants in its debt agreements as of March 31, 2019. While the Company currently expects to be in compliance in future periods with all of the financial covenants, there can be no assurance that these covenants will continue to be met. The Company's failure to maintain compliance with the covenants could prevent the Company from borrowing additional amounts and could result in a default under any of the debt agreements. Such default could cause the outstanding indebtedness to become immediately due and payable, by virtue of cross-acceleration or cross-default provisions.

In addition to those covenants, the Senior Secured Credit Facility also includes certain limitations on acquisitions, indebtedness, liens, dividends and repurchases of capital stock, including the following:

- If the Company's total leverage ratio is greater than 2.75 to 1.00 (as defined in the Senior Secured Credit Facility), the Company is prohibited from making greater than $120.0 million of annual dividend payments, capital stock repurchases and certain other payments. If the total leverage ratio is less than 2.75 to 1.00, there are no such restrictions. As the Company's total leverage ratio as of March 31, 2019, was 2.90 to 1.00, the limitations described above are currently applicable.

- If the Company's senior secured leverage ratio is greater than 3.00 to 1.00 or the Company's total leverage ratio is greater than 3.50 to 1.00 (these ratios as defined in the Senior Secured Credit Facility), the Company is prohibited from voluntarily prepaying any of the Senior Unsecured Notes and from voluntarily prepaying any other unsecured or subordinated indebtedness, with certain exceptions (including any mandatory prepayments on the Senior Unsecured Notes or any other unsecured or subordinated debt). If the senior secured leverage ratio is less than 3.00 to 1.00 and the total leverage ratio is less than 3.50 to 1.00, there are no such restrictions.

Risk Management

For a discussion of the Company's exposure to market risks and management of those market risks, see Item 3, "Quantitative and Qualitative Disclosures About Market Risk," of this Quarterly Report on Form 10-Q.

Contractual Obligations and Off-Balance Sheet Arrangements

As of March 31, 2019, other than the impact to the Company's future debt obligations resulting from the completion of the third amendment to the April 28, 2014 Senior Secured Credit Facility on January 31, 2019, the Company's contractual obligations and off-balance sheet arrangements have not changed materially from that listed in the "Contractual Obligations and Other Commitments" table and related notes to the table listed in the Company's Annual Report on Form 10-K filed on February 20, 2019. See Note 9, "Debt," to the condensed consolidated financial statements in Item 1, "Condensed Consolidated Financial Statements (Unaudited)," of this Quarterly Report on Form 10-Q) for more information on the Company's debt obligations.

New Accounting Pronouncements

See Note 21, “New Accounting Pronouncements,” to the condensed consolidated financial statements in Item 1, “Condensed Consolidated Financial Statements (Unaudited),” of this Quarterly Report on Form 10-Q.

Table of Contents

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

The Company is exposed to a variety of market risks which may adversely impact the Company's results of operations and financial condition, including changes in interest and foreign currency exchange rates, changes in the economic environment that would impact credit positions and changes in the prices of certain commodities. The Company's management takes an active role in the risk management process and has developed policies and procedures that require specific administrative and business functions to assist in the identification, assessment and control of various risks. These risk management strategies may not fully insulate the Company from adverse impacts due to market risks.

Interest Rate Risk

The Company is exposed to interest rate risk on variable rate debt obligations and price risk on fixed rate debt and finance leases. The variable rate debt outstanding at March 31, 2019, was primarily comprised of $250.7 million outstanding on the revolving credit facility, $32.4 million outstanding on the Term Loan A and $485.4 million outstanding on the Term Loan B. In order to reduce the variability of cash flows from interest payments related to a portion of Quad's variable-rate debt, the Company entered into a $250.0 million interest rate swap during February 2017 and a $130.0 million interest rate swap during March 2019, and has classified $380.0 million of the Company's variable rate debt as fixed rate debt. Including the impact of the $380.0 million interest rate swap of variable rate to fixed rate debt, Quad had variable rate debt outstanding of $389.7 million at a current weighted average interest rate of 5.4% and fixed rate debt and finance leases outstanding of $752.1 million at a current weighted average interest rate of 6.9% as of March 31, 2019. A hypothetical 10% increase in the market interest rates impacting the Company's current weighted average interest rate on variable rate debt obligations would not have a material impact on the Company's interest expense. A hypothetical 10% change in market interest rates would change the fair value of fixed rate debt at March 31, 2019, by approximately $7 million.

Foreign Currency Risk and Translation Exposure

The Company is exposed to the impact of foreign currency fluctuations in certain countries in which it operates. The exposure to foreign currency movements is limited in most countries because the operating revenues and expenses of its various subsidiaries and business units are substantially in the local currency of the country in which they operate. To the extent revenues and expenses are not in the applicable local currency, the Company may enter into foreign exchange forward contracts to hedge the currency risk.

Although operating in local currencies may limit the impact of currency rate fluctuations on the results of operations of the Company's non-United States subsidiaries and business units, rate fluctuations may impact the consolidated financial position as the assets and liabilities of its foreign operations are translated into United States dollars in preparing the Company's condensed consolidated balance sheets. As of March 31, 2019, the Company's foreign subsidiaries (excluding Argentina due to the economy's status as highly inflationary) had net current assets (defined as current assets less current liabilities) subject to foreign currency translation risk of $32.4 million. The potential decrease in net current assets as of March 31, 2019, from a hypothetical 10% adverse change in quoted foreign currency exchange rates, would be approximately $3.2 million. This sensitivity analysis assumes a parallel shift in all major foreign currency exchange rates versus the United States dollar. Exchange rates rarely move in the same direction relative to the United States dollar due to positive and negative correlations of the various global currencies. This assumption may overstate or understate the impact of changing exchange rates on individual assets and liabilities denominated in a foreign currency.

The Company's hedging operations have historically not been material, and gains or losses from these operations have not been material to the Company's results of operations, financial position or cash flows. The Company does not use derivative financial instruments for trading or speculative purposes.

These international operations are subject to risks typical of international operations, including, but not limited to, differing economic conditions, changes in political climate, potential restrictions on the movement of funds, differing tax structures, and other regulations and restrictions. Accordingly, future results could be adversely impacted by changes in these or other factors.

Table of Contents

The Company has considered the economy in Argentina to be highly inflationary, effective June 30, 2018. In accordance with ASC 830 — Foreign Currency Matters, a highly inflationary economy is one that has experienced cumulative inflation of approximately 100 percent or more over a three-year period. An entity is required to apply the revised accounting guidance in the reporting period following when the economy was deemed to be highly inflationary. As a result of this classification, the functional currency of the Company's Argentina Subsidiaries was changed from the local currency to the United States Dollar, beginning July 1, 2018, and impacts from the change in the value of the local currency for monetary assets and liabilities is now reflected in the condensed consolidated statements of operations. The total impact from foreign currency losses was $1.1 million during the three months ended March 31, 2019. The Company's operations in Argentina represented less than 2.0% of total consolidated assets as of March 31, 2019, and less than 2.0% of total consolidated net sales for the three months ended March 31, 2019.

Credit Risk

Credit risk is the possibility of loss from a customer's failure to make payments according to contract terms. Prior to granting credit, each customer is evaluated in an underwriting process, taking into consideration the prospective customer's financial condition, past payment experience, credit bureau information and other financial and qualitative factors that may affect the customer's ability to pay. Specific credit reviews and standard industry credit scoring models are used in performing this evaluation. Customers' financial condition is continuously monitored as part of the normal course of business. Some of the Company's customers are highly leveraged or otherwise subject to their own operating and regulatory risks. Based on those customer account reviews and due to the continued uncertainty of the global economy, the Company has established an allowance for doubtful accounts of $28.0 million as of March 31, 2019, and $27.6 million as of December 31, 2018.

The Company has a large, diverse customer base and does not have a high degree of concentration with any single customer account. During the three months ended March 31, 2019, the Company's largest customer accounted for less than 5% of the Company's net sales. Even if the Company's credit review and analysis mechanisms work properly, the Company may experience financial losses in its dealings with customers and other parties. Any increase in nonpayment or nonperformance by customers could adversely impact the Company's results of operations and financial condition. Economic disruptions could result in significant future charges.

Commodity Risk

The primary raw materials that Quad uses in its print business are paper, ink and energy. At this time, the Company's supply of raw materials is readily available from numerous vendors; however, based on market conditions, that could change in the future. The Company generally buys these raw materials based upon market prices that are established with the vendor as part of the procurement process.

Approximately half of the paper used in the printing process is supplied directly by the Company's clients. For those clients that do not directly supply their own paper, the Company makes use of its purchasing efficiencies to supply paper by negotiating with leading paper vendors, uses a wide variety of paper grades, weights and sizes, and does not rely on any one vendor. In addition, the Company generally includes price adjustment clauses in sales contracts for paper and other critical raw materials in the printing process. Although these clauses generally mitigate paper price risk, higher paper prices and tight paper supplies, as well as changes in the United States import or trade regulations may have an impact on client demand for printed products. The Company's working capital requirements, including the impact of seasonality, are partially mitigated through the direct purchasing of paper by its clients.

The Company produces the majority of ink used in its print production, allowing it to control the quality, cost and supply of key inputs. Raw materials for the ink manufacturing process are purchased externally from a variety of vendors.

The Company generally cannot pass on to clients the impact of higher electric and natural gas energy prices on its manufacturing costs, and increases in energy prices result in higher manufacturing costs for certain of its operations. The Company mitigates its risk through natural gas hedges when appropriate. In its logistic operations, however, the Company is able to pass a substantial portion of any increase in fuel prices directly to its clients.

As a result, management believes a hypothetical 10% change in the price of paper and other raw materials would not have a significant direct impact on the Company’s consolidated annual results of operations or cash flows; however, significant increases in commodity pricing or tight supply could influence future client demand for printed products.

Table of Contents

ITEM 4. Controls and Procedures

Disclosure Controls and Procedures

The Company's management, with the participation of the Company's principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report and has concluded that, as of the end of such period, the Company's disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

During the fiscal quarter ended March 31, 2019, the Company modified certain processes and implemented new or revised existing controls as part of its efforts to adopt the new leasing standard (Topic 842), which became effective on January 1, 2019. The operating effectiveness of these changes will be evaluated with the annual assessment of internal control over financial reporting for the year ended December 31, 2019. There were no other changes in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934) that occurred during the fiscal quarter ended March 31, 2019, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Table of Contents

PART II — OTHER INFORMATION

ITEM 1. Legal Proceedings

See Note 8, “Commitments and Contingencies — Litigation,” to the condensed consolidated financial statements in Item 1, “Condensed Consolidated Financial Statements (Unaudited),” of this Quarterly Report on Form 10-Q.

ITEM 1A. Risk Factors

Risk factors relating to the Company are contained in Item 1A, “Risk Factors,” of the Company’s 2018 Annual Report on Form 10-K, filed with the SEC on February 20, 2019. No material changes to such risk factors occurred during the period from January 1, 2019, through March 31, 2019.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

(a) None.

(b) Not applicable.

(c) Information about the Company’s repurchases of its class A common stock in the quarter ended March 31, 2019, was as follows:

	Issuer Purchases of Equity Securities			
Period	Total Number of Shares Purchased[1]	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[1]	Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs[2]
January 1, 2019 to January 31, 2019	—	$ —	—	$100,000,000
February 1, 2019 to February 28, 2019	—	—	—	100,000,000
March 1, 2019 to March 31, 2019	453,040[3]	—	—	100,000,000
Total	453,040		—	

[1] Represents shares of the Company’s class A common stock.

[2] On July 30, 2018, the Company’s Board of Directors authorized a share repurchase program of up to $100.0 million of the Company’s outstanding class A common stock. Under the authorization, share repurchases may be made at the Company’s discretion, from time to time, in the open market and/or in privately negotiated transactions as permitted by federal securities laws and other legal requirements. The timing, manner, price and amount of any repurchase will depend on economic and market conditions, share price, trading volume, applicable legal requirements and other factors. The program may be suspended or discontinued at any time. There were no shares repurchased during the three months ended March 31, 2019. As of March 31, 2019, there were $100.0 million of authorized repurchases remaining under the program.

[3] Represents 453,040 shares of class A common stock transferred from employees to the Company to satisfy tax withholding requirements in connection with the vesting of restricted stock and restricted stock units under the

Omnibus Plan during the month of March 2019.

See Item 2, “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Covenants and Compliance,” of this Quarterly Report on Form 10-Q, for a discussion of covenants under the Company’s debt agreements that may restrict the Company’s ability to pay dividends.

Table of Contents

ITEM 6. Exhibits

The exhibits listed in the exhibit index below are filed as part of this Quarterly Report on Form 10-Q.

EXHIBIT INDEX

Exhibit Number	Exhibit Description
(10)	Quad/Graphics, Inc. Form of Two-Year Incentive Compensation Program Award Agreement
(31.1)	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934.
(31.2)	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934.
(32)	Written Statement of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
(101)	Financial statements from the Quarterly Report on Form 10-Q of Quad/Graphics, Inc. for the quarter ended March 31, 2019 formatted in eXtensible Business Reporting Language (XBRL): (i) the Condensed Consolidated Statements of Operations (Unaudited), (ii) the Condensed Consolidated Statements of Comprehensive Income (Loss) (Unaudited), (iii) the Condensed Consolidated Balance Sheets (Unaudited), (iv) the Condensed Consolidated Statements of Cash Flows (Unaudited), (v) the Notes to Condensed Consolidated Financial Statements (Unaudited), and (vi) document and entity information.

Table of Contents

SIGNATURES

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

QUAD/GRAPHICS, INC.

Date: May 1, 2019 By: /s/ J. Joel Quadracci
J. Joel Quadracci
Chairman, President and Chief Executive Officer
(Principal Executive Officer)

Date: May 1, 2019 By: /s/ David J. Honan
David J. Honan
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)