



INDUSTRIAL GROWTH

Quarterly Update

Second Quarter 2019



RESTRUCTURING • INVESTMENT BANKING • DISTRESSED ASSET SUPPORT SERVICES

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Q2 2019 Highlights

August 2019

To The Friends and Clients of SOLIC Capital Advisors("SCA"):

We are pleased to share with you SCA's *SOLICconnect* Industrial Growth report, which contains, news, statistics, and key trends for industrial sectors that we actively cover for our corporate clients, institutional capital sources, legal and accounting professionals, and other interested groups. These sectors are: (i) Analytical Instrumentation and Testing Equipment, (ii) Electronics and Components, (iii) Precision Machine Products, Tooling and Stampings, (iv) Metals, (v) Resource Recovery and Waste Management, (vi) Chemicals and (vii) Plastic and Packaging companies.

During the Q2 2019, equity capital market returns for SCA's Industrial Sector Growth Index fell 3.5%. The Q2 index performance lagged the S&P (+2.6%) and NASDAQ (+2.3%) indices over the same time period. The index saw mixed results throughout Q2, and growth in the index was driven by significant increases in the Analytical Instrumentation and Equipment Testing (+13.2%), Precision Machine Products (12.7%) and Resource Recovery and Waste Management (+9.3%) segments.

Despite the attractive growth metrics in Q2 2019, certain elements of the economy may be signaling a sooner-than-expected slow down on the horizon. There were 228 industrial M&A deals announced in Q2 2019, which is typical for the space. While the financial details of most deals are private, there were several large deals that occurred during the quarter including Gardner Denver Holdings, Inc.'s (NYSE:GDI) acquisition of Ingersoll-Rand's U.S. industrial segment for \$8.7B (multiples not disclosed), Parker-Hannifin Corporation's (NYSE:PH) \$3.6B acquisition of LORD Corporation (at 3.6x Revenue, 16.4x EBITDA), and Crane Co.'s (NYSE:CR) acquisition of CIRCOR International, Inc. (NYSE:CIR) (at 1.4x Revenue, 12.9x EBITDA).

As a whole, the U.S. economy slowed in Q2 after robust growth the previous quarter. Ongoing trade-war tensions with China and a lowered consumer confidence index may have contributed to a slowdown. U.S. corporate debt, housing starts, and automobile sales remain key concerns amongst most institutional investors. Given that current governmental deficits are increasing, any leaning towards a downward cycle will likely lead to higher costs of capital and strains on the capital markets for the industrials sector.

We welcome your comments and hope you find our *SOLICconnect* report informative.

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 *Recent Representative Engagements **

HEALTHCARE	 has been acquired by  Team Health Holdings (NYSE:TMH) Sell Side Advisor	\$156,000,000  Regional Health Systems, Inc. Financial Advisor, Chief Executive Officer, Chief Restructuring Officer	\$690,600,000 Sale of Assets on behalf of  MedCath Corporation (Nasdaq: MDTH) Sell Side Advisor	\$327,500,000 Capital Restructuring  THE FOUNTAINS Fountains Senior Living Holdings, LLC Exclusive Financial Advisor			
	FINANCIAL SERVICES	\$100,000,000 Capital Placement  Placement Agent and Financial Advisor	\$750,000,000 Assets under Management  Fiduciary Oversight	\$4,500,000,000 of Assets  SENTINEL SENTINEL MANAGEMENT GROUP, INC. Financial Advisor to Bankruptcy Trustee Chapter 11 Reorganization	\$5,000,000,000 Pre-Filing Secured Indebtedness  Financial Advisor and Chief Restructuring Officer		
		REAL ESTATE AND INFRASTRUCTURE	\$118,000,000 Sale of senior notes secured by property located at 610 Lexington Avenue New York  Financial Advisor	\$212,320,000 Debt Restructuring  SunCal Companies The Westland Project Albuquerque, New Mexico Financial Advisor	\$87,000,000 Debt Restructuring for the Illinois Tollway Oasis Project  WILTON PARTNERS REAL ESTATE DEVELOPMENT Financial Advisor	\$500,000,000 Senior & Mezzanine Debt Restructuring related to 19 Master Planned Communities  DE Shaw & Co Financial Advisor	
			ENERGY	Pre Restructuring Invested Capital of Over \$800,000,000  Financial and Restructuring Advisor in Connection with Chapter 11 Bankruptcy	\$240,600,000 Restructured Debt  VAREL INTERNATIONAL Restructuring Advisor	 Alexin, LLC has consummated an Institutional Private Placement of Series A Senior Preferred Units \$13,100,000 with Term Loan and Revolving Credit Facilities \$30,000,000 Financial Advisor	 Pasadena Tank Corporation has merged with  HMT, Inc. a company sponsored by Berkshire Partners LLC Financial Advisor to Pasadena Tank Corporation
				INDUSTRIAL AND OUTSOURCING SERVICES	 Hancock Park Associates has made a strategic investment in  Project Time & Cost Inc. Financial Advisor to Project Time & Cost Inc.	 Tensar Corporation has completed a capital restructuring of \$280,000,000 of senior debt and \$100,000,000 of subordinated debt Financial Advisor	Operational Restructuring  Bocchi Laboratories, Inc. acquired by Investment Group led by John Paul de Joria  medica acquired by Joshua Partners, LLC Restructuring Advisor and Exclusive Sell Side Financial Advisor

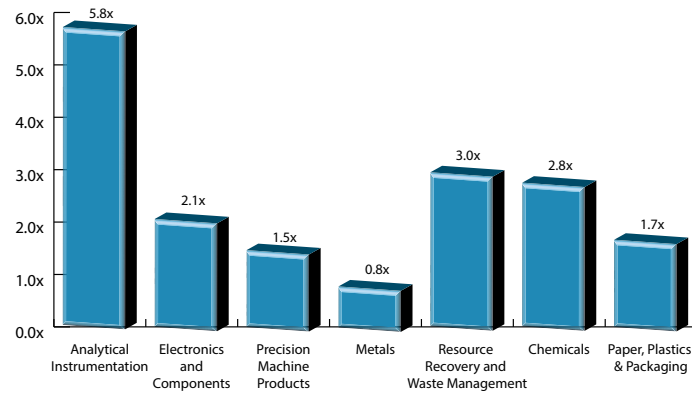
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* Includes transactions led by the team of SOLIC professionals at predecessor firms

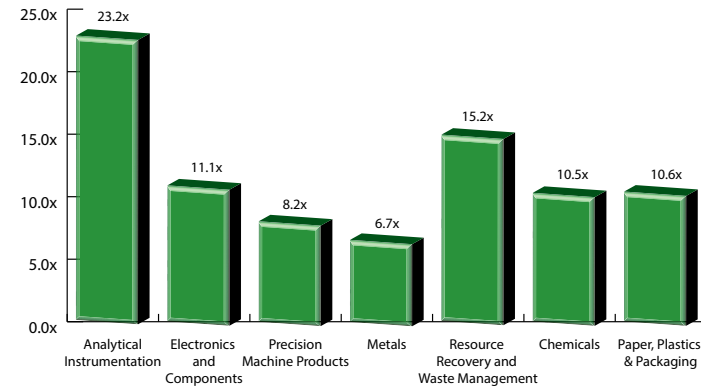
Market Overview



Enterprise Value To Revenue

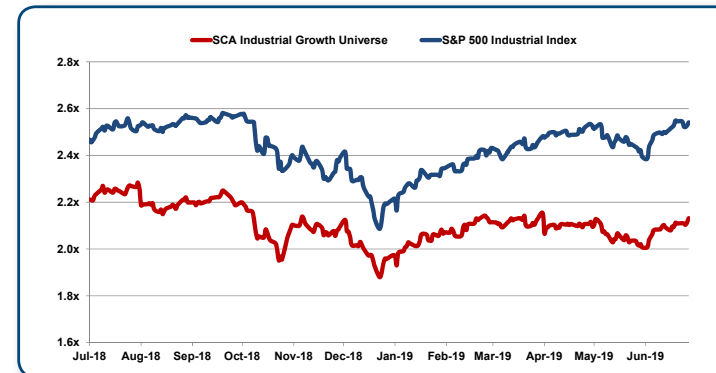


Enterprise Value To EBITDA

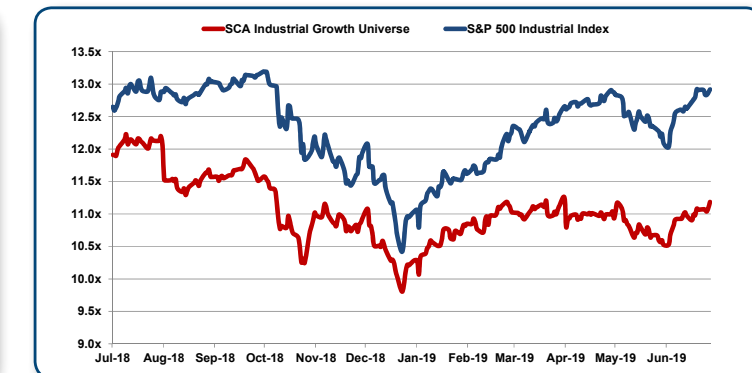


Revenue and EBITDA valuation multiples expanded, while reported deal volume slightly contracted as compared to Q1 2019.

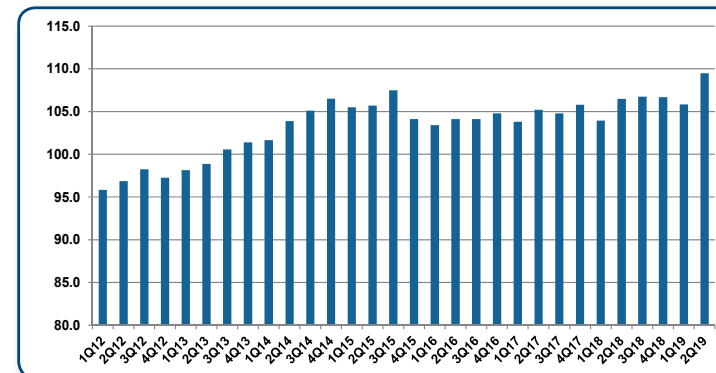
SCA Industrial Growth Universe vs. S&P 500 Total Enterprise Value / Revenue



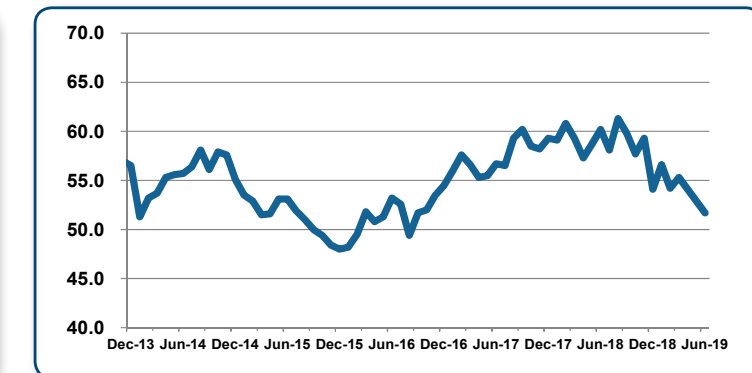
SCA Industrial Growth Universe vs. S&P 500 Total Enterprise Value / EBITDA



Federal Reserve Industrial Production

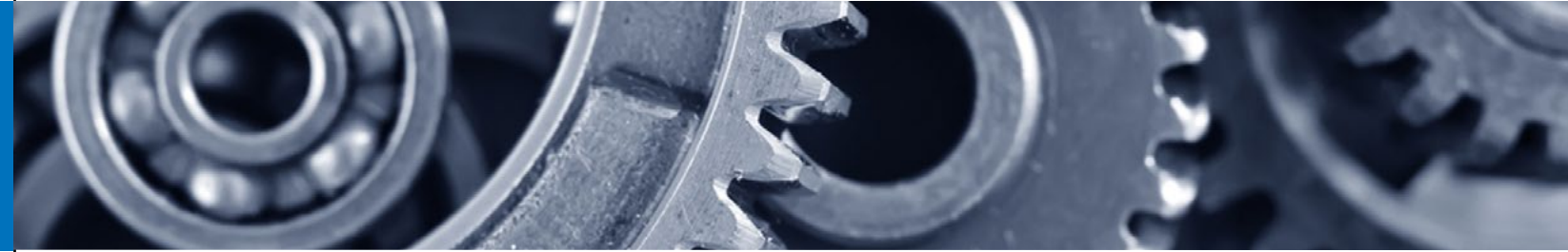


Institute for Supply Management Purchasing Managers' Index

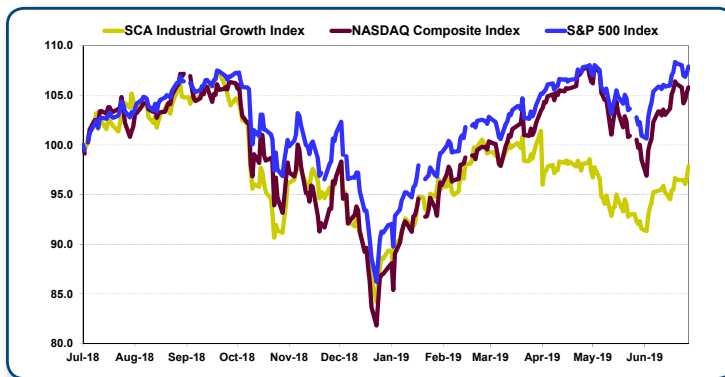


* Please see pages 16-21 for SCA Industrial Growth Universe and additional information in the "Notes" section at the end of this report.

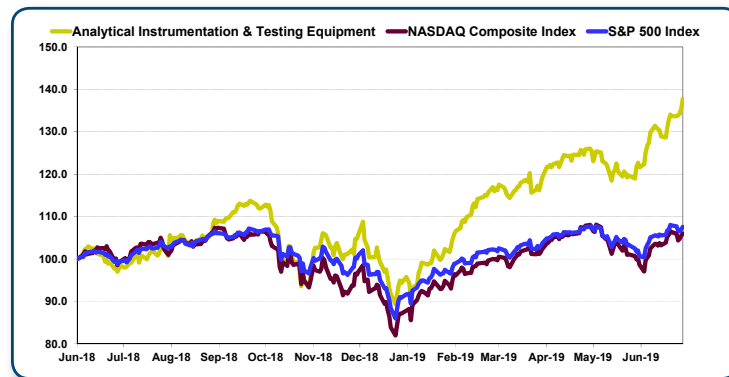
Sector Stock Performance (one year)



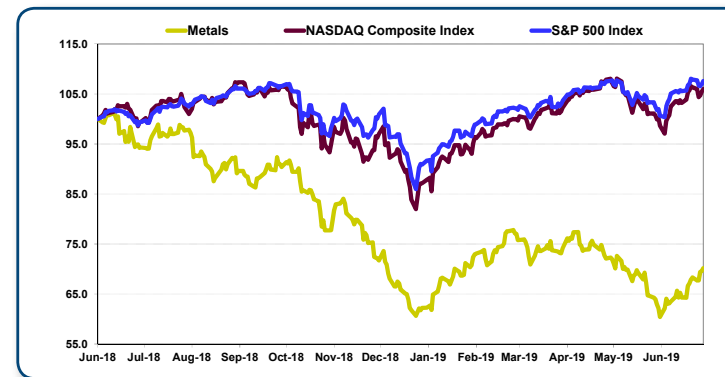
SCA Industrial Growth Index



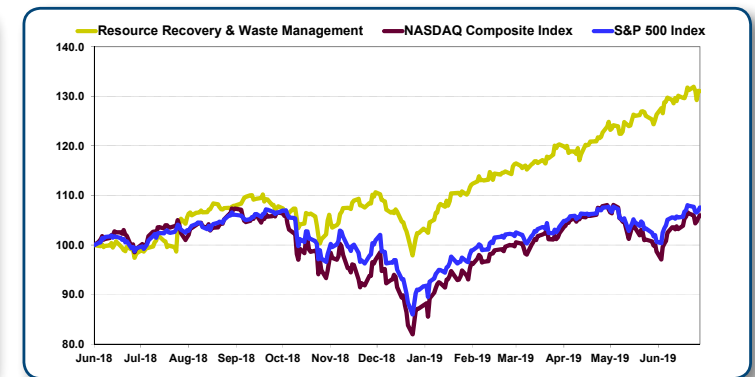
SCA Analytical Instrumentation & Testing Equipment Sector



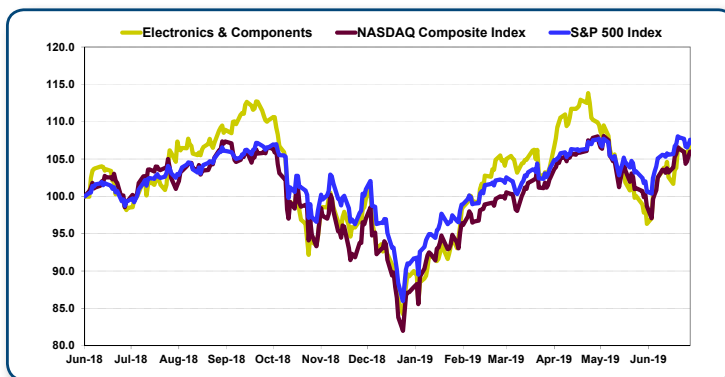
SCA Metals Sector



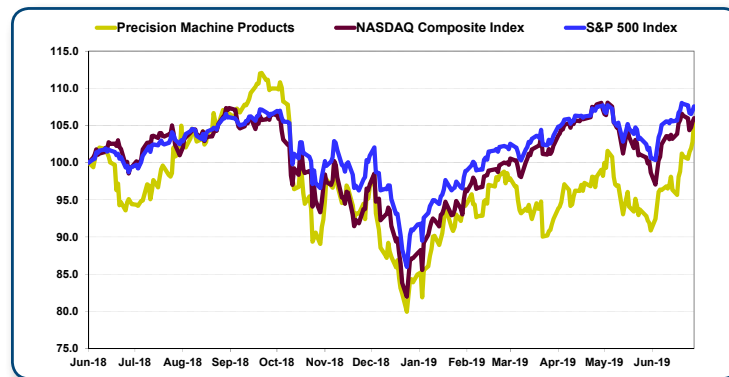
SCA Resource Recovery & Waste Management Sector



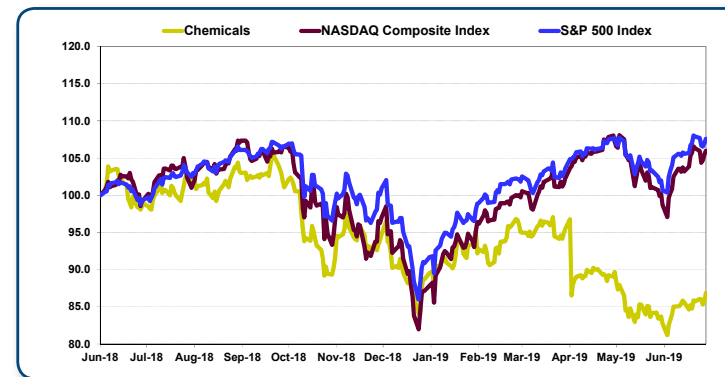
SCA Electronics and Components Sector



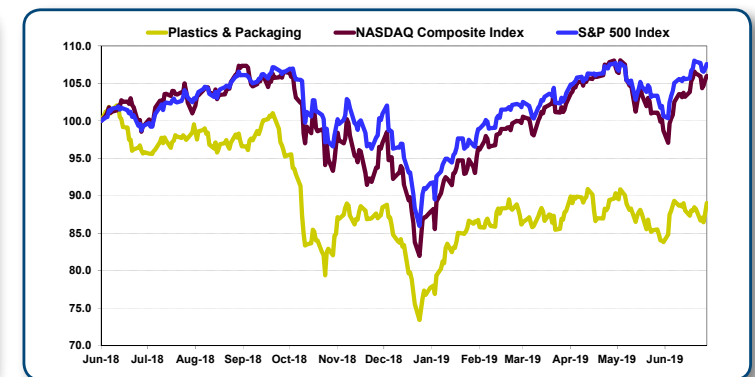
SCA Precision Machine Products Sector



SCA Chemicals Sector



SCA Plastics & Packaging Sector



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Notable Industry Developments



Crude Oil Prices Drop and More Volatile

Crude Oil (WTI) prices were volatile in Q2, decreasing from a high of \$66.30 on April 23 to a low of \$51.14 on June 12. The average price of oil for Q2 was \$59.93, a 9.1% decrease from the average price in Q1 2019. Crude oil prices retreated alongside the Brent crude oil price. The U.S. now produces the most crude oil in the world at 12.1 million barrels per day. Fewer regulations under the Trump administration and a more favorable corporate tax policy have improved the economics for U.S. oil producers, and as a result the American oil industry has become a significant exporter of crude oil both now and in the future. The U.S. is now the world's swing producer of the energy commodity.

U.S. Steel Momentum Gaining Traction as Robust Production Continues

U.S. raw steel production as of June 1 climbed year over year as American steel producers operated above 80% of their capacity, an increase from 77.2% a year ago, per the American Iron and Steel Institute. Domestic raw steel production checked in at 1,890,000 net tons for the reported week. The Trump Administration's 25% tariffs on steel imports has significantly helped the U.S. steel industry break back above the important 80% level – the minimum rate required for sustained profitability in the industry. Additionally, the tariffs have continued to drive domestic production capacity of U.S. steel producers including United States Steel Corp (NYSE: X), Nucor Corp. (NYSE: NUE), Steel Dynamics, Inc. (NASDAQ: STLD), and AK Steel Holding Corp. (NYSE: AKS) amid lower imports which have dropped roughly 8% year over year. U.S. crude steel production increased 6.7% year over year to 29.6 million tons, per the World Steel Association.

U.S. Chemical Production Increased for Organics and Fibers Amid Decreases in Inorganics and Plastics in Q2

Data collected and tabulated by the American Chemistry Council (ACC) shows that the U.S. Chemical Production Regional Index (US CPRI) increased in North America while activity fell in Europe in May. Chemical production was mixed during the second quarter of 2019, as there were gains in production output of petrochemical and organics, synthetic rubber, manufactured fibers, coatings and other specialties which was offset by weakness in agricultural chemicals, consumer products, inorganic chemicals, and plastic resins.

Second Quarter 2019

U.S. Manufacturing Outlook Remains Slightly Positive, but PMI Continues to Inch Downward

The U.S. Manufacturing outlook continues to expand, but at slower rates, as the Institute for Supply Management released a 51.7% PMI score for June 2019, a decrease of 40 bps from May. A PMI score above 50% represents expansion within the industry. The U.S. has now experienced 122 straight months of overall expansion; this expansion is driven by growth in new orders, production, and employment, all of which have a June index above 50. New Order Exports stand at 50.0%, a decrease of 270 bps from the previous month and is expected to decline into Q3 2019.

Q2 GDP Slows to 2.1% But Beats Expectations

The Bureau of Labor Statistics reported a Q2 GDP growth of +2.1%, down from +3.1% in the first quarter, but still beating the Dow Jones expectation of a +2.0% increase. Consumer and government spending fueled the GDP, but a dip in exports and business spending prevented further acceleration. Personal consumption expenditures increased by +4.3%, a record high since Q4 2017, and government spending reached +5.0% growth, nearly doubling since last quarter. However, Q2 growth slowed due to downturns in exports and business investments, which decreased by -5.2% and -5.5%, respectively, since last quarter. The ongoing tariff battle with China impacted U.S. trade during the quarter, and until it is resolved will continue to cause economic difficulties. Q2 results demonstrate the economy's inability to sustain the robust Q1 growth, but strong consumer spending helped propel GDP through the period.

SCA Industrial Fell Slightly in Q2, Lagging Behind the Market

SCA Industrial Growth Index fell by 350 bps in Q2 2019, while the S&P and NASDAQ grew by 230 bps and 260 bps, respectively. The index fell steadily throughout the first two months of Q2 2019, but rebounded in June. The strongest performing subsectors include the Analytical Instrumentation and Equipment Testing (+13.2%), Precision Machine Products (12.7%), and Resource Recovery and Waste Management (+9.3%) segments.

Upcoming Industry Conferences

Analytical Instrumentation and Testing Equipment

Microscopy and Microanalysis August 4-8, 2019 Portland, OR	10th World Meet on Analytical Chemistry & Instrumentation August 28, 2019 Falls Church, VA
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Electronics and Components

Electrical Ohio Expo & Tech Forum August 8, 2019 Strongsville, OH	Coil Winding, Insulation and Electrical Manufacturing Expo (CWIEME) September 16-18, 2019 Chicago, IL
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Precision Machine Products, Toolings, and Stampings

WESTEC January 28-29, 2020 Long Beach, CA	Rapid + TCT April 20-23, 2020 Anaheim, CA
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Metals

METALCON 2019 October 16-18, 2019 Pittsburgh, PA	SOUTH-TEC October 22-24, 2019 Greenville, SC
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Resource Recovery and Waste Management

Wastecon 2019 October 21-24, 2019 Phoenix, AZ	Waste Today Corporate Growth Conference November 18-19, 2019 Chicago, IL
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Chemicals

ICIS World Chemical Purchasing Conference September 2-6, 2019 Boston, MA	International Conference on Petrochemistry & Chemical Engineering October 14-15, 2019 Rome, Italy
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Plastics and Packaging

Plastics Industry Association August 21-23, 2019 Chicago, IL	American Packaging Conference April 15-16, 2020 Lombard, IL
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Selected M&A Transactions



Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
6/28/2019	Orchids Paper Products Company	Cascades Inc. (TSX:CAS)	\$216.0	N/A	N/A
Description:	Cascades Inc. has agreed to acquire certain assets of Orchids Paper Products Company, a producer of packaging and tissue as well as other certain equipment. Orchids Paper Products Company was founded in 1998 and is based in Barnwell, SC.				
6/27/2019	ASV Holdings, Inc. (NasdaqCM:ASV)	Yanmar America Corporation	\$107.0	0.8x	20.7x
Description:	Yanmar America Corporation has agreed to acquire ASV Holdings, Inc., a manufacturer of compact construction equipment. ASV Holdings, Inc. was founded in 1983 and is based in Grand Rapids, MN.				
6/20/2019	Duraco Specialty Tapes LLC	OpenGate Capital, LLC	\$77.4	N/A	N/A
Description:	OpenGate Capital, LLC has agreed to acquire Duraco Specialty Tapes LLC, a manufacturer of specialty tapes. Duraco Specialty Tapes LLC was founded in 2018 and is based in Westchester, IL.				
6/11/2019	H.B. Fuller - Surfactants, Thickeners and Dispersants Business	Tiarco, LLC	\$71.0	2.8x	8.9x
Description:	Tiarco, LLC has agreed to acquire H.B. Fuller's Surfactants, Thickeners and Dispersants Business, a manufacturer of surfactants used in detergents, wetting agents, as well as thickeners used in carpet, floor coatings, adhesive and caulk formulations, and foam boosters in beauty and health care products. H.B. Fuller was founded in 1887 and is based in Saint Paul, MN.				
6/5/2019	Pregis Corporation	Warburg Pincus LLC	\$1,300.0	N/A	N/A
Description:	Warburg Pincus LLC has agreed to acquire Pregis Corporation, a manufacturer and supplier of protective and specialty packaging solutions. Pregis Corporation was founded in 1997 and is based in Deerfield, IL.				
5/21/2019	CIRCOR International, Inc. (NYSE:CIR)	Crane Co. (NYSE:CR)	\$1,742.7	1.4x	12.9x
Description:	Crane Co. has agreed to acquire CIRCOR International, Inc., a manufacturer of engineered products and sub-systems. CIRCOR International, Inc. was founded in 1999 and is based in Burlington, MA.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
5/20/2019	Corenso Holdings America, Inc.	Sonoco Products Company (NYSE:SON)	\$110.0	1.5x	N/A
Description:	Sonoco Products Company has agreed to acquire Corenso Holdings America, Inc., a manufacturer of uncoated recycled paperboard (URB) for paper, packaging films, tape, and specialty industries. Corenso Holdings America, Inc. was founded in 2014 and is based in Wisconsin Rapids, WI.				
5/20/2019	Avera Semiconductor LLC	Marvell Technology Group Ltd. (NasdaqGS:MRVL)	\$740.0	N/A	N/A
Description:	Marvell Technology Group Ltd. has agreed to acquire Avera Semiconductor LLC, a provider of application-specific integrated circuit (ASIC) semiconductor solutions. Avera Semiconductor LLC was founded in 2018 and is based in Essex Junction, VT.				
5/16/2019	ArrMaz Custom Chemicals, Inc.	Arkema S.A. (ENXTPA:AKE)	\$570.0	2.0x	10.8x
Description:	Arkema S.A. has agreed to acquire ArrMaz Custom Chemicals, Inc., a manufacturer and supplier of process chemicals, additives, and solutions for the fertilizer, mining, asphalt, construction, and industrial minerals. ArrMaz Custom Chemicals, Inc. was founded in 1967 and is based in Mulberry, FL.				
5/14/2019	Mark Rite Lines Equipment Company, Inc.	Federal Signal Corporation (NYSE:FSS)	\$71.0	1.1x	8.2x
Description:	Federal Signal Corporation has agreed to acquire the assets and operations of Mark Rite Lines Equipment Company, Inc., a manufacturer of truck-mounted and ride-on road-marking equipment. Mark Rite Lines Equipment Company, Inc. was founded in 1967 and is based in Billings, MT.				
5/13/2019	Avista Technologies, Inc.	Kurita America, Inc.	\$84.3	2.9x	N/A
Description:	Kurita America, Inc. has agreed to acquire Avista Technologies, Inc., a manufacturer of water treatment chemicals. Kurita America, Inc. was founded in 1999 and is based in San Marcos, CA.				
5/9/2019	Harsco Corporation	E&C FinFan, Inc.	\$592.0	N/A	11.2x
Description:	E&C FinFan, Inc. has agreed to acquire Industrial Air-X-Changers Business of Harsco Corporation, a manufacturer of air-cooled heat exchanger systems. Harsco Corporation was founded in 1853 and is based in Camp Hill, PA.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
5/9/2019	Control4 Corporation (NasdaqGS:CTRL)	Wirepath Home Systems, LLC	\$693.7	2.3x	22.5x
Description:	Wirepath Home Systems, LLC has agreed to acquire Control4 Corporation, a provider of smart home and business solutions. Control4 Corporation was founded in 2003 and is based in Salt Lake City, UT.				
5/1/2019	Automated Packaging Systems, Inc.	Sealed Air Corporation (NYSE:SEE)	\$510.0	1.8x	N/A
Description:	Sealed Air Corporation has agreed to acquire Automated Packaging Systems, Inc., a designer and manufacturer of packaging machinery and bagging materials. Automated Packaging Systems, Inc. was founded in 1962 and is based in Streetsboro, OH.				
4/30/2019	Ingersoll-Rand plc	Gardner Denver Holdings, Inc. (NYSE:GDI)	\$8,735.5	N/A	N/A
Description:	Gardner Denver Holdings, Inc. has agreed to acquire the U.S. industrial segment business of Ingersoll-Rand plc, a manufacturer of compression equipment. Ingersoll-Rand plc was founded in 1871 and is based in Dublin, Ireland.				
4/29/2019	LORD Corporation	Parker-Hannifin Corporation (NYSE:PH)	\$3,675.0	3.6x	16.5x
Description:	Parker-Hannifin Corporation has agreed to acquire LORD Corporation, a developer and manufacturer of adhesives, coatings, motion management devices, and sensing technologies. LORD Corporation was founded in 1924 and is based in Cary, NC.				
4/23/2019	Synalloy Corporation (NasdaqGM:SYNL)	Privet Fund Management, LLC	\$286.0	1.0x	10.9x
Description:	Privet Fund Management, LLC has agreed to acquire Synalloy Corporation, a manufacturer and seller of metals and specialty chemicals. Synalloy Corporation was founded in 1945 and is based in Richmond, VA.				
4/23/2019	JR Automation Technologies, LLC	Hitachi, Ltd. (TSE:6501)	\$1,425.0	2.4x	N/A
Description:	Hitachi, Ltd. has agreed to acquire JR Automation Technologies, LLC, a manufacturer and distributor of automated equipment for various industries. JR Automation Technologies, LLC was founded in 1980 and is based in Holland, MI.				
4/22/2019	Amcor Limited	Tekni-Plex, Inc.	\$215.0	N/A	N/A
Description:	Tekni-Plex, Inc. has agreed to acquire three manufacturing facilities in the U.S. of Amcor Limited, a manufacturer of container facilities. Amcor Limited was founded in 1860 and is based in Bristol, UK.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
4/18/2019	Southwest Steel Casting Company	The Greenbrier Companies, Inc. (NYSE:GBX)	\$350.0	N/A	N/A
Description:	The Greenbrier Companies, Inc. has agreed to acquire ARI Component Venture, LLC and Castings, LLC segments of Southwest Steel Casting Company, a manufacturer of stainless steel castings. Southwest Steel Casting Company was founded in 1971 and is based in Longview, TX.				
4/10/2019	Global Brass and Copper Holdings, Inc. (NYSE:BRSS)	Wieland-Werke AG	\$1,320.2	0.7x	10.1x
Description:	Wieland-Werke AG has agreed to acquire Global Brass and Copper Holdings, Inc., a processor and distributor of specialized in non-ferrous products. Global Brass and Copper Holdings, Inc. was founded in 2007 and is based in Schaumburg, IL.				

Valuation Metrics by Sector



Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Analytical Instrumentation and Testing Equipment ^[1]									
AME	AMETEK, Inc.	\$90.84	100.0%	\$20,697.1	\$22,989.9	4.6x	17.3x	16.1x	26.3x
CGNX	Cognex Corporation	47.98	81.1%	8,221.9	7,692.6	9.5x	32.2x	36.1x	39.3x
ESE	ESCO Technologies Inc.	82.62	99.9%	2,146.3	2,328.4	2.9x	15.6x	13.9x	25.8x
HEI	HEICO Corporation	133.81	100.0%	15,473.0	16,232.0	8.4x	32.0x	29.6x	61.7x
MTD	Mettler-Toledo International Inc.	840.00	100.0%	20,834.8	21,857.8	7.4x	29.2x	25.8x	40.5x
MTSC	MTS Systems Corporation	58.53	99.0%	1,050.9	1,437.5	1.7x	12.9x	10.2x	25.5x
Mean						5.8x	23.2x	22.0x	25.9x

Electronics and Components ^[2]									
APH	Amphenol Corporation	95.94	90.9%	28,660.4	31,461.0	3.8x	15.5x	15.7x	24.7x
AYI	Acuity Brands, Inc.	137.91	73.8%	5,448.5	5,573.2	1.5x	10.0x	8.4x	16.9x
BELF.B	Bel Fuse Inc.	17.17	59.2%	206.2	296.6	0.5x	6.3x	0.0x	9.0x
ETN	Eaton Corporation plc	83.28	93.1%	35,235.8	42,846.8	2.0x	11.0x	10.4x	16.5x
LFUS	Littelfuse, Inc.	176.91	76.3%	4,374.4	4,604.3	2.7x	12.8x	12.1x	27.0x
Mean						2.1x	11.1x	9.3x	16.8x

Precision Machine Products, Tooling and Stampings ^[3]									
CW	Curtiss-Wright Corporation	127.13	90.0%	5,437.7	6,203.6	2.5x	12.4x	11.6x	19.4x
HURC	Hurco Companies, Inc.	35.56	76.4%	233.5	163.3	0.5x	4.1x	NM	9.1x
KMT	Kennametal Inc.	36.99	82.0%	3,047.6	3,567.4	1.5x	7.5x	7.2x	12.4x
ROLL	RBC Bearings Incorporated	166.81	98.2%	4,084.7	4,098.5	5.8x	23.0x	20.6x	39.2x
SHLO	Shiloh Industries, Inc.	4.87	39.7%	115.7	346.6	0.3x	5.0x	4.8x	NM
TKR	The Timken Company	51.34	97.9%	3,908.0	5,617.8	1.5x	8.8x	7.2x	12.7x
Mean						1.5x	8.2x	8.7x	13.4x

Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Metals Processors									
ATI	Allegheny Technologies Incorporated	25.20	83.5%	3,176.1	4,614.7	1.1x	10.2x	8.0x	18.8x
CMC	Commercial Metals Company	17.85	78.0%	2,104.9	3,346.6	0.6x	8.2x	5.5x	12.9x
RS	Reliance Steel & Aluminum Co.	94.62	99.6%	6,361.8	8,611.5	0.7x	7.0x	8.1x	10.3x
TSX:RUS	Russel Metals Inc.	22.10	71.3%	1,372.6	1,975.0	0.5x	5.4x	6.7x	6.4x
SCHN	Schnitzer Steel Industries, Inc.	26.17	69.0%	679.6	818.3	0.4x	5.1x	5.6x	7.1x
ASX:S-GM	Sims Metal Management Limited	10.86	62.3%	2,201.7	2,033.2	0.3x	5.5x	5.4x	11.9x
WOR	Worthington Industries, Inc.	40.26	82.9%	2,233.1	3,007.2	0.8x	9.0x	9.4x	15.4x
Mean						0.6x	7.2x	7.0x	11.8x

Tube and Pipe Producers ^[4]									
AKS	AK Steel Holding Corporation	2.37	43.9%	749.7	3,358.4	0.5x	5.1x	7.7x	4.9x
NWPX	Northwest Pipe Company	25.78	97.4%	251.0	256.6	1.3x	19.7x	8.1x	10.3x
STLD	Steel Dynamics, Inc.	30.20	60.8%	6,711.8	8,236.0	0.7x	4.1x	6.5x	5.7x
SYNL	Synalloy Corporation	15.62	63.0%	140.0	266.6	0.9x	9.4x	NM	16.6x
BIT:TEN	Tenaris S.A.	11.51	68.6%	13,588.0	13,402.0	2.0x	8.8x	9.1x	17.3x
X	United States Steel Corporation	15.31	39.4%	2,639.3	4,594.3	0.3x	3.2x	5.1x	2.4x
Mean						0.9x	6.1x	7.3x	8.0x

[1] CGNX, HEI and MTD are excluded from the mean P/E multiple calculation.

[2] LFUS is excluded from the mean P/E multiple calculation.

[3] ROLL and SHLO is excluded from all mean multiple calculations.

[4] NWPX is excluded from the mean LTM EBITDA multiple calculation. TEN is excluded from the mean P/E multiple calculation.

Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Resource Recovery and Waste Management ^[5]									
CWST	Casella Waste Systems, Inc.	39.63	95.0%	1,872.1	2,410.0	3.6x	19.3x	15.3x	202.4x
CECE	CECO Environmental Corp.	9.59	97.9%	336.1	404.2	1.2x	13.2x	11.9x	NM
CLH	Clean Harbors, Inc.	71.10	92.1%	3,972.4	5,491.6	1.6x	11.2x	10.5x	50.7x
HCCI	Heritage-Crystal Clean, Inc	26.31	90.7%	608.4	658.3	1.6x	18.3x	11.2x	49.6x
RSG	Republic Services, Inc.	86.64	98.7%	27,862.2	36,454.9	3.6x	13.3x	12.1x	27.4x
ECOL	US Ecology, Inc.	59.54	77.2%	1,315.2	1,656.6	2.9x	13.9x	11.3x	27.2x
WCN	Waste Connections, Inc.	95.58	99.4%	25,194.6	29,090.9	5.8x	18.4x	16.5x	46.0x
WM	Waste Management, Inc.	115.37	98.3%	48,995.5	59,694.5	4.0x	14.2x	13.4x	26.5x
Mean						3.0x	15.2x	12.8x	37.9x

Diversified Chemicals ^[6]									
ASH	Ashland Global Holdings Inc.	79.97	92.3%	5,016.3	7,388.3	2.0x	12.2x	12.2x	73.0x
CBT	Cabot Corporation	47.71	70.4%	2,789.5	3,994.5	1.2x	7.5x	7.1x	10.6x
DD	DuPont de Nemours, Inc.	75.07	34.8%	55,392.4	90,845.4	1.1x	5.3x	15.5x	17.7x
EMN	Eastman Chemical Company	77.83	74.9%	10,785.6	17,340.6	1.7x	8.5x	7.5x	11.0x
FMC	FMC Corporation	82.95	89.4%	10,921.0	14,195.5	3.0x	10.9x	11.5x	17.9x
OLN	Olin Corporation	21.91	68.5%	3,612.1	6,995.0	1.0x	5.8x	5.9x	10.5x
Mean						1.7x	8.4x	10.0x	13.6x

[5] CWST is excluded from the mean P/E multiple calculation.

[6] ASH is excluded from the mean P/E multiple calculation.

Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Specialty Chemicals ^[7]									
ALB	Albemarle Corporation	70.41	64.8%	7,460.4	9,137.8	2.7x	8.9x	8.0x	10.9x
ECL	Ecolab Inc.	197.44	98.3%	56,910.5	64,589.5	4.4x	20.6x	19.2x	39.1x
FOE	Ferro Corporation	15.80	66.2%	1,294.5	2,153.4	1.4x	10.8x	8.1x	19.0x
FUL	H.B. Fuller Company	46.40	77.9%	2,361.1	4,463.1	1.5x	10.7x	9.2x	18.9x
IFF	International Flavors & Fragrances Inc.	145.09	94.9%	15,479.8	19,664.9	4.5x	20.8x	16.7x	44.7x
MTX	Minerals Technologies Inc.	53.51	66.2%	1,885.4	2,775.6	1.5x	7.9x	7.7x	11.3x
POL	PolyOne Corporation	31.39	68.7%	2,442.6	3,874.4	1.1x	10.7x	9.2x	16.5x
KWR	Quaker Chemical Corporation	202.88	90.5%	2,705.1	2,672.4	3.1x	21.8x	10.7x	44.8x
SCL	Stepan Company	91.91	96.4%	2,078.4	2,122.0	1.1x	9.5x	8.5x	20.3x
Mean						1.9x	11.3x	10.0x	19.4x

Industrial Gases									
APD	Air Products and Chemicals, Inc.	226.37	99.9%	49,831.4	51,221.0	5.7x	15.6x	13.9x	30.3x
PX	Philex Mining Corporation	3.60	72.1%	17,785.4	27,094.5	4.1x	8.0x	0.0x	34.8x
Mean						4.9x	11.8x	7.0x	32.5x

[7] IFF and KWR are excluded from all mean multiple calculations.

Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Paper and Corrugated Packaging ^[8]									
GPK	Graphic Packaging Holding Company	13.98	91.9%	4,128.0	8,177.7	1.4x	8.5x	8.0x	17.5x
GEF	Greif, Inc.	32.55	55.2%	1,815.6	4,793.7	1.2x	8.5x	6.2x	10.4x
IP	International Paper Company	43.32	78.8%	17,212.5	27,786.5	1.2x	6.7x	7.0x	10.3x
PKG	Packaging Corporation of America	95.32	80.2%	8,936.6	11,220.1	1.6x	7.2x	7.7x	11.5x
SON	Sonoco Products Company	65.34	98.7%	6,537.1	8,153.9	1.5x	10.9x	10.3x	21.1x
WRK	WestRock Company	36.47	62.3%	9,374.3	20,031.6	1.2x	6.8x	6.0x	11.2x
					Mean	1.3x	8.1x	7.5x	12.2x

Plastics/Films ^[9]									
ATR	AptarGroup, Inc.	124.34	99.7%	7,857.3	8,940.0	3.2x	15.9x	13.9x	40.9x
BERY	Berry Global Group, Inc.	52.59	88.9%	6,920.8	12,318.8	1.5x	9.1x	8.5x	17.4x
TSX:ITP	Intertape Polymer Group Inc.	18.41	92.2%	1,083.3	1,851.9	1.3x	9.6x	8.3x	17.7x
MYE	Myers Industries, Inc.	19.27	75.0%	683.3	698.7	1.3x	12.8x	NM	NM
TG	Tredegar Corporation	16.62	62.7%	550.2	645.5	0.6x	7.1x	NM	20.8x
					Mean	1.6x	10.9x	10.2x	18.6x

[8] SON is excluded from the mean P/E multiple calculation.

[9] ATR is excluded from the mean P/E multiple calculation.

Ticker	Company Name	Stock Price	% of 52 Week High	Market Cap (\$mm)	Enterprise Value (\$mm)	Enterprise Value to:			P/E
						LTM Revenue	LTM EBITDA	NTM EBITDA	
Flexible Packaging									
ASX: AMC	Amcor plc	16.19	97.1%	26,284.9	32,577.6	2.5x	17.2x	11.8x	19.6x
CCL.B	CCL Industries Inc.	64.22	95.0%	11,430.8	13,641.5	2.6x	13.6x	12.1x	24.3x
SEE	Sealed Air Corporation	42.78	90.8%	6,661.0	9,992.5	2.1x	12.0x	10.5x	16.0x
WPK	Wipak Ltd.	43.20	85.6%	2,808.0	2,362.0	2.0x	9.0x	9.0x	18.9x
					Mean	2.3x	13.0x	10.8x	19.7x

OVERALL INDUSTRIAL GROWTH SECTOR					Mean	2.3x	11.2x	10.2x	19.2x
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 **NOTES**

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- Sources: Capital IQ, Bloomberg, Federal Reserve, Institute for Supply Management, company 10-K, 10-Q and 8-K SEC filings, annual reports, press releases, and others as indicated.
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