



FOR IMMEDIATE RELEASE

Quad Reports Second Quarter and Year-to-Date 2019 Results

Company Continues to Aggressively Execute on Its Quad 3.0 Growth Strategy and Reaffirms Full-Year 2019 Guidance

SUSSEX, WI, July 30, 2019 — Quad/Graphics, Inc. (NYSE: QUAD) (“Quad” or the “Company”) today reported results for its second quarter ending June 30, 2019.

Recent Highlights

- Reported second quarter 2019 net sales of \$1 billion and a net loss of \$15 million, or \$0.30 diluted loss per share.
- Achieved second quarter 2019 Non-GAAP Adjusted EBITDA of \$75 million, within the Company’s second quarter 2019 guidance range of \$70 million to \$80 million, and Non-GAAP Adjusted diluted loss per share of \$0.09.
- Generated second quarter 2019 cash from operations of \$75 million and Free Cash Flow of \$51 million.
- Terminated merger agreement with LSC Communications Inc. (“LSC”) and, as a result, Quad optimized its debt structure by replacing its Term Loan B with a lower interest Term Loan A, saving approximately \$12 million in annualized interest costs.
- Announced investment and partnership with the dtx company (“dtx”), a leader in the direct-to-consumer economy.
- Declares quarterly dividend of \$0.30 per share.

“Our second quarter results were in-line with our expectations and we remain on track to achieve our full-year 2019 guidance as we continue to transform our Company as a marketing solutions partner focused on creating more value for all our stakeholders,” said Joel Quadracci, Chairman, President & CEO. “Our recent investment and partnership with the dtx company builds on a series of strategic investments, including the acquisitions of Periscope and Ivie & Associates, and a controlling ownership interest in Rise Interactive, which have all been designed to accelerate our transformation. dtx, which was founded by Tim Armstrong, formerly CEO of Oath and AOL and a senior leader at Google, empowers consumers and companies to build direct relationships. Through our partnership with dtx, we will help consumers discover and interact with direct-to-consumer brands, and help those brands acquire and retain customers with personalized, multichannel programs.”

Quadracci continued: “As we announced last week, we mutually agreed with LSC Communications to terminate the merger agreement under which Quad would have acquired LSC. The U.S. Department of Justice’s decision to sue to block the transaction added delay, uncertainty and costs that likely would have eroded a considerable amount of the expected benefits of the acquisition. Independent of that outcome, we have continued to develop exciting innovations in print and integrated marketing solutions that reduce complexity, improve efficiencies and enhance marketing spend effectiveness. Our strategy is working, as designed, to help offset expected print industry headwinds. As always, we remain focused on making decisions in the long-term best interest of our clients,

shareholders and employees. With our strong and engaged workforce and state-of-the-art technology and processes, we are well-positioned to continue driving productivity improvements to generate the earnings and cash flow that further advance our value-creating transformation.”

Summary Results

Net sales decreased 1.2% during the second quarter of 2019 to \$1 billion. Organic sales declined 2.4%, after excluding sales related to the January 2019 acquisition of Periscope. The organic results reflect ongoing print industry volume and pricing pressures, and a negative impact from foreign exchange, partially offset by new revenue generated from the Company’s Quad 3.0 growth strategy and an increase in paper sales.

Net loss attributable to Quad common shareholders during the second quarter of 2019 was \$14.8 million, or \$0.30 diluted loss per share, as compared to earnings of \$9.4 million, or \$0.18 diluted earnings per share in 2018. Non-GAAP Adjusted diluted loss per share for the second quarter of 2019 was \$0.09 per share compared to earnings per share of \$0.23. Second quarter 2019 Non-GAAP Adjusted EBITDA was \$75 million compared to \$90 million in second quarter 2018, and Adjusted EBITDA margin was 7.5% compared to 8.8% in 2018. The Adjusted EBITDA variance to prior-year primarily reflects an \$8 million impact from strategic investments made to increase hourly production employees’ wages, a \$7 million impact from the reduction in market price for paper byproduct recoveries, and the impact from the organic sales decline of 2.4%.

Net sales increased 1.3% during the six months ended June 30, 2019, to \$2 billion, primarily from the impact of the Ivie and Periscope acquisitions and the investment in Rise. Organic sales declined 1.5% after excluding acquisition sales impact of 2.8%. The organic results reflect ongoing print industry volume and pricing pressures, and a negative impact from foreign exchange, partially offset by new revenue generated from the Company’s Quad 3.0 growth strategy and an increase in paper sales.

Net loss attributable to Quad common shareholders for the six months ended June 30, 2019, was \$37.3 million, or \$0.75 diluted loss per share, as compared to earnings of \$5.9 million, or \$0.11 diluted earnings per share in 2018. Excluding the loss on debt extinguishment in 2019, expense associated with an employee ownership plan contribution in 2018 and restructuring costs, Non-GAAP Adjusted diluted loss per share for the six month ended June 30, 2019, was \$0.24 compared to earnings of \$0.80 per share in 2018. Year-to-date Non-GAAP Adjusted EBITDA was \$145 million compared to \$200 million for 2018, and Adjusted EBITDA margin was 7.2% compared to 10.1% in 2018. The Adjusted EBITDA variance to prior-year primarily reflects \$24 million in non-recurring benefits in 2018 that did not repeat at the same level in 2019, a \$16 million impact from strategic investments made to increase hourly production employees’ wages, a \$6 million impact from the reduction in market price for paper byproduct recoveries, and the impact from the organic sales decline of 1.5%.

Net cash provided by operating activities during the second quarter of 2019 was \$75 million compared to \$38 million in 2018, and Free Cash Flow was \$51 million in 2019 as compared to \$9 million in 2018, representing an increase of \$42 million. Net cash provided by operating activities was \$16 million for the first six months of 2019 compared to \$41 million in 2018, and Free Cash Flow was negative \$50 million in 2019 as compared to negative \$13 million in 2018. The year-to-date variances were primarily due to lower net earnings and increased capital expenditures on long-term investments in automation and productivity improvements in the manufacturing platform, partially offset by an improvement in cash provided from working capital. As a reminder, the Company generates the majority of its Free Cash Flow in the fourth quarter of the year.

“We made several strategic investments in 2019, such as the acquisition of Periscope, resulting in a Debt Leverage Ratio of 3.06x, temporarily above our long-term targeted range of 2.0x to 2.5x,” said Dave Honan, Quad Executive Vice President and Chief Financial Officer. “However, we anticipate that the Debt Leverage Ratio will decrease significantly by year end to be less than 2.8x due to continued strong Free Cash Flow generation of the business as we benefit from our Quad 3.0 integrated services offering. In addition, the significant and consistent Free Cash Flow generating power of our business allows the Company to maintain an affordable and sustainable annual dividend of \$1.20 per share, representing 39% of Free Cash Flow at the midpoint of our annual guidance. As always, we remain stringently focused on transforming our business to drive further stability and greater shareholder value as we move forward.”

Quad’s next quarterly dividend of \$0.30 per share will be payable on September 6, 2019, to shareholders of record as of August 19, 2019.

Quarterly Conference Call

Quad (NYSE: QUAD) will hold a conference call at 10 a.m. EST on Wednesday, July 31, to discuss second quarter 2019 results. Participants can pre-register for the webcast by navigating to <http://dpreister.com/10133002>. Participants will be given a unique PIN to gain immediate access to the call on July 31, bypassing the live operator. Participants may pre-register at any time, including up to and after the call start time.

Alternatively, participants without internet access may dial in on the day of the call as follows:

- U.S. Toll-Free: 1-877-328-5508
- International Toll: 1-412-317-5424

Telephone playback will be available shortly after the conference call ends, accessible as follows:

- U.S. Toll-Free: 1-877-344-7529
- International Toll: 1-412-317-0088
- Replay Access Code: 10133002

The playback will be available until August 31, 2019.

Forward-Looking Statements

This press release contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements regarding, among other things, our current expectations about the Company’s future results, financial condition, revenue, earnings, free cash flow, margins, objectives, goals, strategies, beliefs, intentions, plans, estimates, prospects, projections and outlook of the Company and can generally be identified by the use of words or phrases such as “may,” “will,” “expect,” “intend,” “estimate,” “anticipate,” “plan,” “foresee,” “project,” “believe,” “continue” or the negatives of these terms, variations on them and other similar expressions. These forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results to be materially different from those expressed in or implied by such forward-looking statements. Forward-looking statements are based largely on the Company’s expectations and judgments and are subject to a number of risks and uncertainties, many of which are unforeseeable and beyond our control.

The factors that could cause actual results to materially differ include, among others: the impact of decreasing demand for printed materials and significant overcapacity in the highly competitive environment creates downward pricing pressures and potential underutilization 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; 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 into 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; 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 intangible assets; and the other risk factors identified in the Company's most recent Annual Report on Form 10-K, which may be amended or supplemented by subsequent Quarterly Reports on Form 10-Q or other reports filed with the Securities and Exchange Commission.

Except to the extent required by the federal securities laws, the Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Non-GAAP Financial Measures

This press release contains financial measures not prepared in accordance with generally accepted accounting principles (referred to as Non-GAAP), specifically Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. Adjusted EBITDA is defined as net earnings (loss) attributable to Quad common shareholders excluding interest expense, income tax expense (benefit), depreciation and amortization, restructuring, impairment and transaction-related charges, net pension income, employee stock ownership plan contributions, loss (gain) on debt extinguishment, equity in (earnings) loss of unconsolidated entity, the Adjusted EBITDA for unconsolidated equity method investments (calculated in a consistent manner with the calculation for Quad) and net earnings (loss) attributable to noncontrolling interests. Adjusted EBITDA Margin is defined as Adjusted EBITDA divided by net sales. Free Cash Flow is defined as net cash provided by operating activities less purchases of property, plant and equipment, plus LSC-related payments primarily related to incremental interest payments associated with the 2019 amended debt refinancing and transaction-related costs. Debt Leverage Ratio is defined as total debt and finance lease obligations divided by the last twelve months of Adjusted EBITDA. Adjusted Diluted Earnings (Loss) Per Share is defined as earnings (loss) before income taxes and equity in (earnings) loss of unconsolidated entity excluding restructuring, impairment and transaction-related charges, employee stock ownership plan contributions, loss (gain) on debt extinguishment, and adjusted for income tax expense at a normalized tax rate, divided by diluted weighted average number of common shares outstanding.

The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies. Reconciliation to the GAAP equivalent of these Non-GAAP measures are contained in tabular form on the attached unaudited financial statements.

About Quad

Quad (NYSE: QUAD) is a worldwide marketing solutions partner dedicated to creating a better way for its clients through a data-driven, integrated marketing platform that helps clients reduce complexity, increase efficiency and enhance marketing spend effectiveness. Quad provides its clients with unmatched scale for client onsite 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, Quad believes it has the resources and knowledge to help a wide variety of clients in multiple vertical industries, including retail, publishing and healthcare. Quad has multiple locations throughout North America, South America and Europe, and strategic partnerships in Asia and other parts of the world. For additional information visit www.QUAD.com.

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QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
For the Three Months Ended June 30, 2019 and 2018
(in millions, except per share data)
(UNAUDITED)

	Three Months Ended June 30,	
	2019	2018
Net sales	\$ 1,003.7	\$ 1,015.5
Cost of sales	828.8	826.7
Selling, general and administrative expenses	99.6	99.2
Depreciation and amortization	57.2	58.3
Restructuring, impairment and transaction-related charges	9.4	10.4
Total operating expenses	995.0	994.6
Operating income	\$ 8.7	\$ 20.9
Interest expense	25.9	18.4
Net pension income	(1.5)	(3.1)
Earnings (loss) before income taxes and equity in (earnings) loss of unconsolidated entity	(15.7)	5.6
Income tax benefit	(1.7)	(3.7)
Earnings (loss) before equity in (earnings) loss of unconsolidated entity	(14.0)	9.3
Equity in (earnings) loss of unconsolidated entity	0.7	(0.2)
Net earnings (loss)	(14.7)	9.5
Less: net earnings attributable to noncontrolling interests	0.1	0.1
Net earnings (loss) attributable to Quad common shareholders	\$ (14.8)	\$ 9.4
Earnings (loss) per share attributable to Quad common shareholders		
Basic	\$ (0.30)	\$ 0.19
Diluted	\$ (0.30)	\$ 0.18
Weighted average number of common shares outstanding		
Basic	50.1	50.8
Diluted	50.1	52.5

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
For the Six Months Ended June 30, 2019 and 2018
(in millions, except per share data)
(UNAUDITED)

	Six Months Ended June 30,	
	2019	2018
Net sales	\$ 2,008.4	\$ 1,983.0
Cost of sales	1,665.9	1,619.1
Selling, general and administrative expenses	197.5	186.1
Depreciation and amortization	116.4	114.5
Restructuring, impairment and transaction-related charges	17.0	35.3
Total operating expenses	<u>1,996.8</u>	<u>1,955.0</u>
Operating income	\$ 11.6	\$ 28.0
Interest expense	47.7	35.7
Net pension income	(3.0)	(6.2)
Loss on debt extinguishment	<u>15.9</u>	<u>—</u>
Loss before income taxes and equity in (earnings) loss of unconsolidated entity	(49.0)	(1.5)
Income tax benefit	<u>(12.3)</u>	<u>(7.0)</u>
Earnings (loss) before equity in (earnings) loss of unconsolidated entity	(36.7)	5.5
Equity in (earnings) loss of unconsolidated entity	<u>0.8</u>	<u>(0.5)</u>
Net earnings (loss)	(37.5)	6.0
Less: net earnings (loss) attributable to noncontrolling interests	<u>(0.2)</u>	<u>0.1</u>
Net earnings (loss) attributable to Quad common shareholders	\$ (37.3)	\$ 5.9
Earnings (loss) per share attributable to Quad common shareholders		
Basic	<u>\$ (0.75)</u>	<u>\$ 0.12</u>
Diluted	<u>\$ (0.75)</u>	<u>\$ 0.11</u>
Weighted average number of common shares outstanding		
Basic	<u>49.9</u>	<u>50.5</u>
Diluted	<u>49.9</u>	<u>52.3</u>

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
As of June 30, 2019 and December 31, 2018
(in millions)
(UNAUDITED)

	June 30, 2019	December 31, 2018
ASSETS		
Cash and cash equivalents	\$ 10.0	\$ 69.5
Receivables, less allowances for doubtful accounts	510.0	528.7
Inventories	269.5	300.6
Prepaid expenses and other current assets	49.6	47.8
Total current assets	839.1	946.6
Property, plant and equipment—net	1,217.1	1,257.4
Operating lease right-of-use assets—net	125.4	—
Goodwill	113.2	54.6
Other intangible assets—net	161.7	112.6
Equity method investment in unconsolidated entity	3.2	4.0
Other long-term assets	87.5	93.9
Total assets	<u>\$ 2,547.2</u>	<u>\$ 2,469.1</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Accounts payable	\$ 435.0	\$ 511.0
Accrued liabilities	264.6	292.3
Short-term debt and current portion of long-term debt	53.1	42.9
Current portion of finance lease obligations	6.1	5.1
Current portion of operating lease obligations	34.2	—
Total current liabilities	793.0	851.3
Long-term debt	1,044.1	882.6
Finance lease obligations	8.7	10.3
Operating lease obligations	94.4	—
Deferred income taxes	5.8	32.1
Other long-term liabilities	211.7	232.6
Total liabilities	2,157.7	2,008.9
Shareholders' equity		
Preferred stock	—	—
Common stock	1.4	1.4
Additional paid-in capital	839.6	861.3
Treasury stock, at cost	(30.0)	(56.6)
Accumulated deficit	(280.7)	(211.4)
Accumulated other comprehensive loss	(158.3)	(152.2)
Quad's shareholders' equity	372.0	442.5
Noncontrolling interests	17.5	17.7
Total shareholders' equity and noncontrolling interests	389.5	460.2
Total liabilities and shareholders' equity	<u>\$ 2,547.2</u>	<u>\$ 2,469.1</u>

QUAD/GRAPHICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Six Months Ended June 30, 2019 and 2018
(in millions)
(UNAUDITED)

	Six Months Ended June 30,	
	2019	2018
OPERATING ACTIVITIES		
Net earnings (loss)	\$ (37.5)	\$ 6.0
Adjustments to reconcile net earnings (loss) to net cash provided by operating activities:		
Depreciation and amortization	116.4	114.5
Employee stock ownership plan contribution	—	22.3
Impairment charges	2.1	11.5
Loss on debt extinguishment	15.9	—
Stock-based compensation	7.7	9.1
Gain from property insurance claims	(0.8)	(18.3)
Gain on the sale or disposal of property, plant and equipment	(5.5)	(2.1)
Deferred income taxes	(21.2)	1.1
Other non-cash adjustments to net earnings (loss)	3.1	1.2
Changes in operating assets and liabilities—net of acquisitions	(63.9)	(104.8)
Net cash provided by operating activities	16.3	40.5
INVESTING ACTIVITIES		
Purchases of property, plant and equipment	(74.6)	(53.8)
Proceeds from the sale of property, plant and equipment	14.7	8.9
Proceeds from property insurance claims	0.3	14.5
Acquisition of businesses—net of cash acquired	(121.0)	(71.4)
Net cash used in investing activities	(180.6)	(101.8)
FINANCING ACTIVITIES		
Proceeds from issuance of long-term debt	491.5	—
Payments of long-term debt	(551.4)	(21.5)
Payments of finance lease obligations	(2.9)	(3.4)
Borrowings on revolving credit facilities	2,495.5	896.6
Payments on revolving credit facilities	(2,261.7)	(791.9)
Payments of debt issuance costs and financing fees	(20.2)	—
Purchases of treasury stock	—	(36.7)
Proceeds from stock options exercised	—	4.0
Equity awards redeemed to pay employees' tax obligations	(6.6)	(7.5)
Payment of cash dividends	(34.3)	(32.2)
Contingent consideration paid for business acquired	(5.3)	—
Net cash provided by financing activities	104.6	7.4
Effect of exchange rates on cash and cash equivalents	0.2	(1.6)
Net decrease in cash and cash equivalents	(59.5)	(55.5)
Cash and cash equivalents at beginning of period	69.5	64.4
Cash and cash equivalents at end of period	\$ 10.0	\$ 8.9

QUAD/GRAPHICS, INC.
SEGMENT FINANCIAL INFORMATION
For the Three and Six Months Ended June 30, 2019 and 2018
(in millions)
(UNAUDITED)

	Net Sales	Operating Income (Loss)	Restructuring, Impairment and Transaction-Related Charges ⁽¹⁾
Three months ended June 30, 2019			
United States Print and Related Services	\$ 908.8	\$ 23.5	\$ 3.3
International	94.9	0.3	3.4
Total operating segments	1,003.7	23.8	6.7
Corporate	—	(15.1)	2.7
Total	\$ 1,003.7	\$ 8.7	\$ 9.4
Three months ended June 30, 2018			
United States Print and Related Services	\$ 919.5	\$ 33.3	\$ 8.1
International	96.0	1.6	2.0
Total operating segments	1,015.5	34.9	10.1
Corporate	—	(14.0)	0.3
Total	\$ 1,015.5	\$ 20.9	\$ 10.4
Six months ended June 30, 2019			
United States Print and Related Services	\$ 1,807.5	\$ 39.3	\$ 7.8
International	200.9	2.2	5.0
Total operating segments	2,008.4	41.5	12.8
Corporate	—	(29.9)	4.2
Total	\$ 2,008.4	\$ 11.6	\$ 17.0
Six months ended June 30, 2018			
United States Print and Related Services	\$ 1,787.3	\$ 53.6	\$ 28.5
International	195.7	7.3	3.0
Total operating segments	1,983.0	60.9	31.5
Corporate	—	(32.9)	3.8
Total	\$ 1,983.0	\$ 28.0	\$ 35.3

⁽¹⁾ Restructuring, impairment and transaction-related charges are included within operating income (loss).

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
EBITDA, EBITDA MARGIN, ADJUSTED EBITDA AND ADJUSTED EBITDA MARGIN
For the Three Months Ended June 30, 2019 and 2018
(in millions, except margin data)
(UNAUDITED)

	Three Months Ended June 30,	
	2019	2018
Net earnings (loss) attributable to Quad common shareholders	\$ (14.8)	\$ 9.4
Interest expense	25.9	18.4
Income tax benefit	(1.7)	(3.7)
Depreciation and amortization	57.2	58.3
EBITDA (Non-GAAP)	\$ 66.6	\$ 82.4
EBITDA Margin (Non-GAAP)	6.6%	8.1%
Restructuring, impairment and transaction-related charges ⁽¹⁾	9.4	10.4
Net pension income ⁽²⁾	(1.5)	(3.1)
Other ⁽³⁾	0.8	(0.1)
Adjusted EBITDA (Non-GAAP)	\$ 75.3	\$ 89.6
Adjusted EBITDA Margin (Non-GAAP)	7.5%	8.8%

⁽¹⁾ Operating results for the three months ended June 30, 2019 and 2018, were affected by the following restructuring, impairment and transaction-related charges:

	Three Months Ended June 30,	
	2019	2018
Employee termination charges ^(a)	\$ 3.3	\$ 2.5
Impairment charges ^(b)	0.4	3.6
Transaction-related charges ^(c)	2.7	0.1
Integration costs ^(d)	0.8	0.1
Other restructuring charges ^(e)	2.2	4.1
Restructuring, impairment and transaction-related charges	\$ 9.4	\$ 10.4

^(a) Employee termination charges were related to workforce reductions through facility consolidations and separation programs.

^(b) Impairment charges were for certain property, plant and equipment no longer being utilized in production as a result of facility consolidations.

^(c) Transaction-related charges consisted of professional service fees related to business acquisition and divestiture activities.

^(d) Integration costs were primarily costs related to the integration of acquired companies.

^(e) Other restructuring charges include costs to maintain and exit closed facilities, as well as lease exit charges, and are presented net of gains on the sale of facilities, including a \$2.5 million gain on the sale of the Franklin, Kentucky facility during the three months ended June 30, 2019.

⁽²⁾ As required by United States GAAP, pension components other than service cost are required to be excluded from operating income. The Company has also excluded pension income from the calculation of Adjusted EBITDA, which is reflected in all periods presented.

⁽³⁾ Other includes the following items: (a) the equity in (earnings) loss of unconsolidated entity, which includes the results of operations for an investment in an entity where Quad has the ability to exert significant influence, but not control, and is accounted for using the equity method of accounting; (b) the Adjusted EBITDA for unconsolidated equity method investments, which was calculated in a consistent manner with the calculation above for Quad; and (c) the net earnings (loss) attributable to noncontrolling interests, which is the portion of the net earnings (loss) not owned by Quad for an investment where Quad has a controlling financial interest.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
EBITDA, EBITDA MARGIN, ADJUSTED EBITDA AND ADJUSTED EBITDA MARGIN
For the Six Months Ended June 30, 2019 and 2018
(in millions, except margin data)
(UNAUDITED)

	Six Months Ended June 30,	
	2019	2018
Net earnings (loss) attributable to Quad common shareholders	\$ (37.3)	\$ 5.9
Interest expense	47.7	35.7
Income tax benefit	(12.3)	(7.0)
Depreciation and amortization	116.4	114.5
EBITDA (Non-GAAP)	\$ 114.5	\$ 149.1
EBITDA Margin (Non-GAAP)	5.7%	7.5%
Restructuring, impairment and transaction-related charges ⁽¹⁾	17.0	35.3
Net pension income ⁽²⁾	(3.0)	(6.2)
Employee stock ownership plan contribution ⁽³⁾	—	22.3
Loss on debt extinguishment ⁽⁴⁾	15.9	—
Other ⁽⁵⁾	0.8	(0.4)
Adjusted EBITDA (Non-GAAP)	\$ 145.2	\$ 200.1
Adjusted EBITDA Margin (Non-GAAP)	7.2%	10.1%

⁽¹⁾ Operating results for the six months ended June 30, 2019 and 2018, were affected by the following restructuring, impairment and transaction-related charges:

	Six Months Ended June 30,	
	2019	2018
Employee termination charges ^(a)	\$ 7.6	\$ 13.1
Impairment charges ^(b)	2.1	11.5
Transaction-related charges ^(c)	4.2	0.8
Integration costs ^(d)	1.6	0.2
Other restructuring charges ^(e)	1.5	9.7
Restructuring, impairment and transaction-related charges	\$ 17.0	\$ 35.3

^(a) Employee termination charges were related to workforce reductions through facility consolidations and separation programs.

^(b) Impairment charges were for certain property, plant and equipment no longer being utilized in production as a result of facility consolidations.

^(c) Transaction-related charges consisted of professional service fees related to business acquisition and divestiture activities.

^(d) Integration costs were primarily costs related to the integration of acquired companies.

^(e) Other restructuring charges include costs to maintain and exit closed facilities, as well as lease exit charges, and are presented net of gains on the sale of facilities. Gains on the sale of facilities were \$6.0 million and \$2.2 million during the six months ended June 30, 2019 and 2018, respectively.

⁽²⁾ As required by United States GAAP, pension components other than service cost are required to be excluded from operating income. The Company has also excluded pension income from the calculation of Adjusted EBITDA, which is reflected in all periods presented.

⁽³⁾ The Company made a \$22.3 million non-cash contribution to its employee stock ownership plan during the six months ended June 30, 2018.

⁽⁴⁾ The \$15.9 million loss on debt extinguishment recorded during the six months ended June 30, 2019, relates to the third amendment to the Company's April 28, 2014 Senior Secured Credit Facility, completed on January 31, 2019.

⁽⁵⁾ Other includes the following items: (a) the equity in (earnings) loss of unconsolidated entity, which includes the results of operations for an investment in an entity where Quad has the ability to exert significant influence, but not control, and is accounted for using the equity method of accounting; (b) the Adjusted EBITDA for unconsolidated equity method investments, which was calculated in a consistent manner with the calculation above for Quad; and (c) the net earnings (loss) attributable to noncontrolling interests, which is the portion of the net earnings (loss) not owned by Quad for an investment where Quad has a controlling financial interest.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
FREE CASH FLOW
For the Six Months Ended June 30, 2019 and 2018
(in millions)
(UNAUDITED)

	Six Months Ended June 30,	
	2019	2018
Net cash provided by operating activities	\$ 16.3	\$ 40.5
Less: purchases of property, plant and equipment	(74.6)	(53.8)
Plus: LSC-related payments ⁽¹⁾	8.5	—
Free Cash Flow (Non-GAAP)	\$ (49.8)	\$ (13.3)

⁽¹⁾ LSC-related payments include the incremental interest payments associated with the 2019 amended debt refinancing and payments for transaction-related costs associated with the proposed, but now terminated, acquisition of LSC Communications, Inc.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
DEBT LEVERAGE RATIO
As of June 30, 2019 and December 31, 2018
(in millions, except ratio)
(UNAUDITED)

	June 30, 2019	December 31, 2018
Total debt and finance lease obligations on the condensed consolidated balance sheets	\$ 1,112.0	\$ 940.9
Divided by:		
Trailing twelve months Adjusted EBITDA for Quad (Non-GAAP) ⁽¹⁾	\$ 359.7	\$ 414.6
Pro forma Adjusted EBITDA for acquired companies (Non-GAAP) ⁽²⁾	4.2	2.9
Trailing twelve months Adjusted EBITDA (Non-GAAP)	\$ 363.9	\$ 417.5
Debt Leverage Ratio (Non-GAAP)	3.06x	2.25x
Debt Leverage Ratio—net of excess cash (Non-GAAP) ⁽³⁾	3.06x	2.11x

⁽¹⁾ The calculation of Adjusted EBITDA for the trailing twelve months ended June 30, 2019, and December 31, 2018, was as follows:

	Year Ended December 31, 2018 ^(a)	Add		Subtract		Trailing Twelve Months Ended June 30, 2019
		Six Months Ended		Six Months Ended		
		June 30, 2019	June 30, 2018	June 30, 2018	June 30, 2018	
Net earnings (loss) attributable to Quad common shareholders	\$ 8.5	\$ (37.3)	\$ 5.9	\$ (34.7)	\$ (34.7)	
Interest expense	73.3	47.7	35.7	85.3	85.3	
Income tax benefit	(9.8)	(12.3)	(7.0)	(15.1)	(15.1)	
Depreciation and amortization	230.7	116.4	114.5	232.6	232.6	
EBITDA (Non-GAAP)	\$ 302.7	\$ 114.5	\$ 149.1	\$ 268.1	\$ 268.1	
Restructuring, impairment and transaction-related charges	103.6	17.0	35.3	85.3	85.3	
Net pension income	(12.4)	(3.0)	(6.2)	(9.2)	(9.2)	
Employee stock ownership plan contribution	22.3	—	22.3	—	—	
Loss on debt extinguishment	—	15.9	—	15.9	15.9	
Other ^(b)	(1.6)	0.8	(0.4)	(0.4)	(0.4)	
Adjusted EBITDA (Non-GAAP)	\$ 414.6	\$ 145.2	\$ 200.1	\$ 359.7	\$ 359.7	

^(a) 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.

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

⁽²⁾ As permitted by the Company's senior secured credit facility, certain pro forma financial information related to the acquisitions of Periscope, Inc. ("Periscope") and Ivie & Associates, LLC ("Ivie") were included in calculating the Debt Leverage Ratio as of June 30, 2019, and December 31, 2018:

- (a) As the acquisition of Periscope was completed on January 3, 2019, the \$4.2 million pro forma Adjusted EBITDA represents the period from July 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 six months of pro forma Adjusted EBITDA for Periscope was not included in the calculation, the Company's Debt Leverage Ratio would have been 3.09x as of June 30, 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.

⁽³⁾ 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.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
ADJUSTED DILUTED EARNINGS (LOSS) PER SHARE
For the Three Months Ended June 30, 2019 and 2018
(in millions, except per share data)
(UNAUDITED)

	Three Months Ended June 30,	
	2019	2018
Earnings (loss) before income taxes and equity in (earnings) loss of unconsolidated entity	\$ (15.7)	\$ 5.6
Restructuring, impairment and transaction-related charges	9.4	10.4
Adjusted net earnings (loss), before income taxes (Non-GAAP)	(6.3)	16.0
Income tax expense (benefit) at 25% normalized tax rate	(1.6)	4.0
Adjusted net earnings (loss) (Non-GAAP)	<u>\$ (4.7)</u>	<u>\$ 12.0</u>
Basic weighted average number of common shares outstanding	50.1	50.8
Plus: effect of dilutive equity incentive instruments	—	1.7
Diluted weighted average number of common shares outstanding	<u>50.1</u>	<u>52.5</u>
Adjusted diluted earnings (loss) per share (Non-GAAP) ⁽¹⁾	<u>\$ (0.09)</u>	<u>\$ 0.23</u>
Diluted earnings (loss) per share attributable to Quad common shareholders (GAAP)	\$ (0.30)	\$ 0.18
Restructuring, impairment and transaction-related charges per share	0.19	0.20
Income tax benefit from condensed consolidated statement of operations per share	(0.03)	(0.07)
Income tax (expense) benefit at 25% normalized tax rate per share	0.03	(0.08)
Other items from condensed consolidated statement of operations per share ⁽²⁾	0.02	—
Adjusted diluted earnings (loss) per share (Non-GAAP) ⁽¹⁾	<u>\$ (0.09)</u>	<u>\$ 0.23</u>

⁽¹⁾ Adjusted diluted earnings (loss) per share excludes the following: (i) restructuring, impairment and transaction-related charges; (ii) employee stock ownership plan contribution; (iii) loss on debt extinguishment; (iv) discrete income tax items; (v) equity in (earnings) loss of unconsolidated entity; and (vi) net earnings (loss) attributable to noncontrolling interests.

⁽²⁾ Other items from condensed consolidated statement of operations per share is comprised of the diluted earnings (loss) per share impacts of equity in (earnings) loss of unconsolidated entity and net earnings (loss) attributable to noncontrolling interests.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.

QUAD/GRAPHICS, INC.
RECONCILIATION OF GAAP TO NON-GAAP MEASURES
ADJUSTED DILUTED EARNINGS (LOSS) PER SHARE
For the Six Months Ended June 30, 2019 and 2018
(in millions, except per share data)
(UNAUDITED)

	Six Months Ended June 30,	
	2019	2018
Loss before income taxes and equity in (earnings) loss of unconsolidated entity	\$ (49.0)	\$ (1.5)
Restructuring, impairment and transaction-related charges	17.0	35.3
Employee stock ownership plan contribution	—	22.3
Loss on debt extinguishment	15.9	—
Adjusted net earnings (loss), before income taxes (Non-GAAP)	(16.1)	56.1
Income tax expense (benefit) at 25% normalized tax rate	(4.0)	14.0
Adjusted net earnings (loss) (Non-GAAP)	<u>\$ (12.1)</u>	<u>\$ 42.1</u>
Basic weighted average number of common shares outstanding	49.9	50.5
Plus: effect of dilutive equity incentive instruments	—	1.8
Diluted weighted average number of common shares outstanding	<u>49.9</u>	<u>52.3</u>
Adjusted diluted earnings (loss) per share (Non-GAAP) ⁽¹⁾	<u>\$ (0.24)</u>	<u>\$ 0.80</u>
Diluted earnings (loss) per share attributable to Quad common shareholders (GAAP)	\$ (0.75)	\$ 0.11
Restructuring, impairment and transaction-related charges per share	0.34	0.67
Employee stock ownership plan contribution per share	—	0.43
Loss on debt extinguishment per share	0.32	—
Income tax benefit from condensed consolidated statement of operations per share	(0.25)	(0.13)
Income tax (expense) benefit at 25% normalized tax rate per share	0.08	(0.27)
Other items from condensed consolidated statement of operations per share ⁽²⁾	0.02	(0.01)
Adjusted diluted earnings (loss) per share (Non-GAAP) ⁽¹⁾	<u>\$ (0.24)</u>	<u>\$ 0.80</u>

⁽¹⁾ Adjusted diluted earnings (loss) per share excludes the following: (i) restructuring, impairment and transaction-related charges; (ii) employee stock ownership plan contribution; (iii) loss on debt extinguishment; (iv) discrete income tax items; (v) equity in (earnings) loss of unconsolidated entity; and (vi) net earnings (loss) attributable to noncontrolling interests.

⁽²⁾ Other items from condensed consolidated statement of operations per share is comprised of the diluted earnings (loss) per share impacts of equity in (earnings) loss of unconsolidated entity and net earnings (loss) attributable to noncontrolling interests.

In addition to financial measures prepared in accordance with accounting principles generally accepted in the United States of America (GAAP), this earnings announcement also contains Non-GAAP financial measures, specifically EBITDA, EBITDA Margin, Adjusted EBITDA, Adjusted EBITDA Margin, Free Cash Flow, Debt Leverage Ratio and Adjusted Diluted Earnings (Loss) Per Share. The Company believes that these Non-GAAP measures, when presented in conjunction with comparable GAAP measures, provide additional information for evaluating Quad's performance and are important measures by which Quad's management assesses the profitability and liquidity of its business. These Non-GAAP measures should be considered in addition to, not as a substitute for or superior to, net earnings (loss) as a measure of operating performance or to cash flows provided by operating activities as a measure of liquidity. These Non-GAAP measures may be different than Non-GAAP financial measures used by other companies.