

## Analysis of Semi-Annual Valuation Multiples of Specialty Chemical and Commodity Chemical Transactions

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Enclosed is Scott-Macon's semi-annual update of valuation multiples for specialty chemical and commodity chemical transactions. As shown in the enclosed chart, the median multiple of transaction value ("TEV") to latest twelve months EBITDA ("EBITDA multiple") for specialty chemical transactions which closed in the first half of 2015 was 11.7x compared to 11.5x in the first half of 2014 and 9.9x and 9.5x for specialty chemical transactions which closed in all of 2014 and 2013, respectively, and compares to the median EBITDA multiple for all closed transactions in the ten year period 2005 – 2014 of 9.6x. The median multiple of TEV to latest twelve months sales ("sales multiple") for specialty chemical transactions which closed in the first half of 2015 was 2.0x compared to 1.8x in the first half of 2014 and 1.4x in all of 2014 and 2013, respectively, and the median multiple of all closed transactions of 1.2x for the past decade. The median EBITDA and sales multiples for commodity chemical transactions which closed in the first half of 2015 were 10.0x and 1.0x, respectively, compared to 7.0x and 0.6x, respectively, for commodity chemical transactions which closed in all of 2014.

The median EBITDA multiple in the first half of 2015 was 12.9x for specialty chemical transactions closed with TEV's above \$1 billion compared to 11.4x for transactions with TEV's below \$1 billion. The median sales multiple in the first half of 2015 was 2.5x for specialty chemical transactions closed with TEV's above \$1 billion compared to 2.0x for transactions with TEV's below \$1 billion.

The total TEV of all specialty chemical transactions which closed in the first half of 2015 for which information has been disclosed and for which at least one valuation multiple can be calculated was \$19.1 billion, representing 16 transactions. This compares with the total TEV of specialty chemical transactions of \$11.8 billion representing 21 transactions which closed in the first half of 2014 and the total TEV of specialty chemical transactions of \$33.1 billion representing 52 transactions and \$23.0 billion representing 45 transactions which closed in all of 2014 and 2013, respectively. The median annual TEV of specialty chemical transactions for which at least one valuation multiple can be calculated which closed in the ten-year period 2005 – 2014 was \$30.2 billion and the median annual number of transactions which closed in the same period was 39. The total TEV of all commodity chemical transactions which closed in the first half of 2015 for which information has been disclosed and for which at least one valuation multiple can be calculated was \$8.2 billion representing 15 transactions. Strategic buyers accounted for 94% of the number of specialty chemical transactions closed and for 89% of the number of commodity chemical transactions closed in the first half of 2015.

# COMPARISON OF MEDIAN CHEMICAL TRANSACTION MULTIPLES 2013–1H 2015

	Sales			EBITDA		
	2013	2014	1H 2015	2013	2014	1H 2015
<b>Specialty Chemicals</b>						
All Closed Transactions	1.4x	1.4x	2.0x	9.5x	9.9x	11.7x
Over \$1 Billion	1.8x	2.0x	2.5x	9.6x	11.0x	12.9x
Under \$1 Billion	1.2x	1.3x	2.0x	9.4x	9.6x	11.4x
<b>Commodity Chemicals</b>						
All Closed Transactions	0.6x	0.6x	1.0x	6.9x	7.0x	10.0x
Over \$1 Billion	1.2x	0.9x	1.5x	5.9x	6.5x	13.1x
Under \$1 Billion	0.6x	0.6x	0.9x	7.1x	7.0x	9.1x

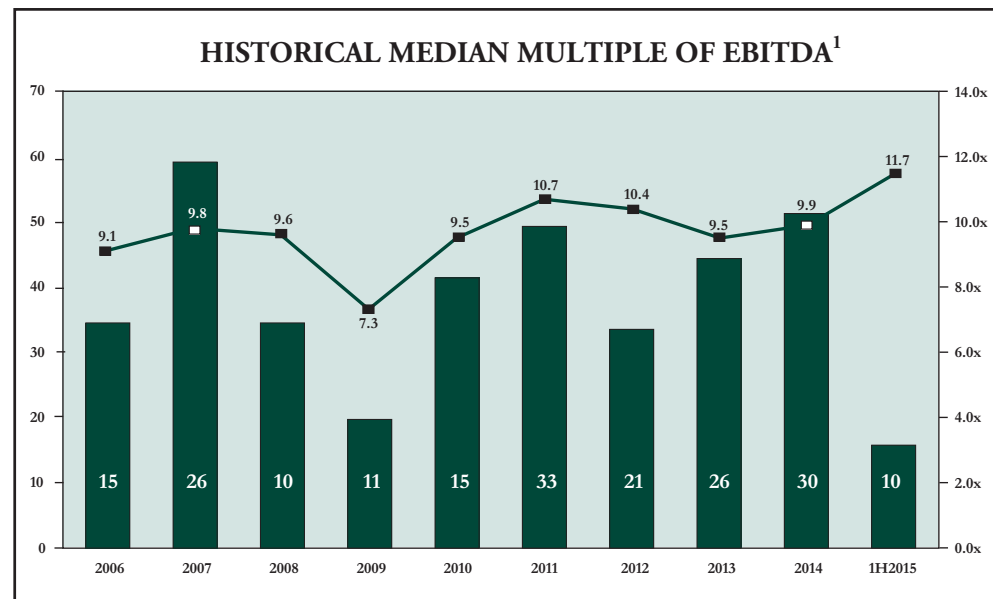
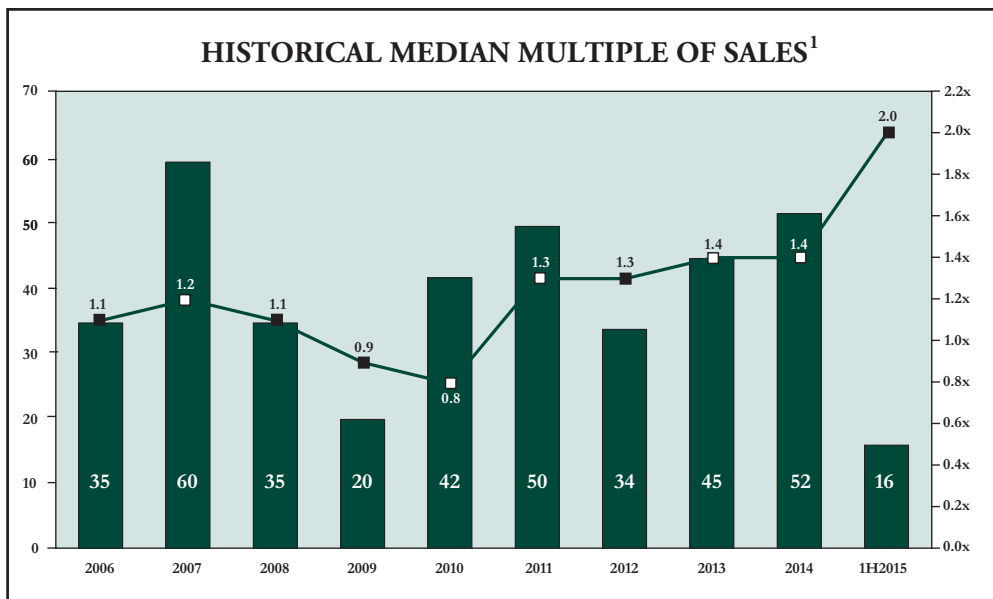
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# SPECIALTY CHEMICAL TRANSACTION MULTIPLES 2006–1H 2015



■ Number of Transactions    ■ Multiple

<sup>1</sup>) Transactions for 1H 2015 and prior years include only those that were closed during the respective year. Whole numbers in the transaction bars refer to the number of datapoints used in the median calculation.

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