



INDUSTRIAL GROWTH
Quarterly Update
Fourth Quarter 2019



RESTRUCTURING • INVESTMENT BANKING • DISTRESSED ASSET SUPPORT SERVICES

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Q4 2019 Highlights

February 2020

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 Q4 2019, equity capital market returns for SCA’s Industrial Sector Growth Index gained 6.6% while lagging both the S&P (+9.9%) and NASDAQ (+13.5%) indices over the same time period. The index experienced healthy results across all seven sectors throughout Q4, with notable performance in the index driven by Precision Machine Products (+15.7%) and Electronics & Components segments (+14.7%).

With respect to the industrial sector, Q4 2019 was a robust quarter, as equity markets experienced record-setting returns and GDP growth held stable at 2.1%. In the M&A market, there were 236 Industrial transactions announced in Q4 2019, a jump of 28% from the previous quarter (184 announced deals). Notable deals for this quarter included Cleveland-Cliffs Inc.’s (NYSE:CLF) acquisition of AK Steel Holding Corporation (NYSE:AKS) for \$3.6B (0.5x Revenue, 61x EBITDA), Iris Parent’s \$1.0B acquisition of Innophos Holdings, Inc. (1.3x Revenue, 9.1x EBITDA), Pigments Spain SI’s \$592M acquisition of the tile coating business of Ferro Corporation (1.0x Revenue, EBITDA multiple not disclosed), and Bodycote PLC’s acquisition of Ellison Surface Technologies, Inc. (4.0x Revenue, EBITDA multiple not disclosed).

As a whole, the U.S. economy thrived in Q4 after a relatively lackluster performance in the previous quarter. Recent phase-one trade-war agreements with China, positive personal consumption expenditures, and increased federal and state government spending in defense equipment and infrastructure, contributed materially to this uptick in industrial demand. However, U.S. corporate debt, housing starts, and global trade remain key concerns amongst most institutional investors and the outlook for 2020. Further, the purchasing managers index continues to be soft having reached 47.2 in December, its lowest point since June 2009. Given that current governmental deficits are increasing and much of this current economic cycle is driven by consumer spending, any leaning towards a downward cycle, which appears more likely than not, will impact costs of capital and strain investor sentiment in the industrials sector for the near term.

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

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 *Recent Representative Engagements **

HEALTHCARE	<p>MESA Medical Group <i>has been acquired by</i> TEAMHealth Team Health Holdings (NYSE:TMH) Sell Side Advisor</p>	<p>\$156,000,000 SUMNER Regional Health Systems, Inc. Financial Advisor, Chief Executive Officer, Chief Restructuring Officer</p>	<p>\$690,600,000 Sale of Assets on behalf of MedCath MedCath Corporation (Nasdaq: MDTH) Sell Side Advisor</p>	<p>\$327,500,000 Capital Restructuring THE FOUNTAINS Fountains Senior Living Holdings, LLC Exclusive Financial Advisor</p>
FINANCIAL SERVICES	<p>\$100,000,000 Capital Placement GREEN BANK Placement Agent and Financial Advisor</p>	<p>\$750,000,000 Assets under Management SageCrest II, LLC Fiduciary Oversight</p>	<p>\$4,500,000,000 of Assets SENTINEL SENTINEL MANAGEMENT GROUP, INC. Financial Advisor to Bankruptcy Trustee Chapter 11 Reorganization</p>	<p>\$5,000,000,000 Pre-Filing Secured Indebtedness TB&W Financial Advisor and Chief Restructuring Officer</p>
REAL ESTATE AND INFRASTRUCTURE	<p>\$118,000,000 Sale of senior notes secured by property located at 610 Lexington Avenue New York 610 LEX Financial Advisor</p>	<p>\$212,320,000 Debt Restructuring SunCal Companies The Westland Project Albuquerque, New Mexico Financial Advisor</p>	<p>\$87,000,000 Debt Restructuring for the Illinois Tollway Oasis Project WILTON PARTNERS REAL ESTATE DEVELOPMENT Financial Advisor</p>	<p>\$500,000,000 Senior & Mezzanine Debt Restructuring related to 19 Master Planned Communities DE Shaw & Co Financial Advisor</p>
ENERGY	<p>Pre Restructuring Invested Capital of Over \$800,000,000 BOSQUE POWER COMPANY Financial and Restructuring Advisor in Connection with Chapter 11 Bankruptcy</p>	<p>\$240,600,000 Restructured Debt VAREL INTERNATIONAL Restructuring Advisor</p>	<p>Alexin, LLC <i>has consummated</i> 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</p>	<p>PTC Pasadena Tank Corporation <i>has merged with</i> HMT, Inc. a company sponsored by Berkshire Partners LLC Financial Advisor to Pasadena Tank Corporation</p>
INDUSTRIAL AND OUTSOURCING SERVICES	<p>HANCOCK PARK ASSOCIATES <i>has made a</i> strategic investment in Project Time & Cost Project Time & Cost Inc. Financial Advisor to Project Time & Cost Inc.</p>	<p>Tensar Tensar Corporation <i>has completed a</i> capital restructuring of \$280,000,000 of senior debt and \$100,000,000 of subordinated debt Financial Advisor</p>	<p>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</p>	<p>\$289,800,000 Capital Restructuring in connection with a consensual Plan of Reorganization jiffylube Heartland Automotive Holdings, Inc. Heartland Automotive Services America's Largest Jiffy Lube Franchisee Financial Advisor to Unsecured Creditors Committee</p>

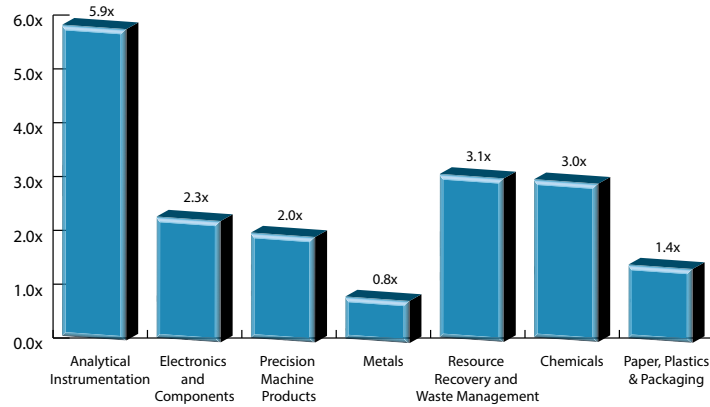
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* Includes transactions led by the team of SOLIC professionals at predecessor firms

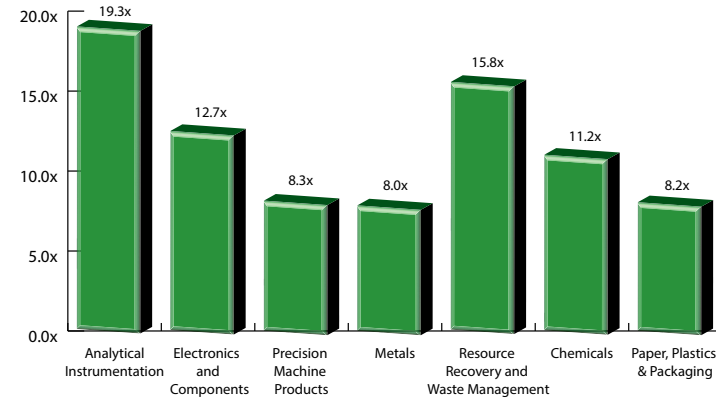
Market Overview



Enterprise Value To Revenue

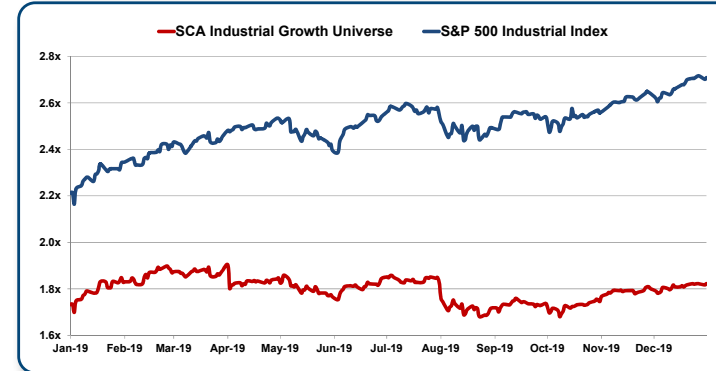


Enterprise Value To EBITDA

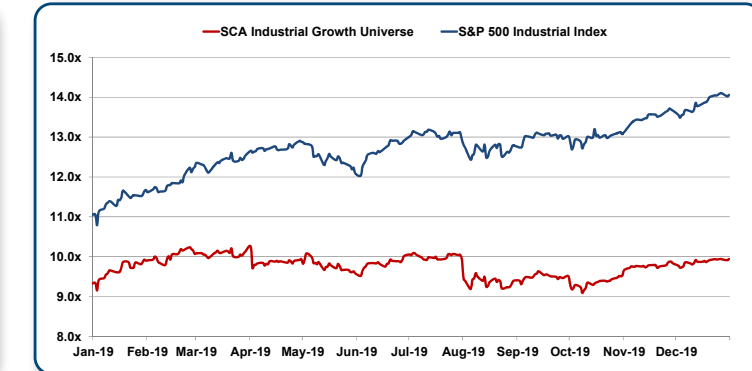


Revenue and EBITDA valuation multiples maintained heightened levels in Q4, while reported deal volume rebounded from Q3 2019

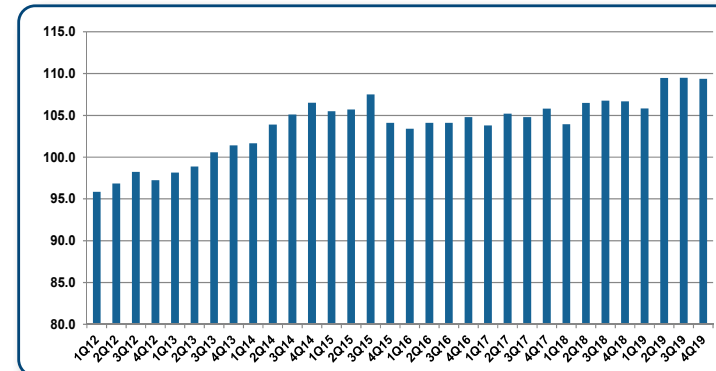
SCA Industrial Growth Universe vs. S&P 500 Total Enterprise Value / Revenue



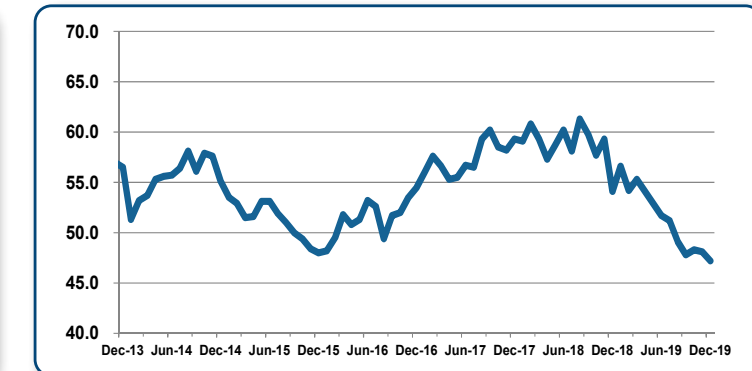
SCA Industrial Growth Universe vs. S&P 500 Total Enterprise Value / EBITDA



Federal Reserve Industrial Production

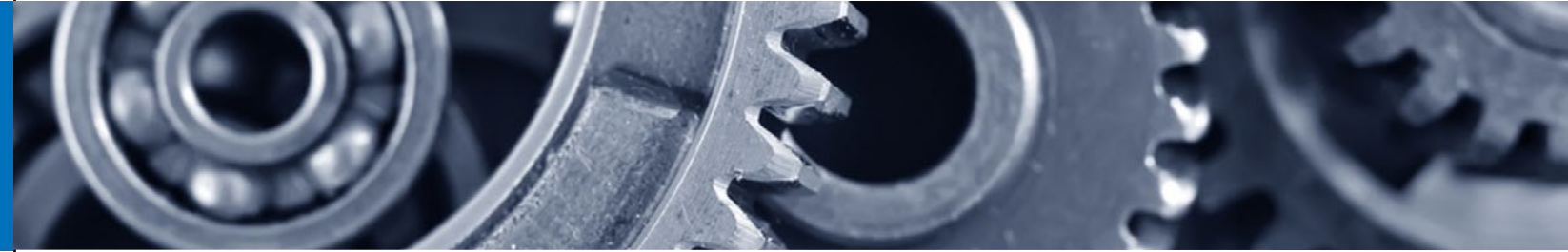


Institute for Supply Management Purchasing Managers' Index

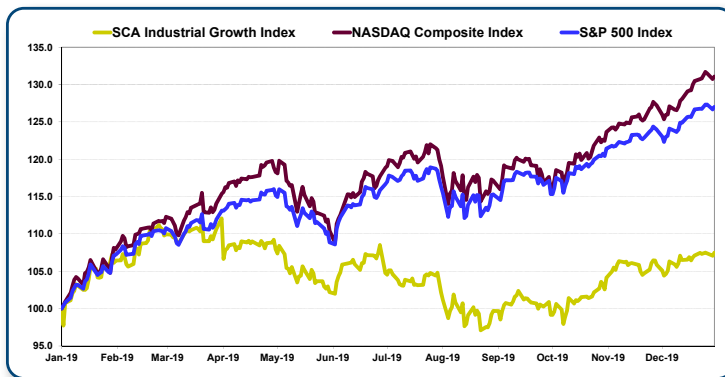


* Please see pages 16-21 for SCA Industrial Growth Universe and additional information in the "Notes" section at the end of this report.

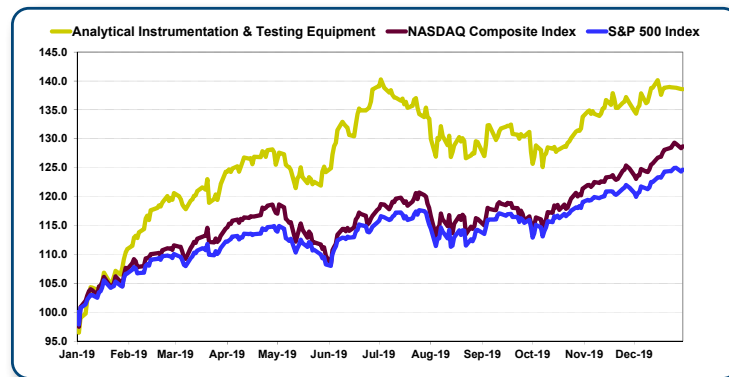
Sector Stock Performance (one year)



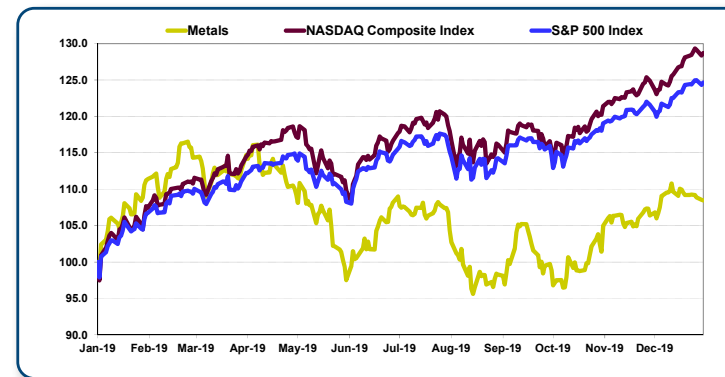
SCA Industrial Growth Index



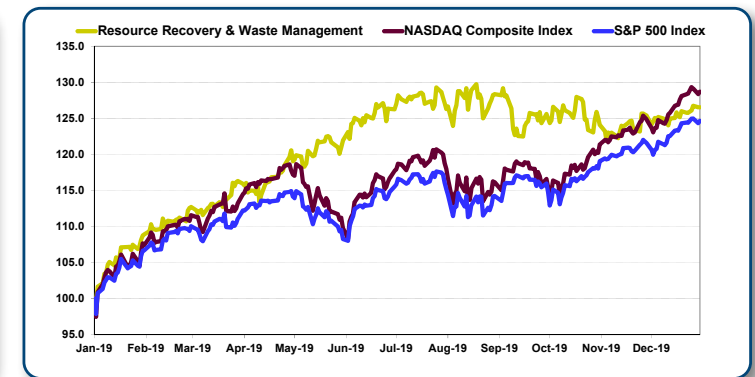
SCA Analytical Instrumentation & Testing Equipment Sector



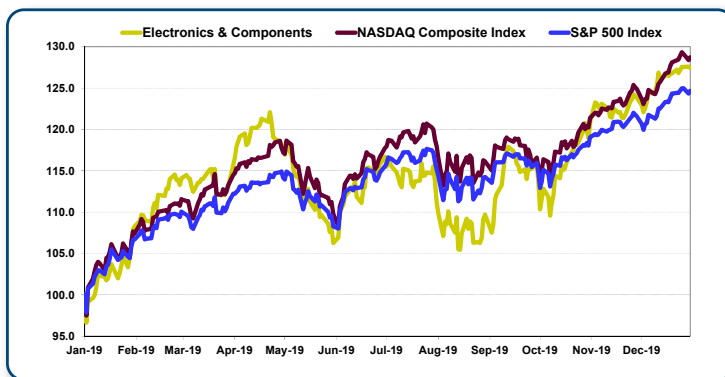
SCA Metals Sector



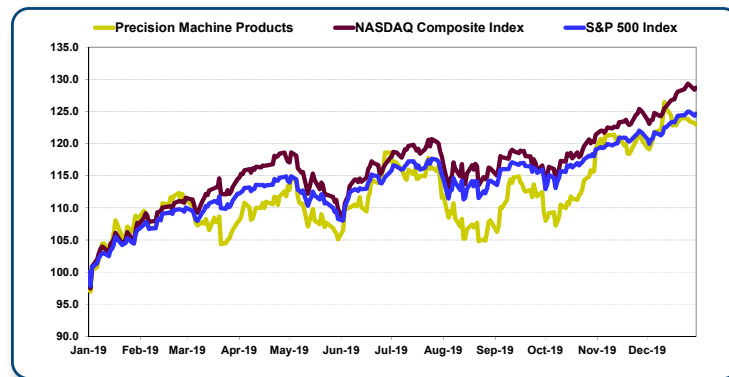
SCA Resource Recovery & Waste Management Sector



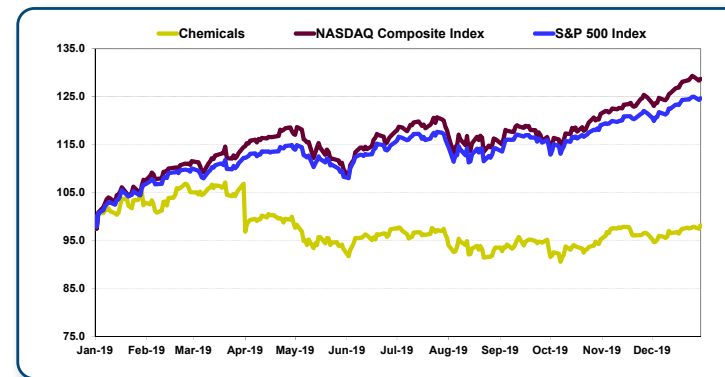
SCA Electronics and Components Sector



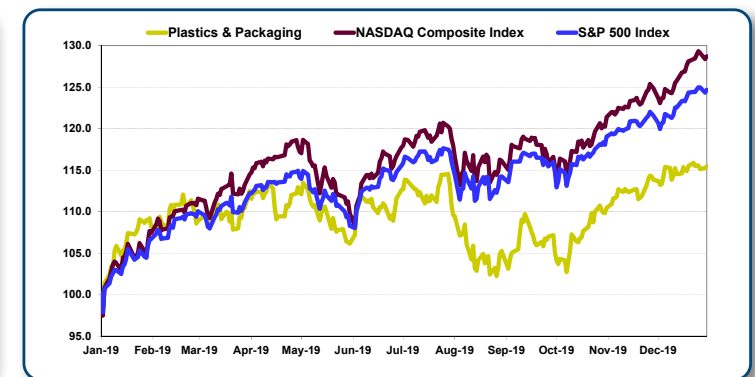
SCA Precision Machine Products Sector



SCA Chemicals Sector



SCA Plastics & Packaging Sector



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Notable Industry Developments



Crude Oil Prices Rise as Production Cuts Expected from OPEC

Brent crude oil prices averaged \$67/b in December 2019, up \$4/b from the average in November and \$10/b higher than in December 2018. Price increases in December partly reflect market expectations that global economic conditions in 2020 will be better than previously anticipated, and the announced phase-one trade deal with China will be signed in Q1-2020. According to the U.S. Energy Information Administration ("EIA"), upward price pressure will continue to build due to the expected implementation of OPEC oil production cuts and improved economic conditions.

U.S. Steel Momentum Increases as Capacity Climbs Above 80%

U.S. raw steel production recorded an uptick in December 2019 as American steel producers climbed above 80% of their capacity, per the American Iron and Steel Institute. Domestic raw steel production checked in at 96.3 million tons through December 2019, up 1.9% from the same period a year ago. President Trump's imposition of 25% tariffs on steel imports have helped expand U.S. steel industry capacity levels above the 80% threshold. By region, output from Great Lakes ticked up 5.9% on a weekly basis to 733,000 net tons in the reported week. Mills in the North East produced 213,000 net tons of raw steel, up 6.0% from the previous reported week. The Midwest region produced 207,000 net tons of raw steel, up 15.6% from the previous reported week. Output rose 9.9% in the Western region to 78,000 net tons.

U.S. Chemical Production Increased in Q4

Data collected and tabulated by the American Chemistry Council (ACC) shows that U.S. Chemical Production Regional Index (US CPRI) increased in North America by 0.3% in December bouncing back from declines of 0.2% in November. Chemical production was mixed over the three-month period. There were gains in the production three-month moving average (3MMA) output trend in inorganic chemicals, bulk petrochemicals and organics, plastic resins, coatings, and other specialties. These gains were offset by declines in the output of agricultural chemicals, consumer products, synthetic rubber and manufactured rubbers.

Fourth Quarter 2019

Economic Activity in the Manufacturing Sector Contracted in December

The U.S. manufacturing outlook continues to expand, but at slower rates, as the Institute for Supply Management released a 47.2% PMI score for December 2019, a decrease of 190 bps from November. A PMI score above 42.9%, over a period of time, represents expansion of the overall economy. The U.S. economy has now experienced growth for the 128th consecutive month and marks the fifth month of contraction in the manufacturing sector following 35 straight months of growth. The only manufacturing industries to report growth in December were Food, Beverage & Tobacco Products, Miscellaneous Manufacturing and Computer & Electronic Products. New Order Exports stand at 46.8% as compared with 47.2% in November and is expected to decline further into Q1 2020.

Q4 GDP Growth Remains Stable at 2.1%

The Bureau of Labor Statistics reported an estimated Q4 GDP growth of +2.1%, in line with +2.1% in the third quarter. Consumer and government spending fueled the growth in GDP, but a dip in private investment and nonresidential fixed investments prevented further acceleration. Current-dollar personal income increased by \$148.7B in Q4 2019, compared with an increase of \$162.6B for Q3 2019. Disposable income increased by 3.1% this quarter compared to the previous quarter of 4.5%. Real disposable personal income increased 1.5% compared with an increase of 2.1% for the same periods, respectively.

Upcoming Industry Conferences

Analytical Instrumentation and Testing Equipment	
SPIE Medical Imaging Conference February 15-20, 2020 Houston, TX	Pittcon Conference March 1-5, 2020 Chicago, IL
Electronics and Components	
EDS Summit May 11-15, 2020 Las Vegas, NV	70th ECTC May 26-29, 2020 Lake Buena Vista, FL
Precision Machine Products, Toolings, and Stampings	
Precision Machined Products Association Update Conference March 5, 2020 Atlanta, GA	Rapid + TCT April 20-23, 2020 Anaheim, CA
Metals	
Global Metals and Mining Conference February 23, 2020 Hollywood, FL	Steel Success Strategies 2020 June 8-10, 2020 New York, NY
Resource Recovery and Waste Management	
Recycled Packaging for Food Contact Conference April 23, 2020 Glendale, CA	850th ICESD 2020 June 22-23, 2020 Chicago, IL
Chemicals	
4th International Conference Catalysis & Chemical Engineering February 24, 2020 Los Angeles, CA	ACS National Meeting & Expo March 22-26, 2020 Philadelphia, PA
Plastics and Packaging	
American Packaging Conference April 15-16, 2020 Lombard, IL	Thin Wall Packaging USA June 23-25, 2020 Wheeling, IL

Selected M&A Transactions



Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
12/30/2019	CIRCOR International, Inc. - Non-Core Instrumentation and Sampling Business	Crane Co. (NYSE:CR)	\$172.0	2.1x	n/a
Description:	Crane Co. (NYSE:CR) has agreed to acquire the Non-Core Instrumentation and Sampling Business of CIRCOR International, Inc., an instrumentation and sampling engineered products business. CIRCOR International, Inc. was founded in 1999 and is based in Burlington, MA.				
12/24/2019	Ellison Surface Technologies, Inc.	Bodycote plc (LSE:BOY)	\$200.0	4.0x	n/a
Description:	Bodycote plc (LSE:BOY) has agreed to acquire Ellison Surface Technologies, Inc., a producer of thermal spray coating and performance coating solutions. Ellison Surface Technologies, Inc. was founded in 1986 and is based in Mason, OH.				
12/16/2019	Ferro Corporation - Tile Coatings Business	Pigments Spain SI	\$492.0	1.0x	n/a
Description:	Pigments Spain SI has agreed to acquire Tile Coatings Business of Ferro Corporation, a coatings production business for ceramic tiles. Ferro Corporation was founded in 1919 and is based in Mayfield Heights, OH.				
12/3/2019	AK Steel Holding Corporation (NYSE:AKS)	Cleveland-Cliffs Inc. (NYSE:CLF)	\$3,604.0	0.5x	6.1x
Description:	Cleveland-Cliffs Inc. (NYSE:CLF) has agreed to acquire AK Steel Holding Corporation (NYSE:AKS), a producer of flat-rolled carbon, and stainless and electrical steel products. AK Steel Holding Corporation was founded in 1899 and is based in West Chester, OH.				
12/3/2019	Clyde Industries	Wynnchurch Capital, LLC	\$96.0	n/a	n/a
Description:	Wynnchurch Capital, LLC has agreed to acquire Clyde Industries, a producer of boiler efficiency solutions for the pulp and paper, power, and other industrial markets. Clyde Industries was founded in 1987 and is based in Atlanta, GA.				
12/2/2019	Torotel, Inc. (OTCPK:TTLO)	Standex International Corporation (NYSE:SXI)	\$55.8	2.3x	26.8x
Description:	Standex International Corporation (NYSE:SXI) has agreed to acquire Torotel, Inc. (OTCPK:TTLO), a producer of precision magnetic components used in commercial, industrial and military electronics. Torotel, Inc. was founded in 1956 and is based in Olathe, KS.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
11/26/2019	901 D LLC	Curtiss-Wright Corporation (NYSE:CW)	\$132.0	n/a	n/a
Description:	Curtiss-Wright Corporation (NYSE:CW) has agreed to acquire 901 D LLC, a service engineering and manufacturing company. 901 D LLC was founded in 2016 and is based in Airmont, NY.				
11/20/2019	Kester Inc.	Alpha Assembly Solutions, Inc.	\$68.0	n/a	n/a
Description:	Alpha Assembly Solutions, Inc. has agreed to acquire Kester Inc., a producer of interconnecting materials and related services for the electronic, and micro-component assembly markets. Kester Inc. was founded in 1899 and is based in Itasca, IL.				
11/18/2019	Thermoform Engineered Quality LLC	Sonoco Plastics, Inc.	\$187.0	2.2x	n/a
Description:	Sonoco Plastics, Inc. has agreed to acquire Thermoform Engineered Quality LLC, a manufacturer of thermoformed packaging products serving the healthcare, medical device, and consumer markets. Thermoform Engineered Quality LLC was founded in 1994 and is based in Huntley, IL.				
11/13/2019	Harsco Industrial Patterson-Kelley	The Marley Company, LLC	\$60.0	n/a	n/a
Description:	The Marley Company, LLC has agreed to acquire Harsco Industrial Patterson-Kelley, a manufacturer of heat transfer products. Harsco Industrial Patterson-Kelley was founded in 1880 and is based in East Stroudsburg, PA.				
11/5/2019	Bal Seal Engineering, Inc.	Kaman Aerospace Group, Inc.	\$330.0	n/a	12.5x
Description:	Kaman Aerospace Group, Inc. has agreed to acquire Bal Seal Engineering, Inc., a designer and manufacturer of custom-engineered sealing, connecting, conducting, and EMI/RFI shielding solutions. Bal Seal Engineering, Inc. was founded in 1958 and is based in Foothill Ranch, CA.				
11/4/2019	Lamons Gasket Company	First Reserve Corporation	\$135.0	0.7x	n/a
Description:	First Reserve Corporation has agreed to acquire Lamons Gasket Company, a manufacturer and supplier of gasket, fasteners, hose assemblies, and specialty bolts. Lamons Gasket Company was founded in 1964 and is based in Houston, TX.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
11/4/2019	Dynamic Systems Inc.	Vishay Precision Group, Inc. (NYSE:VPG)	\$44.0	n/a	n/a
Description:	Vishay Precision Group, Inc. (NYSE:VPG) has agreed to acquire Dynamic Systems Inc., a designer and manufacturer of dynamic thermal-mechanical testing equipment and physical simulation systems. Dynamic Systems Inc. was founded in 1957 and is based in Poestenkill, NY.				
10/30/2019	Kraton Polymers LLC - Cariflex Business Unit	Daelim USA Inc.	\$530.0	n/a	13.6x
Description:	Daelim USA Inc. has agreed to acquire Cariflex Business Unit of Kraton Polymers LLC, a isoprene rubber latex manufacturing business. Kraton Polymers LLC was founded in 2000 and is based in Houston, TX.				
10/22/2019	Cleveland Track Material, Inc.	Progress Rail Services Corporation	\$39.0	n/a	n/a
Description:	Progress Rail Services Corporation has agreed to acquire Cleveland Track Material, Inc., a manufacturer of rail switches and components for freight railroads and transit agencies. Cleveland Track Material, Inc. was founded in 1984 and is based in Cleveland, OH.				
10/21/2019	AutoGuide Mobile Robots	Teradyne, Inc. (NasdaqGS:TER)	\$165.0	41.3x	n/a
Description:	Teradyne, Inc. (NasdaqGS:TER) has agreed to acquire AutoGuide Mobile Robots, a manufacturer of high-payload industrial autonomous mobile robots. AutoGuide Mobile Robots was founded in 2017 and is based in Chelmsford, MA.				
10/21/2019	Innophos Holdings, Inc. (NasdaqGS:IPHS)	Iris Parent LLC	\$1,003.6	1.3x	9.1x
Description:	Iris Parent LLC has agreed to acquire Innophos Holdings, Inc. (NasdaqGS:IPHS), a producer of ingredients used in the production of food, beverages, dietary supplements, pharmaceuticals, and oral care products. Innophos Holdings, Inc. was founded in 2006 and is based in Cranbury, NJ.				
10/15/2019	Cooper Lighting, LLC	Signify N.V. (ENXTAM:LIGHT)	\$1,400.0	0.8x	7.5x
Description:	Signify N.V. (ENXTAM:LIGHT) has agreed to acquire Cooper Lighting, LLC, a provider of LED lighting and control solutions. Cooper Lighting, LLC was founded in 2012 and is based in Peachtree City, GA.				
10/14/2019	Closure Systems International, Inc.	Cerberus Capital Management, L.P.	\$615.0	n/a	n/a
Description:	Cerberus Capital Management, L.P. has agreed to acquire Closure Systems International, Inc., a producer of plastic and aluminum closures. Closure Systems International, Inc. was founded in 1930 and is based in Memphis, TN.				

Date	Target	Buyer	Enterprise Value (\$ mm)	Enterprise Value / Revenue	Enterprise Value / EBITDA
10/3/2019	Evoqua Water Technologies Corp. (NYSE:AQUA)	DuPont Safety & Construction, Inc.	\$110.0	n/a	n/a
Description:	DuPont Safety & Construction, Inc. has agreed to acquire Evoqua Water Technologies Corp. (NYSE:AQUA), a manufacturer of bio-filtration systems and technologies. Evoqua Water Technologies Corp. was founded in 1978 and is based in Pittsburgh, PA.				
10/3/2019	Copperweld Bimetallics, LLC	Kinderhook Industries, LLC	\$34.6	0.4x	3.8x
Description:	Kinderhook Industries, LLC has agreed to acquire Copperweld Bimetallics, LLC, a manufacturer of bimetallic wire for the rail, telecom and auto industry. Copperweld Bimetallics, LLC was founded in 1915 and is based in Brentwood, TN.				
10/2/2019	Manufacturing Techniques, Inc.	QinetiQ Group plc (LSE:QQ.)	\$125.0	0.7x	11.0x
Description:	QinetiQ Group plc (LSE:QQ.) has agreed to acquire Manufacturing Techniques, Inc., a developer of prototype sensors and systems for the Department of Defense (DoD), intelligence, and law enforcement agencies. Manufacturing Techniques, Inc. was founded in 1992 and is based in Lorton, VA.				

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.	\$99.95	99.1%	\$22,847.9	\$24,721.7	4.8x	17.9x	16.6x	27.0x
CGNX	Cognex Corporation	56.16	98.0%	9,597.6	9,200.0	12.3x	47.4x	46.6x	57.9x
ESE	ESCO Technologies Inc.	91.66	98.8%	2,381.4	2,638.9	3.2x	17.3x	17.7x	29.6x
HEI	HEICO Corporation	115.09	77.8%	13,482.2	14,203.5	6.9x	26.0x	24.5x	48.2x
MTD	Mettler-Toledo International Inc.	792.83	90.8%	19,308.7	20,452.4	6.9x	26.5x	24.1x	36.4x
MTSC	MTS Systems Corporation	47.58	75.2%	910.7	1,365.4	1.5x	8.8x	9.6x	21.5x
					Mean	5.9x	19.3x	18.5x	26.0x

Electronics and Components ^[2]									
APH	Amphenol Corporation	108.06	98.9%	32,038.9	35,243.6	4.2x	16.9x	17.9x	28.3x
AYI	Acuity Brands, Inc.	137.72	93.4%	5,401.8	5,297.4	1.4x	9.6x	8.7x	16.6x
BELF.B	Bel Fuse Inc.	20.28	73.0%	240.2	305.1	0.6x	9.4x	8.5x	152.4x
ETN	Eaton Corporation plc	94.99	99.5%	39,268.9	47,045.9	2.2x	12.1x	12.1x	16.9x
LFUS	Littelfuse, Inc.	192.02	93.2%	4,677.2	4,903.6	3.1x	15.6x	16.2x	32.2x
					Mean	2.3x	12.7x	12.7x	20.6x

Precision Machine Products, Tooling and Stampings ^[3]									
CW	Curtiss-Wright Corporation	141.72	97.9%	6,049.9	6,666.2	2.7x	13.0x	12.4x	20.3x
HURC	Hurco Companies, Inc.	38.73	87.9%	262.1	196.0	0.7x	5.4x	NM	11.2x
KMT	Kennametal Inc.	37.12	88.3%	3,075.6	3,641.5	1.6x	9.4x	9.8x	16.1x
ROLL	RBC Bearings Incorporated	158.99	90.9%	3,904.2	3,934.0	5.5x	21.4x	19.8x	36.0x
SHLO	Shiloh Industries, Inc.	3.65	53.9%	88.3	325.5	0.3x	5.2x	4.1x	NM
TKR	The Timken Company	56.58	96.7%	4,261.8	5,903.5	1.6x	8.5x	8.4x	14.2x
					Mean	2.0x	8.3x	8.7x	15.5x

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	20.99	71.2%	2,646.5	3,869.2	0.9x	9.2x	7.1x	12.0x
CMC	Commercial Metals Company	22.53	98.6%	2,673.2	3,725.6	0.6x	7.7x	6.2x	13.5x
RS	Reliance Steel & Aluminum Co.	120.28	98.5%	8,017.5	9,703.1	0.9x	8.0x	9.2x	13.2x
TSX:RUS	Russel Metals Inc.	22.54	89.4%	1,401.4	1,963.0	0.5x	7.4x	8.0x	10.8x
SCHN	Schnitzer Steel Industries, Inc.	21.99	80.1%	601.3	698.3	0.3x	5.0x	6.6x	10.9x
ASX:SGM	Sims Limited	10.90	84.0%	2,207.4	1,845.8	0.3x	5.5x	11.6x	14.7x
WOR	Worthington Industries, Inc.	42.49	95.1%	2,340.9	3,131.6	0.9x	9.7x	11.3x	21.6x
					Mean	0.6x	7.5x	8.6x	13.8x

Tube and Pipe Producers									
AKS	AK Steel Holding Corporation	3.23	90.0%	1,022.1	3,557.8	0.5x	6.0x	10.6x	10.4x
NWPX	Northwest Pipe Company	33.06	95.0%	322.2	319.6	1.2x	9.4x	7.5x	20.1x
STLD	Steel Dynamics, Inc.	34.53	87.8%	7,439.6	8,724.3	0.8x	5.8x	7.6x	9.4x
SYNL	Synalloy Corporation	13.23	67.3%	119.5	237.9	0.8x	16.5x	NM	NM
BIT:TEN	Tenaris S.A.	10.09	74.5%	11,911.6	11,470.3	1.6x	8.0x	8.2x	15.9x
X	United States Steel Corporation	11.14	45.0%	1,894.2	4,231.2	0.3x	4.9x	8.9x	3.1x
					Mean	0.9x	8.4x	8.6x	11.8x

[1] CGNX is excluded from the mean EBITDA multiple calculations.
 CGNX, HEI, & MTD are excluded from the mean P/E multiple calculation.
 [2] BELF.B and LFUS is excluded from the mean P/E multiple calculation.
 [3] ROLL is excluded from the mean EBITDA and P/E 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	
Resource Recovery and Waste Management ^[4]									
CWST	Casella Waste Systems, Inc.	45.84	96.1%	2,190.3	2,800.4	3.9x	21.3x	16.0x	244.2x
CECE	CECO Environmental Corp.	7.62	77.4%	268.6	329.0	1.0x	11.3x	9.1x	27.1x
CLH	Clean Harbors, Inc.	86.21	98.0%	4,811.3	6,241.7	1.8x	12.1x	11.2x	53.9x
HCCI	Heritage-Crystal Clean, Inc	31.56	96.9%	731.8	782.1	1.8x	19.9x	12.3x	56.3x
RSG	Republic Services, Inc.	90.20	99.5%	28,786.9	37,669.4	3.7x	13.6x	12.4x	26.8x
ECOL	US Ecology, Inc.	56.66	84.3%	1,785.5	2,141.8	3.5x	17.2x	9.3x	25.0x
WCN	Waste Connections, Inc.	90.90	92.8%	23,968.2	27,979.1	5.3x	17.1x	15.8x	42.5x
WM	Waste Management, Inc.	113.89	93.5%	48,316.8	59,239.8	3.8x	13.8x	12.6x	27.8x
Mean						3.1x	15.8x	12.3x	37.1x

Diversified Chemicals ^[5]									
ASH	Ashland Global Holdings Inc.	76.50	94.2%	4,607.4	6,042.4	2.4x	11.9x	11.1x	197.6x
CBT	Cabot Corporation	46.98	92.9%	2,676.8	3,707.8	1.1x	7.3x	6.9x	17.9x
DD	DuPont de Nemours, Inc.	63.73	35.4%	47,211.6	63,850.6	0.7x	3.7x	10.9x	16.1x
EMN	Eastman Chemical Company	78.34	90.9%	10,652.6	16,928.6	1.8x	8.9x	8.3x	14.2x
FMC	FMC Corporation	101.13	99.2%	13,108.0	16,502.4	3.3x	12.2x	12.8x	17.2x
OLN	Olin Corporation	17.23	63.1%	2,751.1	6,233.2	1.0x	5.7x	7.4x	23.9x
Mean						1.7x	8.3x	9.6x	17.9x

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

[5] 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									
ALB	Albemarle Corporation	72.01	77.3%	7,635.4	9,552.5	2.7x	8.8x	9.9x	13.4x
ECL	Ecolab Inc.	191.68	91.3%	55,250.7	62,476.1	4.2x	19.1x	18.0x	36.8x
FOE	Ferro Corporation	14.74	69.3%	1,208.2	2,052.4	1.3x	12.1x	8.3x	25.5x
FUL	H.B. Fuller Company	51.83	98.9%	2,642.4	4,645.1	1.6x	11.3x	10.0x	19.3x
IFF	International Flavors & Fragrances Inc.	127.34	83.3%	13,596.9	17,925.4	3.5x	15.7x	15.2x	37.5x
MTX	Minerals Technologies Inc.	57.25	89.8%	1,995.4	2,823.7	1.6x	8.1x	8.2x	13.8x
POL	PolyOne Corporation	36.82	98.6%	2,832.0	4,129.3	1.2x	10.4x	12.5x	20.4x
KWR	Quaker Chemical Corporation	163.73	73.0%	2,903.3	3,672.9	3.9x	26.8x	14.2x	95.7x
SCL	Stepan Company	99.93	98.1%	2,248.9	2,233.6	1.2x	10.3x	9.2x	21.9x
Mean						2.4x	13.6x	11.7x	31.6x

Industrial Gases									
APD	Air Products and Chemicals, Inc.	235.49	97.4%	51,922.3	53,145.3	6.0x	15.3x	13.6x	29.7x
PX	Philex Mining Corporation	2.83	63.5%	13,981.3	23,968.4	3.9x	8.1x	0.0x	29.3x
Mean						4.9x	11.7x	13.6x	29.5x

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									
GPX	Graphic Packaging Holding Company	16.69	98.5%	4,844.2	8,730.2	1.4x	8.4x	8.2x	22.6x
GEF	Greif, Inc.	44.41	88.2%	2,302.3	5,107.9	1.1x	7.7x	7.2x	12.5x
IP	International Paper Company	45.89	95.1%	17,994.2	28,099.2	1.2x	7.2x	8.1x	13.4x
PKG	Packaging Corporation of America	111.77	97.4%	10,499.0	12,502.6	1.8x	8.3x	9.4x	13.9x
SON	Sonoco Products Company	61.33	92.1%	6,139.0	7,896.5	1.5x	10.4x	10.0x	19.2x
WRK	WestRock Company	42.64	98.3%	11,010.9	20,938.9	1.1x	7.0x	6.8x	12.8x
					Mean	1.4x	8.2x	8.3x	15.7x

Plastics/Films ^[6]									
ATR	AptarGroup, Inc.	115.02	91.1%	7,352.9	8,340.6	2.9x	13.8x	13.7x	32.4x
NYSE: BERY	Berry Global Group, Inc.	47.09	79.6%	6,220.6	16,916.6	1.9x	11.6x	7.9x	15.7x
TSX:ITP	Intertape Polymer Group Inc.	16.66	83.4%	980.9	1,719.4	1.1x	8.1x	7.5x	18.5x
MYE	Myers Industries, Inc.	16.50	84.4%	586.1	595.0	1.1x	10.0x	NM	27.1x
TG	Tredegar Corporation	21.89	93.2%	724.7	776.8	0.8x	8.6x	NM	9.4x
					Mean	1.6x	10.4x	9.7x	17.7x

[6] 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									
BMS	Braemar Shipping Services plc	2.11	87.2%	65.3	111.0	0.9x	10.7x	9.4x	NM
CCL.B	CCL Industries Inc.	56.13	82.0%	10,008.1	11,980.3	2.2x	11.7x	10.9x	20.6x
SEE	Sealed Air Corporation	39.93	84.7%	6,169.8	9,965.0	2.1x	11.8x	9.9x	16.9x
WPK	Winpak Ltd.	47.46	96.8%	3,084.9	2,579.8	2.2x	9.8x	9.7x	20.3x
					Mean	1.9x	11.0x	10.0x	19.3x

OVERALL INDUSTRIAL GROWTH SECTOR					Mean	2.4x	11.3x	11.0x	21.4x
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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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