

Quaker Houghton

Fourth Quarter and Full Year

2019 Results

Investor Conference Call



Risks and Uncertainties Statement

On August 1, 2019, Quaker Chemical Corporation (the “Company”, also known as Quaker Houghton) completed its combination with Houghton International, Inc. (“Houghton”) (herein referred to as “the Combination”). As a result, five months of operations of Houghton post-closing of the Combination are included in the Company’s results described in this presentation. In addition, the Company acquired the operating divisions of Norman Hay plc (“Norman Hay”) on October 1, 2019, so three months of operations of Norman Hay post-closing are included in the Company’s results described in this presentation. The Company will be filing a Notification of Late Filing on Form 12b-25 with respect to its Annual Report on Form 10-K for its fiscal year ended December 31, 2019 (the “Annual Report”). The Company has determined that it is unable to file its Annual Report within the prescribed time period without unreasonable effort or expense. As a result of the Combination, in which the Company acquired a complex global organization, and the significant effort required to account for the Combination, the Company requires additional time to finalize its financial statements, assess its disclosure controls and procedures and evaluate the effectiveness of its internal controls over financial reporting for the year ended December 31, 2019. The Company’s Annual Report will be filed no later than March 17, 2020 in compliance with the extension period. Given the delay in filing the Company’s Annual Report, all fourth quarter and full year 2019 figures presented in this presentation are preliminary, unaudited and subject to change pending the finalization of the Company’s financial statements for the year ended December 31, 2019 and filing of its Annual Report. However, the Company believes the numbers presented in this presentation will not change materially, if at all, as a result of the additional time needed to finalize its financial statements for the year ended December 31, 2019 and complete its Annual Report.

Regulation G

The attached charts include Company information that does not conform to generally accepted accounting principles (“GAAP”). Management believes that an analysis of this data is meaningful to investors because it provides insight with respect to ongoing operating results of the Company and allows investors to better evaluate the financial results of the Company. These measures should not be viewed as an alternative to GAAP measures of performance. Furthermore, these measures may not be consistent with similar measures provided by other companies. This data should be read in conjunction with the fourth quarter and full year earnings news release, dated March 2, 2020, which has been furnished to the Securities and Exchange Commission (“SEC”) on Form 8-K.

Forward-Looking Statements

This presentation contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements can be identified by the fact that they do not relate strictly to historical or current facts. We have based these forward-looking statements on our current expectations about future events. These forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, intentions, financial condition, results of operations, future performance, and business, including but not limited to our current and future results and plans and statements that include the words “may,” “could,” “should,” “would,” “believe,” “expect,” “anticipate,” “estimate,” “intend,” “plan” or similar expressions. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected in such statements. A major risk is that demand for the Company’s products and services is largely derived from the demand for its customers’ products, which subjects the Company to uncertainties related to downturns in a customer’s business and unanticipated customer production shutdowns. Other major risks and uncertainties include, but are not limited to, significant increases in raw material costs, customer financial stability, worldwide economic and political conditions, the impact of widespread public health crises, including the recent spread of the coronavirus, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence. Furthermore, the Company is subject to the same business cycles as those experienced by steel, automobile, aircraft, industrial equipment, and durable goods manufacturers. Other factors could also adversely affect us, including those related to the Combination and other acquisitions and the integration of the combined company as well as other acquired businesses. Our forward-looking statements are subject to risks, uncertainties and assumptions about the Company and its operations that are subject to change based on various important factors, some of which are beyond our control. These risks, uncertainties, and possible inaccurate assumptions relevant to the Company’s business could cause its actual results to differ materially from expected and historical results. All forward-looking statements included in this presentation, including expectations about the timing of the completion of the Company’s financial statements and audit for the fiscal year ended December 31, 2019, and the timing, form and content of the Company’s Annual Report are based upon information available to the Company as of the date of this presentation, which may change. Therefore, we caution you not to place undue reliance on our forward-looking statements. For more information regarding these risks and uncertainties as well as certain additional risks that we face, you should refer to the Risk Factors detailed in Item 1A of our Annual Report for the year ended December 31, 2018, as amended, and once filed with the SEC, our Annual Report for the year ended December 31, 2019, and in our quarterly and other reports filed from time to time with the SEC. We do not intend to, and we disclaim any duty or obligation to, update or revise any forward-looking statements to reflect new information or future events or for any other reason. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.



Speakers

Michael F. Barry

Chairman of the Board, Chief Executive Officer & President

Mary Dean Hall

Senior Vice President, Chief Financial Officer & Treasurer

Robert T. Traub

Senior Vice President, General Counsel & Corporate Secretary

Shane W. Hostetter

Vice President, Finance & Chief Accounting Officer

Fourth Quarter and Full Year 2019 Headlines

- **Net income of \$15.2 million and \$31.6 million for the fourth quarter and full year 2019**
- **Adjusted EBITDA of \$60.6 million for the fourth quarter of 2019 up 4% versus prior year pro forma and ahead of previously provided guidance**
- **Integration going well and synergy achievement on track**

Chairman Comments

Fourth Quarter 2019

- Net sales negatively impacted by the compounding conditions of a weak global automotive market, a generally weaker global industrial environment and continued customer inventory corrections and reductions in consumption
- Achieved targeted gross margin and have made good progress with our integration and are on track to achieve or exceed our targeted integration cost synergies
- Adjusted EBITDA of \$60.6 million was above our guidance range of \$52 to \$59 million mentioned in the third quarter and 4% higher than pro forma results for the fourth quarter of 2018

2020 Outlook

- Increased uncertainty in 2020 performance due to the coronavirus and Boeing's decision to temporarily stop production of the 737 Max aircraft
- Prior to negative impacts from coronavirus and 737 Max production, most of our business segments forecasted to show low to moderate growth in 2020
- Despite market uncertainties, we expect to deliver approximately \$30 million or more of adjusted EBITDA growth in 2020 compared to 2019 pro forma adjusted EBITDA of \$234 million, primarily driven by synergy benefits, a full year of Norman Hay and additional market share gains

Financial Highlights – Actual Results

Fourth quarter of 2019

- Net sales of \$391.3 million increased 85% compared to prior year due to the inclusion of Houghton and Norman Hay
 - Excluding Houghton and Norman Hay, net sales declined 10% due to lower volumes of 9% and negative foreign exchange translation of 1%
- Gross profit increased \$61.3 million, also due to Houghton and Norman Hay, partially offset by a \$1.5 million one-time expense related to selling acquired Norman Hay inventory at fair value
 - Q4'19 gross margin of 34.8% includes \$0.5 million of accelerated depreciation and Norman Hay's \$1.5 million fair value adjustment; excluding these, gross margin would have been ~35.3% compared to 35.4% in the prior year
- SG&A increased \$51.0 million due to additional Houghton and Norman Hay SG&A, partially offset by lower direct selling costs on the decline in net sales, a benefit from foreign exchange translation and the initial benefits of realized cost savings associated with the Combination
- Below operating income performance includes higher interest expense primarily due to additional borrowings under the Company's new credit facility to finance the closing of the Combination on August 1, 2019, partially offset by higher equity earnings from Houghton's Korea joint venture
- Effective tax rates of (18.2%) and 59.8% for Q4'19 and Q4'18, respectively, include various one-time impacts; without these items ETRs would have been ~24% and ~17% for Q4'19 and Q4'18, respectively

Financial Highlights – Non-GAAP & Pro Forma

Fourth quarter of 2019

Non-GAAP Results

- Non-GAAP EPS of \$1.34 compared to \$1.54 in the prior year impacted by the increase in share count due to the closing of the Combination
- Non-GAAP operating income increased to \$37.6 million compared to \$24.3 million in the prior year, primarily due to additional net sales and operating income from Houghton and Norman Hay
- Non-GAAP adjusted EBITDA increased to \$60.6 million compared to \$29.7 million in the prior year, also primarily due to additional earnings from Houghton and Norman Hay

Pro forma Results

- Actual net sales of \$391.3 million decreased 2% compared to pro forma net sales of approximately \$401 million in the prior year, primarily due to lower volume and a negative impact from foreign currency translation, partially offset by additional net sales from Norman Hay
- Adjusted EBITDA of \$60.6 million increased 4% compared to pro forma adjusted EBITDA of approximately \$58 million in the prior year, primarily due to the benefit of Norman Hay in the current quarter and initial benefits of cost savings realized from the Combination

Financial Highlights – Actual Results

Full Year of 2019

- Net sales of \$1,133.5 million increased 31% compared to prior year due to the inclusion of Houghton and Norman Hay
 - Excluding Houghton and Norman Hay, net sales declined 6% due to lower volumes of 3% and negative foreign exchange translation of 3%
- Gross profit increased \$79.8 million, also due to Houghton and Norman Hay
 - Gross margin of 34.6% includes \$11.7 million of Houghton and Norman Hay one-time expenses to sell acquired inventory which had been adjusted to fair value and \$0.5 million of accelerated depreciation; excluding these, gross margin would have been ~35.7% compared to 36.0% in the prior year
- SG&A increased \$76.0 million due to additional Houghton and Norman Hay SG&A, partially offset by foreign exchange translation, lower direct selling costs on the decline in net sales, lower incentive compensation costs and the benefits of realized cost savings associated with the Combination
- Below operating income performance driven by higher interest expense primarily due to additional borrowings to finance the Combination partially offset by higher equity earnings from Houghton's Korea joint venture
- Effective tax rates of 7.2% and 30.1% for FY'19 and FY'18, respectively, include various one-time impacts; without these items ETRs would have been ~22% in both periods

Financial Highlights – Non-GAAP & Pro Forma

Full Year of 2019

Non-GAAP Results

- Non-GAAP EPS of \$5.83 compared to \$6.17 in the prior year impacted by the increase to the share count from the Combination partially offset by earnings attributed to Houghton and Norman Hay
- Non-GAAP operating income increased to \$121.9 million compared to \$104.4 million in the prior year, primarily due to additional net sales and operating income from Houghton and Norman Hay
- Non-GAAP adjusted EBITDA increased to \$173.1 million compared to \$125.8 million in the prior year, also due to additional earnings from Houghton and Norman Hay

Pro forma Results

- Net sales of \$1,562 million decreased 6% compared to \$1,655 million in the prior year, primarily due to the same factors impacting Q4'19
- Adjusted EBITDA of \$234 million decreased 1% compared to \$236 million in the prior year, primarily due to lower full year pro forma net sales partially offset by the same benefits impacting Q4'19

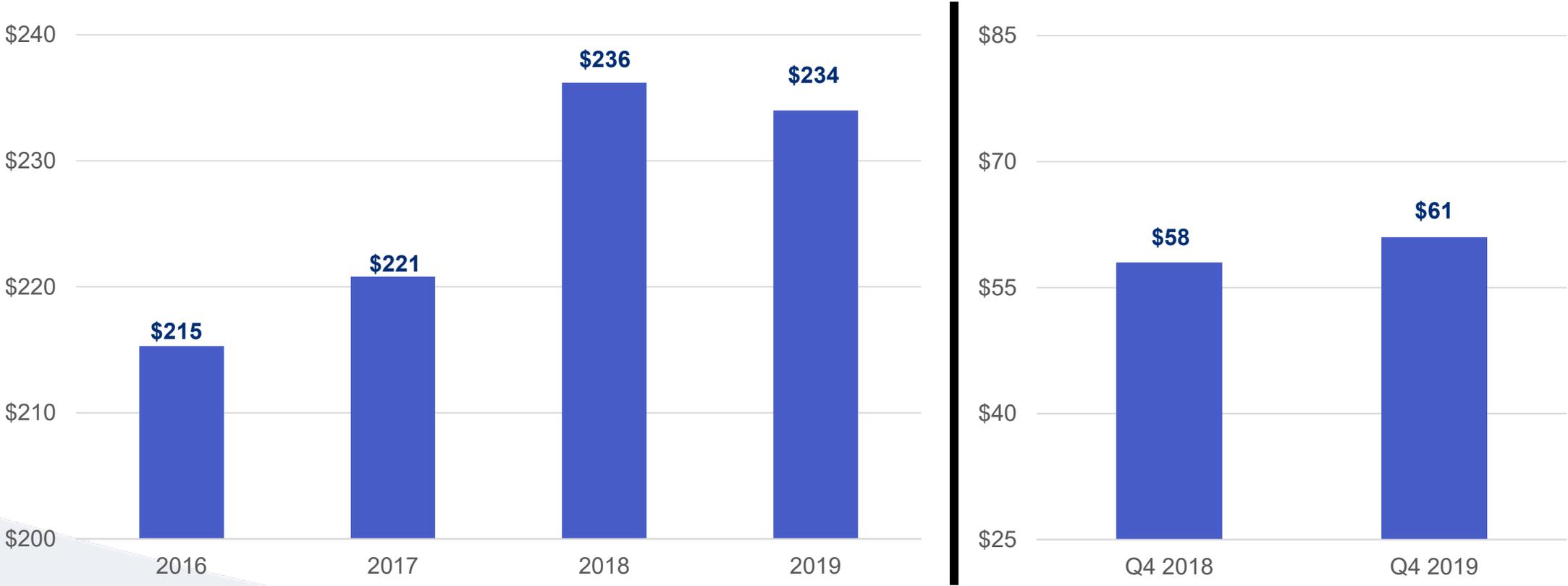
Financial Snapshot

2019 (dollars in millions, unless otherwise noted)

	Q4 2019		Q4 2018		YTD 2019		YTD 2018	
GAAP								
Net Sales	\$	391.3	\$	211.5	\$	1,133.5	\$	867.5
Gross Profit		136.1		74.8		392.1		312.3
Operating Income		20.3		20.1		46.1		87.8
Net Income		15.2		7.8		31.6		59.5
Earnings Per Diluted Share		0.86		0.58		2.08		4.45
Non-GAAP								
Non-GAAP Operating Income	\$	37.6	\$	24.3	\$	121.9	\$	104.4
Non-GAAP Operating Margin (%)		9.6%		11.5%		10.8%		12.0%
Adjusted EBITDA		60.6		29.7		173.1		125.8
Adjusted EBITDA Margin (%)		15.5%		14.0%		15.3%		14.5%
Non-GAAP Earnings Per Diluted Share		1.34		1.54		5.83		6.17
Pro Forma								
Net Sales	\$	391.3	\$	401	\$	1,562	\$	1,655
Adjusted EBITDA		60.6		58		234		236
Adjusted EBITDA Margin (%)		15.5%		15%		15%		14%

Quaker Houghton's Pro Forma Adjusted EBITDA

(dollars in millions)



FY'19 pro forma adjusted EBITDA decrease primarily due to lower volumes and FX; but Q4'19 increase due to benefits from Norman Hay and lower SG&A due to Combination benefits



Leverage and Liquidity Update

- At close on August 1, 2019, net debt to TTM adjusted EBITDA of ~3.42x compared to ~3.47x as of December 31, 2019
 - Net debt to adjusted EBITDA expected to improve to ~3.0x or better by end of 2020
- Despite Norman Hay acquisition for ~\$95 million, capex of ~\$5 million and dividends of ~\$7 million in Q4'19, net debt up only ~\$50 million versus Q3'19, with the difference due to good operating cash flow
- Cash and cash equivalents of \$124 million and undrawn revolver of \$221 million as of December 31, 2019 provide ample liquidity
- Cost of debt ~3.1% post closing of the Combination and ~2.9% at December 31, 2019
- Capex still expected to be ~2% of sales in the first two years and 1.5% of sales thereafter

Appendix

Actual and Non-GAAP Results



Non-GAAP and Pro Forma Measures

The information included in this presentation includes non-GAAP (unaudited) financial information that includes EBITDA, adjusted EBITDA, non-GAAP operating income, non-GAAP net income, non-GAAP earnings per diluted share, and pro forma net sales, net income, EBITDA and adjusted EBITDA. The Company believes these non-GAAP financial measures provide meaningful supplemental information as they enhance a reader's understanding of the financial performance of the Company, are indicative of future operating performance of the Company, and facilitate a comparison among fiscal periods, as the non-GAAP financial measures exclude items that are not indicative of future operating performance or not considered core to the Company's operations. Non-GAAP results and pro forma information are presented for supplemental informational purposes only and should not be considered a substitute for the financial information presented in accordance with GAAP.

The Company presents EBITDA which is calculated as net income attributable to the Company before depreciation and amortization, interest expense, net, and taxes on income before equity in net income of associated companies. The Company also presents adjusted EBITDA which is calculated as EBITDA plus or minus certain items that are not indicative of future operating performance or not considered core to the Company's operations. In addition, the Company presents non-GAAP operating income which is calculated as operating income plus or minus certain items that are not indicative of future operating performance or not considered core to the Company's operations. Adjusted EBITDA margin and non-GAAP operating margin are calculated as the percentage of adjusted EBITDA and non-GAAP operating income to consolidated net sales, respectively. The Company believes these non-GAAP measures provide transparent and useful information and are widely used by analysts, investors, and competitors in our industry as well as by management in assessing the operating performance of the Company on a consistent basis.

Additionally, the Company presents non-GAAP net income and non-GAAP earnings per diluted share as additional performance measures. Non-GAAP net income is calculated as adjusted EBITDA, defined above, less depreciation and amortization, interest expense, net - adjusted, and taxes on income before equity in net income of associated companies - adjusted, as applicable, for any depreciation, amortization, interest or tax impacts resulting from the non-core items identified in the reconciliation of net income attributable to the Company to adjusted EBITDA. Non-GAAP earnings per diluted share is calculated as non-GAAP net income per diluted share as accounted for under the "two-class share method." The Company believes that non-GAAP net income and non-GAAP earnings per diluted share provide transparent and useful information and are widely used by analysts, investors, and competitors in our industry as well as by management in assessing the operating performance of the Company on a consistent basis.

During the first quarter of 2019, the Company updated its calculation methodology to include the use of interest expense net of interest income in the reconciliation of EBITDA and adjusted EBITDA, compared to its historical use of only interest expense, and also to include the non-service component of the Company's pension and postretirement benefit costs in the reconciliation of adjusted EBITDA, non-GAAP net income attributable to Quaker Chemical Corporation and non-GAAP earnings per diluted share. Prior year amounts have been recast for comparability purposes and the change in calculation methodology does not produce materially different results. The Company believes these updated calculations better reflect its underlying operating performance and better aligns the Company's calculations to those commonly used by analysts, investors, and competitors in our industry.

In addition, the Company has provided certain unaudited pro forma financial information in this presentation. The unaudited pro forma financial information is based on the historical consolidated financial statements and results of both Quaker and Houghton, and has been prepared to illustrate the effects of the Combination. The unaudited pro forma financial information has been presented for informational purposes only and is not necessarily indicative of Quaker Houghton's past results of operations, nor is it indicative of the future operating results of Quaker Houghton and should not be considered a substitute for the financial information presented in accordance with GAAP. The Company has not provided pro forma financial information as it relates to the acquired operating divisions of Norman Hay plc based on materiality.

As it relates to the full year 2020 expected adjusted EBITDA growth described further above, the Company has not provided guidance for comparable GAAP measures or a quantitative reconciliation of forward-looking non-GAAP financial measures to the most directly comparable U.S. GAAP measure because it is unable to determine with reasonable certainty the ultimate outcome of certain significant items necessary to calculate such measures without unreasonable effort. These items include, but are not limited to, certain non-recurring or non-core items the Company may record that could materially impact net income, such as Combination and other acquisition-related expenses and restructuring expenses, as well as income taxes. These items are uncertain, depend on various factors, and could have a material impact on the U.S. GAAP reported results for the guidance period.

The following charts should be read in conjunction with the Company's fourth quarter and full year earnings news release dated March 2, 2020, which has been furnished to the SEC on Form 8-K and the Company's Annual Report for the period ended December 31, 2019, once filed with the SEC, by no later than March 17, 2020. These documents may contain additional explanatory language and information regarding certain of the items included in the following reconciliations.

Non-GAAP Operating Income Reconciliation

(dollars in thousands unless otherwise noted)

	Q4 2019	Q4 2018	YTD 2019	YTD 2018
Operating income	\$ 20,276	\$ 20,068	\$ 46,134	\$ 87,781
Fair value step up of Houghton and Norman Hay inventory sold	1,500	-	11,714	-
Houghton combination and other acquisition-related expenses	12,156	4,257	35,945	16,661
Restructuring expense	2,633	-	26,678	-
Customer bankruptcy costs	1,073	-	1,073	-
Charges related to the settlement of a non-core equipment sale	-	-	384	-
Non-GAAP operating income	\$ 37,638	\$ 24,325	\$ 121,928	\$ 104,442
Non-GAAP operating margin (%)	9.6%	11.5%	10.8%	12.0%

Adjusted EBITDA Reconciliation

(dollars in thousands unless otherwise noted)

	Q4 2019		Q4 2018		YTD 2019		YTD 2018	
Net income attributable to Quaker Chemical Corporation	\$	15,240	\$	7,805	\$	31,622	\$	59,473
Depreciation and amortization		21,250		4,803		45,264		19,714
Interest expense, net		9,365		818		16,976		4,041
Taxes on income before equity in net income of associated companies		(2,012)		11,496		2,084		25,050
EBITDA		43,843		24,922		95,946		108,278
Equity (income) loss in a captive insurance company		(562)		117		(1,822)		(966)
Fair value step up of Houghton and Norman Hay inventory sold		1,500		-		11,714		-
Houghton combination and other acquisition-related expenses		11,572		4,257		35,361		16,051
Restructuring expense		2,633		-		26,678		-
Pension and postretirement benefit costs, non-service components		501		572		2,805		2,285
Customer bankruptcy costs		1,073		-		1,073		-
Insurance insolvency recovery		(60)		(90)		(60)		(90)
Charges related to the settlement of a non-core equipment sale		-		-		384		-
Gain on liquidation of an inactive legal entity		-		-		-		(446)
Currency conversion impacts of hyper-inflationary economies		142		(100)		1,033		664
Adjusted EBITDA	\$	60,642	\$	29,678	\$	173,112	\$	125,776
Adjusted EBITDA Margin (%)		15.5%		14.0%		15.3%		14.5%

Non-GAAP EPS Reconciliation

	Q4 2019	Q4 2018	YTD 2019	YTD 2018
GAAP earnings per diluted share	\$ 0.86	\$ 0.58	\$ 2.08	\$ 4.45
Equity (income) loss in a captive insurance company per diluted share	(0.03)	0.01	(0.12)	(0.07)
Fair value step up of Houghton and Norman Hay inventory sold per diluted share	0.07	-	0.58	-
Houghton combination and other acquisition-related expenses per diluted share	0.56	0.32	2.05	1.21
Restructuring expense per diluted share	0.11	-	1.34	-
Transition tax adjustments per diluted share	-	0.61	(0.03)	0.43
Deferred tax benefit on an intercompany intangible asset transfer per diluted share	(0.30)	-	(0.35)	-
Pension and postretirement benefit costs, non-service components per diluted share	0.02	0.03	0.14	0.13
Customer bankruptcy costs per diluted share	0.04	-	0.05	-
Insurance insolvency recovery per diluted share	(0.00)	(0.01)	(0.00)	(0.01)
Charges related to the settlement of a non-core equipment sale per diluted share	-	-	0.02	-
Gain on liquidation of an inactive legal entity per diluted share	-	-	-	(0.03)
Currency conversion impacts of hyper-inflationary economies per diluted share	0.01	0.00	0.07	0.06
Non-GAAP earnings per diluted share	<u>\$ 1.34</u>	<u>\$ 1.54</u>	<u>\$ 5.83</u>	<u>\$ 6.17</u>

Segment Performance

(dollars in thousands)

	Q4 2019	Q4 2018	YTD 2019	YTD 2018
Net sales				
Americas	\$ 131,439	\$ 72,486	\$ 392,121	\$ 297,601
EMEA	101,290	52,231	285,570	216,984
Asia/Pacific	82,605	49,114	247,839	192,502
Global Specialty Businesses	75,960	37,650	207,973	160,433
Total net sales	\$ 391,294	\$ 211,481	\$ 1,133,503	\$ 867,520
Segment operating earnings				
Americas	\$ 26,033	\$ 14,809	\$ 78,268	\$ 62,686
EMEA	16,156	8,017	47,388	36,119
Asia/Pacific	22,198	14,108	67,573	53,739
Global Specialty Businesses	22,375	9,707	58,475	42,931
Total segment operating earnings	86,762	46,641	251,704	195,475
Combination and other acquisition-related expenses	(11,688)	(4,257)	(35,477)	(16,661)
Restructuring and related charges	(2,633)	-	(26,678)	-
Fair value step up of inventory sold	(1,500)	-	(11,714)	-
Non-operating and administrative expenses	(36,306)	(20,471)	(104,572)	(83,515)
Depreciation of corporate assets and amortization	(14,359)	(1,845)	(27,129)	(7,518)
Operating Income	20,276	20,068	46,134	87,781
Other income (expense), net	135	(11)	(254)	(642)
Interest expense, net	(9,365)	(817)	(16,976)	(4,041)
Income before taxes and equity in net income of associated companies	\$ 11,046	\$ 19,240	\$ 28,904	\$ 83,098

Appendix

Pro Forma Results



Q4 2018 Pro Forma Reconciliations

(dollars in millions)

	QTD December 2018				
	Quaker	Houghton	Divestitures	Other (a)	Pro Forma*
Net sales	\$ 211	\$ 208	\$ (13)	\$ (5)	\$ 401
Net Income Attributable to Quaker Houghton	\$ 8	\$ (5)	\$ (1)	\$ 5	\$ 6
Depreciation and Amortization	5	13	-	1	19
Interest Expense, Net	1	15	-	(7)	9
Taxes on Income (b)	11	5	(0)	1	17
EBITDA*	25	28	(2)	0	51
Combination and Other Acquisition-Related Expenses	4	2	-	-	6
Other Addbacks (c)	1	0	-	-	1
Adjusted EBITDA*	\$ 30	\$ 30	\$ (2)	\$ 0	\$ 58
Adjusted EBITDA Margin* (%)	14%	15%	14%	-4%	15%

* Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increased to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on income related to both Divestitures and Other reflect each tax effected at the U.S. federal tax rate of 21%.

(c) Other addbacks include equity income in a captive insurance company, pension and postretirement benefit costs, non-service components, affiliate management fees, insurance insolvency recoveries, currency conversion impacts of hyper-inflationary economies and other non-recurring miscellaneous charges.

Full Year 2019 Pro Forma Reconciliations

(dollars in millions)

	YTD December 2019				
	Quaker	Houghton	Divestitures	Other (a)	Pro Forma*
Net sales	\$ 1,134	\$ 475	\$ (34)	\$ (13)	\$ 1,562
Net Income Attributable to Quaker Houghton	\$ 32	\$ (3)	\$ (6)	\$ 10	\$ 33
Depreciation and Amortization	45	31	-	3	77
Interest Expense, Net	17	33	-	(15)	35
Taxes on Income (b)	2	(1)	(2)	3	2
EBITDA*	96	60	(8)	1	148
Combination and Other Acquisition-Related Expenses	35	44	-	-	80
Gain on Sale of Divested Assets	-	(35)	-	-	(35)
Fair Value Step Up of Houghton and Norman Hay Inventory Sold	12	-	-	-	12
Restructuring Expenses	27	-	-	-	27
Other Addbacks (c)	3	(0)	-	-	3
Adjusted EBITDA*	\$ 173	\$ 68	\$ (8)	\$ 1	\$ 234
Adjusted EBITDA Margin* (%)	15%	14%	24%	-4%	15%

* Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increased to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on income related to both Divestitures and Other reflect each tax effected at the U.S. federal tax rate of 21%.

(c) Other addbacks include equity income in a captive insurance company, pension and postretirement benefit costs, non-service components, customer bankruptcy costs, insurance insolvency recoveries and currency conversion impacts of hyper-inflationary economies.

Full Year 2018 Pro Forma Reconciliations

(dollars in millions)

	YTD December 2018				
	Quaker	Houghton	Divestitures	Other (a)	Pro Forma*
Net sales	\$ 868	\$ 861	\$ (53)	\$ (22)	\$ 1,655
Net Income Attributable to Quaker Houghton	\$ 59	\$ (0)	\$ (9)	\$ 17	\$ 66
Depreciation and Amortization	20	54	-	5	79
Interest Expense, Net	4	56	-	(25)	35
Taxes on Income (b)	25	3	(2)	5	30
EBITDA*	108	113	(12)	1	210
Combination and Other Acquisition-Related Expenses	16	7	-	-	23
Other Addbacks (c)	1	2	-	-	3
Adjusted EBITDA*	\$ 126	\$ 121	\$ (12)	\$ 1	\$ 236
Adjusted EBITDA Margin* (%)	14%	14%	23%	-4%	14%

* Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increased to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on income related to both Divestitures and Other reflect each tax effected at the U.S. federal tax rate of 21%.

(c) Other addbacks include currency conversion impacts on hyper-inflationary economies, a gain on the liquidation of an inactive legal entity and charges related to non-recurring non-income tax and VAT charges.

Full Year 2017 Pro Forma Reconciliations

(dollars in millions)

	2017				
	Quaker	Houghton	Divestitures	Other (a)	Pro Forma*
Net Income Attributable to Quaker Houghton	\$ 20	\$ (47)	\$ (9)	\$ 9	\$ (26)
Depreciation and Amortization	20	55	-	5	80
Interest Expense, Net	1	51	-	(16)	37
Taxes on Income (b)	42	42	(2)	2	84
EBITDA*	83	102	(11)	0	175
Equity Income in a Captive Insurance Company	(3)	-	-	-	(3)
Combination and Other Acquisition-Related Expenses	30	10	-	-	40
Pension and Postretirement Benefit Costs, Non-Service Components	4	(1)	-	-	4
Cost Reduction Activities	0	2	-	-	2
Loss on Disposal of Held-for-Sale Asset	0	-	-	-	0
Insurance Insolvency Recovery	(1)	-	-	-	(1)
Affiliate Management Fees	-	2	-	-	2
Non-Income Tax Settlement Expense	-	1	-	-	1
Other Addbacks (c)	0	0	-	-	1
Adjusted EBITDA*	\$ 115	\$ 116	\$ (11)	\$ 0	\$ 221
Adjusted EBITDA Margin* (%)	14%	15%	20%	0%	14%

* Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increases to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on Income related to the Divestitures and Other, as described above, each tax effected at the U.S. tax rate of 21%.

(c) Other Addbacks includes charges related to inventory fair value adjustments in the Wallover acquisition, currency conversion impacts of hyper-inflationary economies and other non-recurring charges.

Full Year 2016 Pro Forma Reconciliations

(dollars in millions)

	2016				
	Quaker	Houghton	Divestitures	Other (a)	Pro Forma*
Net Income Attributable to Quaker Houghton	\$ 61	\$ (37)	\$ (8)	\$ 7	\$ 23
Depreciation and Amortization	20	55	-	5	80
Interest Expense, Net	1	51	-	(14)	37
Taxes on Income (b)	23	(5)	(2)	2	18
EBITDA*	105	64	(10)	0	158
Equity Income in a Captive Insurance Company	(2)	-	-	-	(2)
Combination and Other Acquisition-Related Expenses	2	3	-	-	5
Pension and Postretirement Benefit Costs, Non-Service Components	2	(1)	-	-	1
Cost Reduction Activities	-	4	-	-	4
Impairment of Goodwill and Intangible Assets	-	41	-	-	41
Affiliate Management Fees	-	2	-	-	2
Non-Income Tax Settlement Expense	-	2	-	-	2
Full-Year Impact of Wallover Acquisition	-	3	-	-	3
Other Addbacks (c)	(0)	1	-	-	1
Adjusted EBITDA*	\$ 107	\$ 119	\$ (10)	\$ 0	\$ 215
Adjusted EBITDA Margin* (%)	14%	16%	22%	0%	15%

* Certain amounts may not calculate due to round, including EBITDA, Adjusted EBITDA, Adjusted EBITDA margin (%) as well as the total pro forma financial results presented for combined Quaker Houghton.

(a) Other includes estimated increases to depreciation and amortization due to purchase accounting fair value adjustments and a reduction of interest expense based on the average borrowings of the period plus the purchase consideration under the Quaker Houghton facility estimated interest rates.

(b) Taxes on Income related to the Divestitures and Other, as described above, each tax effected at the U.S. tax rate of 21%.

(c) Other Addbacks includes a charge related to a legal settlement, a charge related to inventory fair value adjustments in the Wallover acquisition, offset by a gain on the sale of an asset, currency conversion impacts of hyper-inflationary economies and a restructuring credit.