



Manufacturing Update

February 2019

The Mufson Howe Hunter Manufacturing Update is designed to provide business leaders, investors, and industry professionals an update on current market trends and important developments within the manufacturing sector of the economy. This monthly report contains information on select companies in various subsectors within manufacturing emphasizing financial performance, stock performance, and recent news.

Macro-Economic Trends

	Dec-18	Jan-19	Trend
PMI	54.1	56.6	Positive
Total Unemployment	3.9	4.0	Negative
CPI Monthly Change	0.0	0.0	Neutral
PPI Monthly Change	-0.2	-0.1	Negative
Industrial Production	110.1	109.4	Negative
Capacity Utilization	78.8	78.2	Negative
Manufacturing Production	106.1	105.2	Negative
Manufacturing Utilization	76.5	75.8	Negative

Sector Index Performance

	3-Year	1-Year	3-Month
Aerospace & Defense	66.8%	-8.2%	1.6%
Components & Materials	17.6%	-25.0%	0.4%
Industrial Equipment	72.9%	-12.7%	8.4%
Industrial & Engineering			
Services and Distribution	22.0%	-10.7%	-0.4%
NASDAQ	57.8%	-1.8%	-0.3%
S&P	39.4%	-4.2%	-0.3%

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MHH Sectors/Sub-sectors

Aerospace & Defense

- Aerospace
- Defense

Components & Materials

- Electronic Components
- Specialty Materials
- Vehicle Parts and Supplies

Industrial Equipment

- Construction Equipment
- Electrical Equipment
- Semiconductor Capital Equipment
- Measurement, Control and Testing Devices

Industrial & Engineering Services and Distribution

- Industrial and Engineering Services
- Industrial Distribution
- Industrial Recycling Services

Note: Please refer to Page 19 for the Universe components.

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MHH's coverage of the Manufacturing Sector spans companies in the following four sectors for each of which our index has been calculated as follows:

The MMH Aerospace & Defense Index is currently comprised of Airbus Group NV, BAE Systems plc, The Boeing Company, Embraer SA, General Dynamics Corp., Honeywell International Inc., Huntington Ingalls Industries, L-3 Communications Holdings Inc., Lockheed Martin Corp., Northrop Grumman Corp., Raytheon Company, Rolls Royce Holdings plc, Textron Inc., Thales SA, and United Technologies Corp.

The MMH Components & Materials Index is currently comprised of 3M Company, Akzo Nobel NV, Alps Electric Ltd., Amphenol Corp., Aptiv plc, Autoliv Inc., AVX Corp., BASF SE, Belden Inc., Bosch Ltd., Celanese Corp., Continental AG, Corning Inc., Denso Corp., Delphi Automotive plc, DowDuPont Inc., Encore Wire Corp., Evonik Industries, Ferro Corp., Johnson Controls Inc., Lear Corp., OMRON Corp., PPG Industries Inc., Solvay SA, Stanley Electric Co. Ltd., TE Connectivity Ltd., and Vishay Intertechnology.

The MMH Industrial Equipment Index is currently comprised of Ametek Inc., Applied Materials Inc., ASML Holding NV, Axcelis Technologies Inc., Brooks Automation Inc., Caterpillar Inc., Cohu Inc., Cummins Inc., Danaher Corp., Deere & Company, Eaton Corp. plc, Emerson Electric Co., Entegris Inc., FARO Technologies Inc., FormFactor Inc., Hubbell Inc., Hyundai Heavy Industries Co. Ltd, KLA-Tencor Corp., LamResearch Corp., MKS Instruments Inc., Nanometrics Inc., Navistar International Corp., Nova Measuring Instruments Ltd., Oshkosh Corp., Powell Industries, Inc., Regal Beloit Corp., Rockwell Automation Inc., Rudolph Technologies Inc., Schneider Electric SE, Teradyne Inc., Terex Corp., Tokyo Electron Ltd., Veeco Instruments Inc., and Xcerra Corp.

The MMH Industrial & Engineering Services and Distribution Index is currently comprised of AECOM Technology Corp., Aurubis AG, Balfour Beatty plc, Cardno Ltd., Clean Harbors Inc., Commercial Metals Company, Dow Holdings Co. Ltd., Fastenal Company, Fluor Corp., HD Supply Holdings Inc., Jacobs Engineering Group Inc., John Wood Group plc, KBR Inc., Lawson Products Inc., MRC Global Inc., MSC Industrial Direct Co. Inc., Primoris Services Corp., Sims Metal Management Ltd., Tetra Tech Inc., Transcat Inc., Veolia Environnement SA, WW Grainger Inc., and WESCO International Inc.

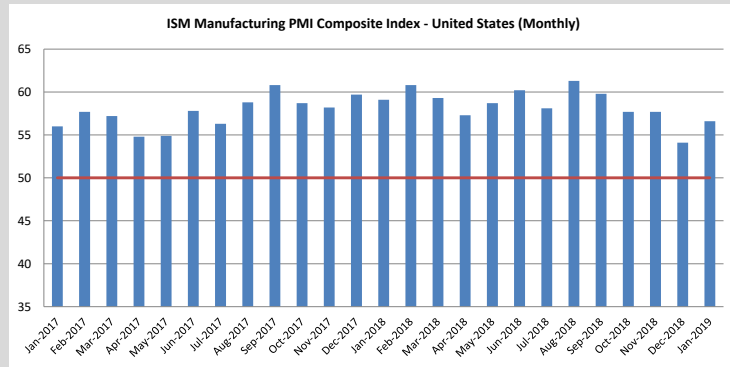
The companies that comprise each Index can change periodically as a result of a variety of reasons, including mergers, acquisitions, initial public offerings, and other transactions; therefore, comparisons to historical time periods and historical performance for each Index may not entirely correspond and correlate to the Index's current performance. In addition, historical performance is not a guarantee or prediction of future results.

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Major U.S. Economic Indicators

PMI (Purchase Manager Index)

A PMI reading above 50 percent (red line below) indicates that the manufacturing economy is generally expanding and below 50 percent means it is contracting.



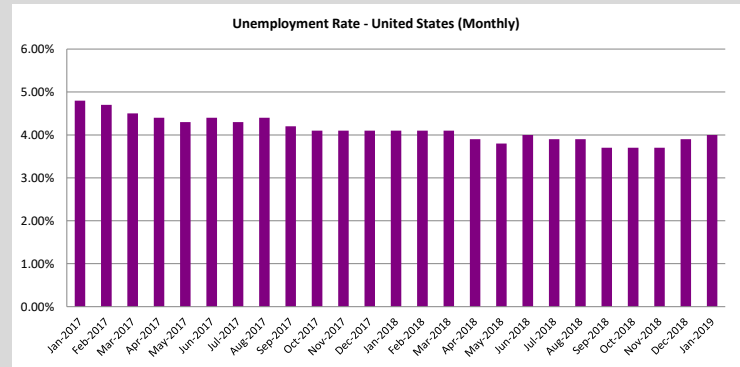
Source: Institute for Supply Management

Commentary

Economic activity in the manufacturing sector expanded in January as the economy grew for the 117th consecutive month. New Orders, Production, Employment, and Backlog all grew. Supplier Deliveries, however, slowed as Raw Materials Inventories continued to expand and Prices decreased.

Unemployment Rate

Unemployment rate is traditionally defined as the percentage of the total labor force that is actively looking for gainful employment.



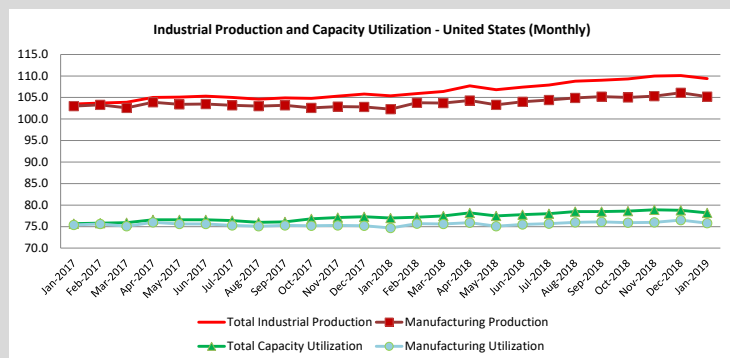
Source: United States Bureau of Labor

Commentary

In January, the unemployment rate edged up to 4.0%. Total nonfarm payroll employment increased by 304,000 with gains in hospitality, healthcare, and transportation/ warehousing. Manufacturing jobs increased by 13,000 in January; 261,000 manufacturing jobs have been created in the last 12 months.

Industrial Production and Capacity Utilization

The Production Index (in red below) measures real output and is expressed as a percentage of real output in a base year, currently 2007. The Capacity Index (in green below), which is an estimate of sustainable potential output, is also expressed as a percentage of real output in 2007.



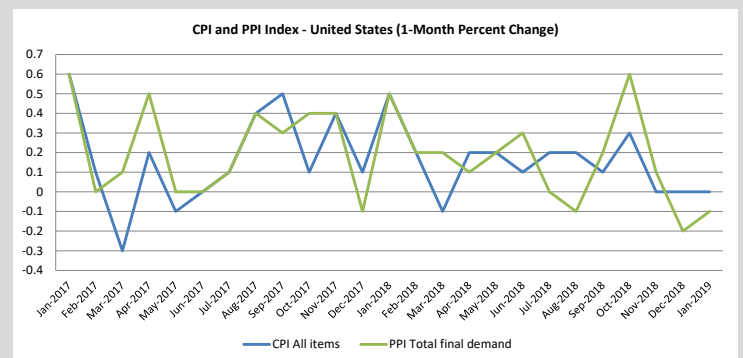
Source: United States Federal Reserve

Commentary

Industrial production decreased 0.6% in January. In January, manufacturing production fell 0.9%, primarily as a result of a large drop in motor vehicle assemblies. At 109.4% of its 2012 average, total industrial production was 3.8% higher in January than it was a year earlier.

Producer Price Index (PPI) and Consumer Price Index (CPI)

The PPI measures the average change over time in prices received (price changes) by producers for domestically produced goods, services and construction. The CPI measures changes in the prices paid by urban consumers for a representative basket of goods and services.



Source: United States Bureau of Labor

Commentary

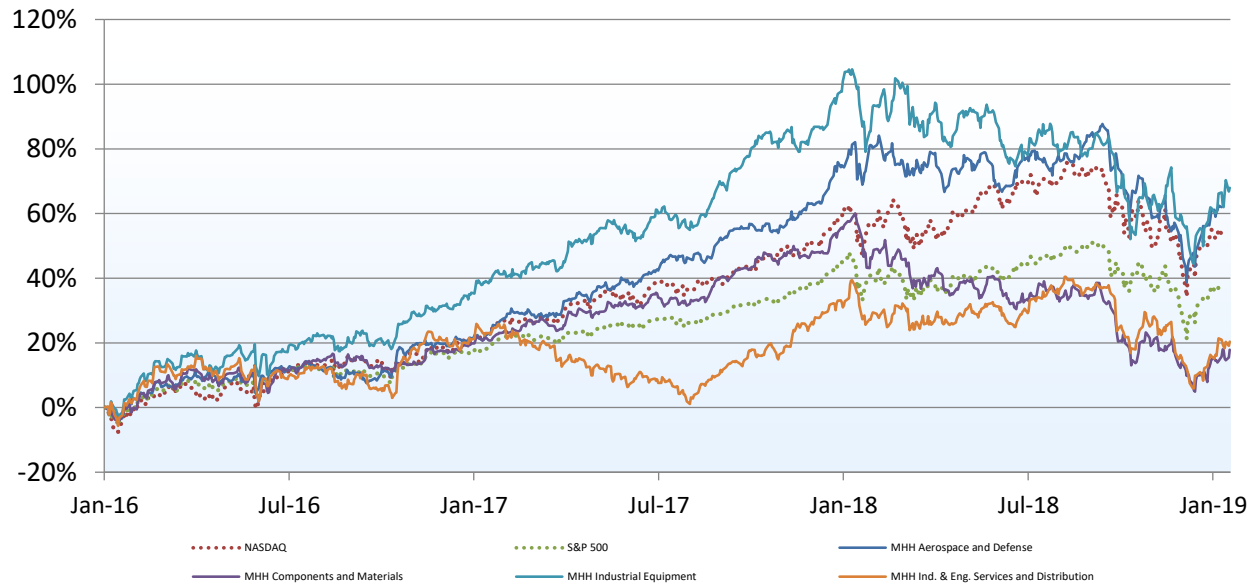
CPI for all items was unchanged in January. The energy index declined this month, offsetting an increase in the food index. PPI for final demand edged down 0.1% in January. The decline in the index can be traced to a decrease of 0.8% in prices for final demand goods. Conversely, the final demand services increased 0.3%.

Sector Index Performance

Comparative Sector Index Performance (Last Three Years)

Last Three Years

Daily from January 29, 2016 to January 31, 2019
Price as Percent of Base (January 29, 2016 = 0%)

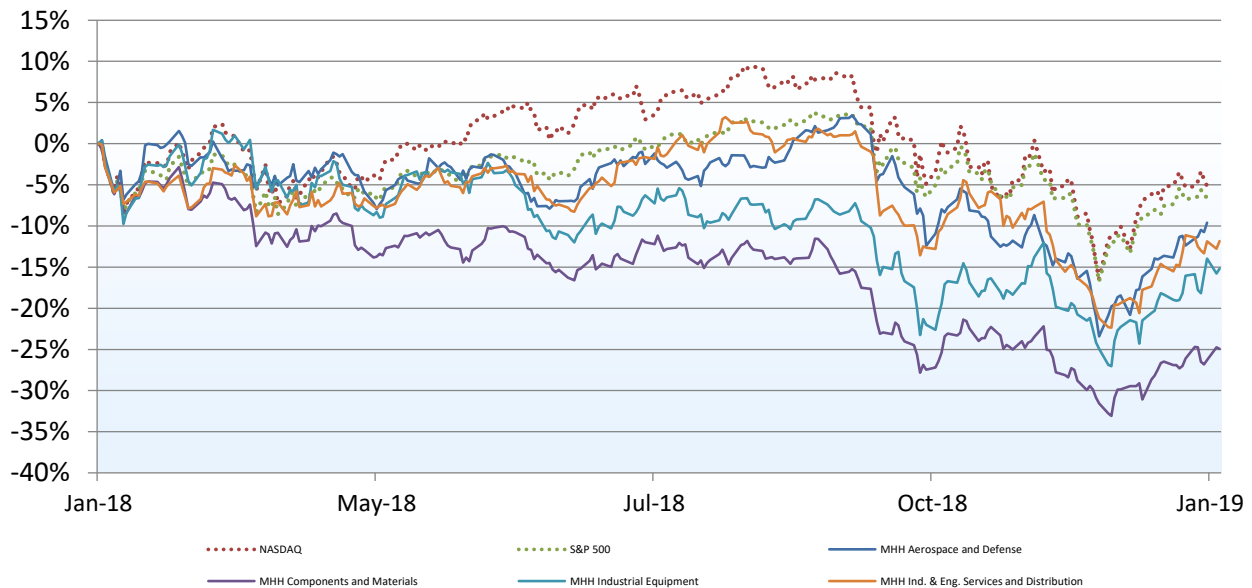


Source: CapitalIQ

Comparative Sector Index Performance (Last Twelve Months)

Last Twelve Months

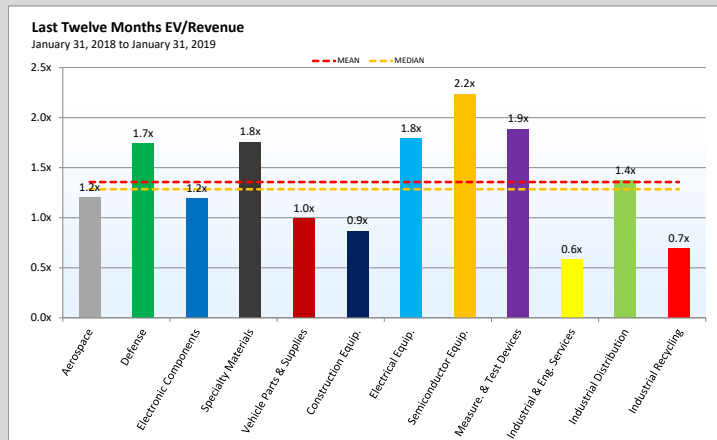
Daily from January 31, 2018 to January 31, 2019
Price as Percent of Base (January 31, 2018 = 0%)



Source: CapitalIQ

Subsector Trading Multiples & Margins

Comparative Subsector LTM EV/Revenue

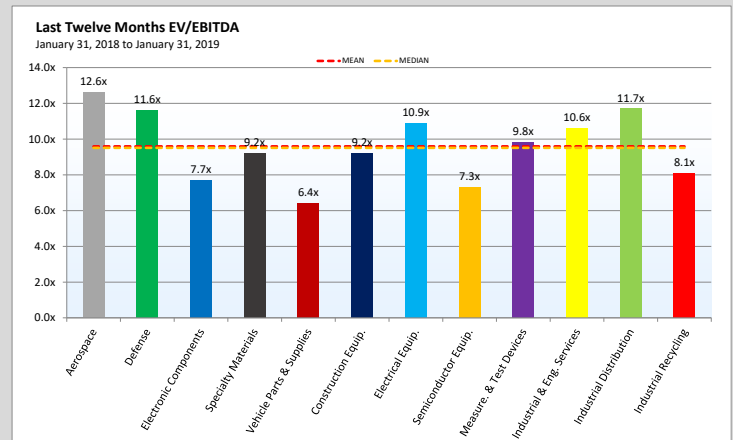


Source: CapitalIQ

Commentary

During the last twelve months, our index subsectors had a mean EV/Revenue of 1.4x and a median of 1.3x. Of the subsectors, Semiconductor Capital Equipment had the high multiple at 2.2x and Industrial & Engineering Services had the low multiple at 0.6x.

Comparative Subsector LTM EV/EBITDA

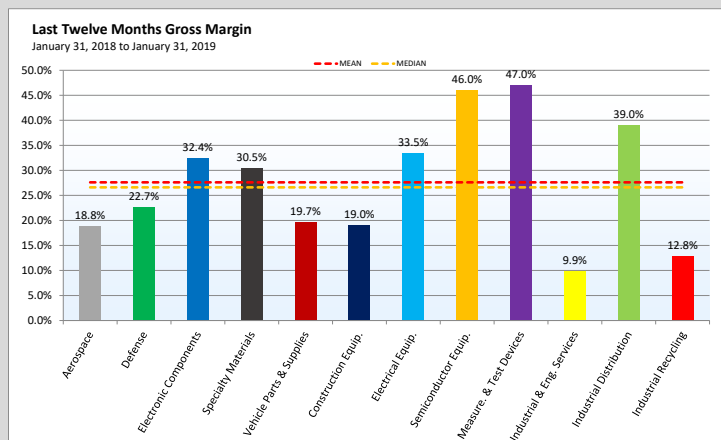


Source: CapitalIQ

Commentary

During the last twelve months, our index subsectors had a mean EV/EBITDA of 9.6x and a median of 9.5x. Of the subsectors, Aerospace had the high multiple at 12.6x and Vehicle Parts & Supplies had the low multiple at 6.4x.

Comparative Subsector LTM Gross Margin

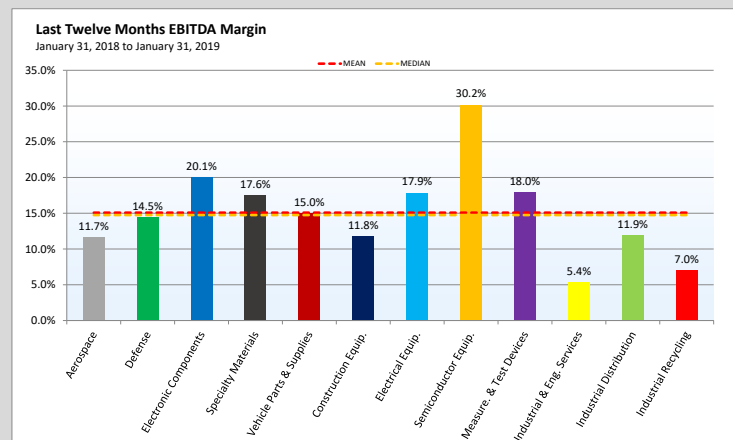


Source: CapitalIQ

Commentary

During the last twelve months, our index subsectors had a mean Gross Margin of 27.6% and a median of 26.6%. Of the subsectors, Measurement, Control, and Testing Devices had the high margin at 47.0% and Industrial & Engineering Services had the low margin at 9.9%.

Comparative Subsector LTM EBITDA Margin

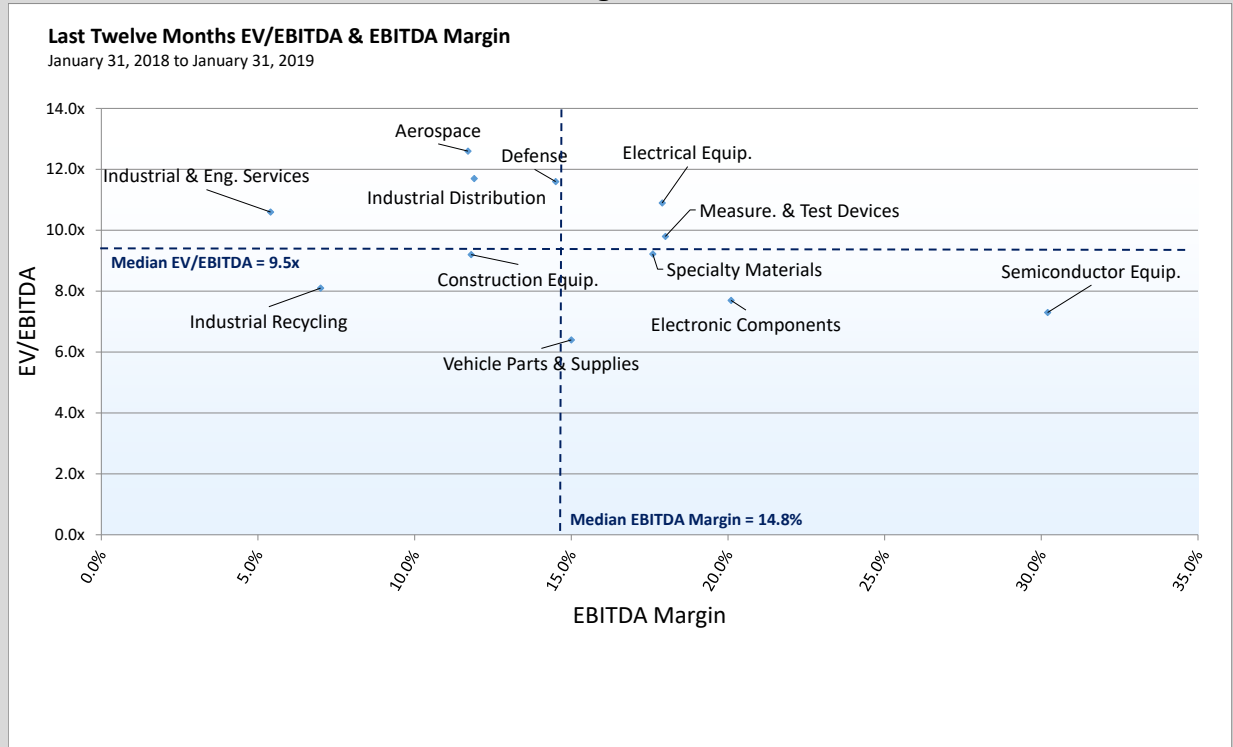


Source: CapitalIQ

Commentary

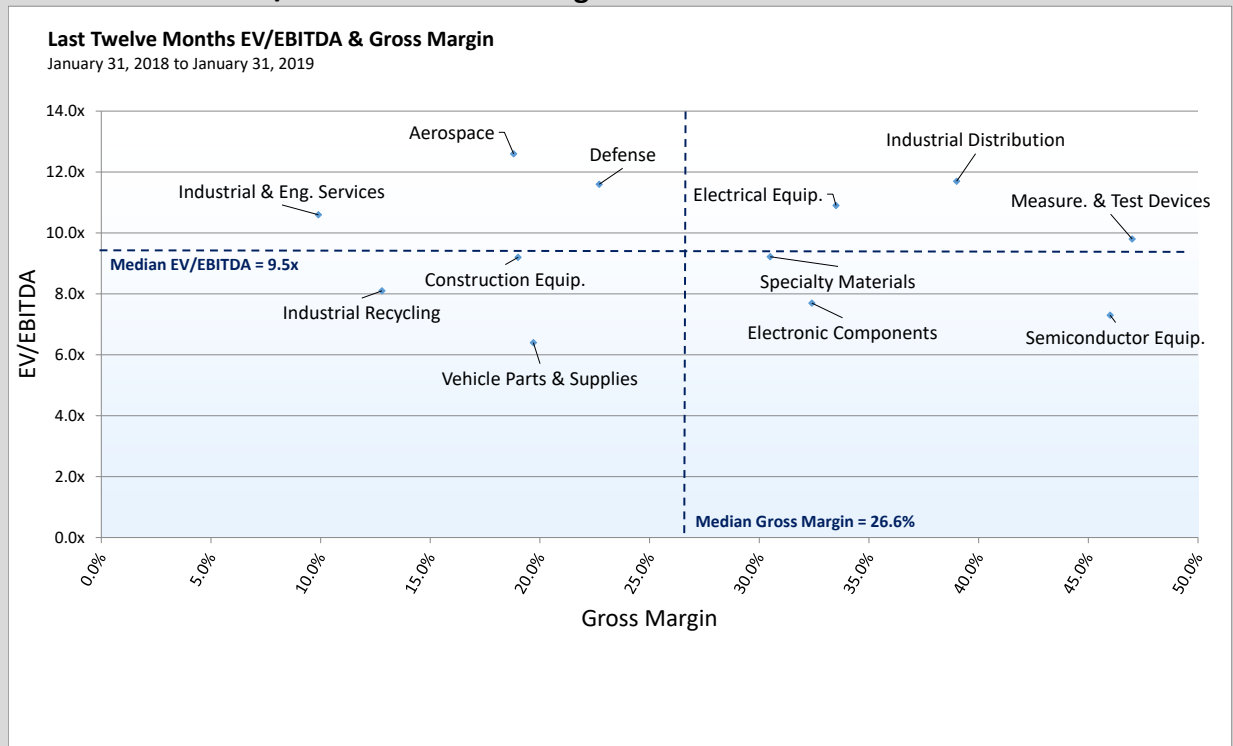
During the last twelve months, our index subsectors had a mean EBITDA Margin of 15.1% and a median of 14.8%. Of the subsectors, Semiconductor Capital Equipment had the high margin at 30.2% and Industrial & Engineering Services had the low margin at 5.4%.

Index Subsector LTM EV/EBITDA vs. EBITDA Margin



Source: CapitalIQ

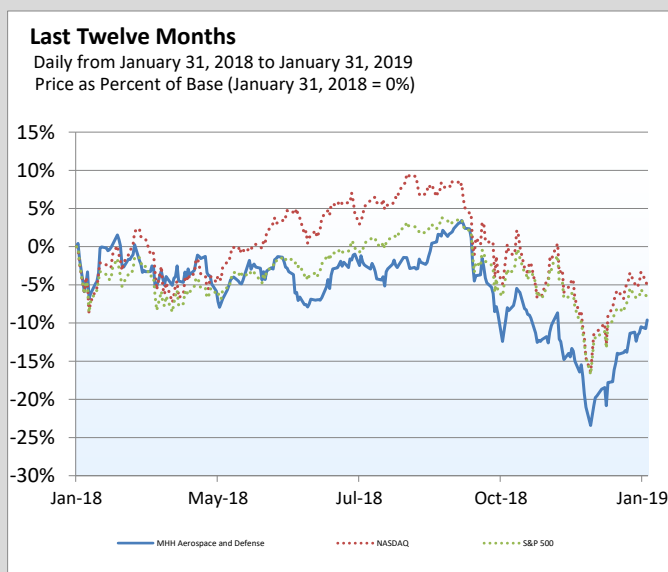
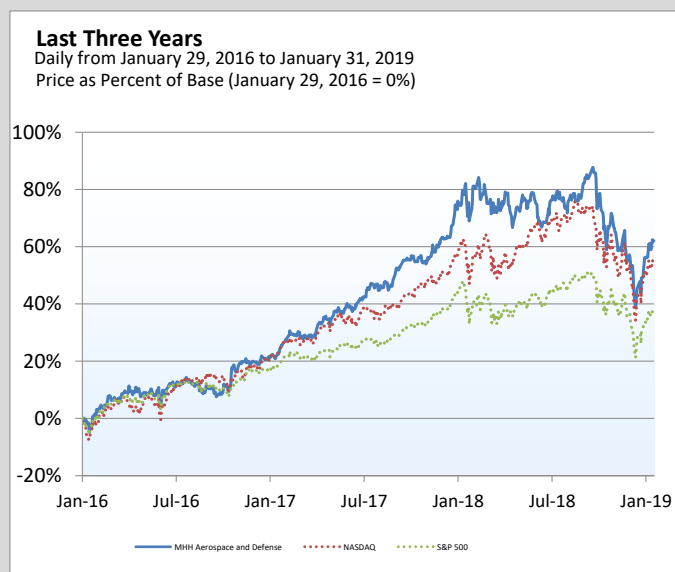
Index Subsector LTM EV/EBITDA vs. Gross Margin



Source: CapitalIQ

Comparative Index Performance

The Mufson Howe Hunter Aerospace & Defense Index^(a) increased by 1.6% during the three months ending January 31, 2019.



Price Performance

Mufson Howe Hunter Aerospace & Defense Index^(a)
NASDAQ
S&P 500

3-Year	LTM	3 Month
66.8%	-8.2%	1.6%
57.8%	-1.8%	-0.3%
39.4%	-4.2%	-0.3%

(a) Market cap weighted index assuming no dividend reinvestment. Mufson Howe Hunter Aerospace & Defense Index is comprised of all companies listed on the following page.

Please see Page 13 for sector news

Highlighted M&A Transaction – Aerospace and Defense

Target	Acquirer	Value*
 BAE SYSTEMS (Combat Vehicle Business)	 RHEINMETALL	\$36.9
Rheinmetall AG (DB:RHM) signed an agreement to acquire 55% stake in Combat Vehicles Business from BAE Systems plc (LSE:BA.) for £28.6 million on January 21, 2019. Post-completion, BAE Systems will retain 45% stake. Combat Vehicles Business will operate as a joint venture between Rheinmetall and BAE Systems and will be known as Rheinmetall BAE Systems Land. Post-completion, the joint venture will sustain 400 jobs and will be headquartered at BAE Systems' facility in Telford, England.		
*ND – Not disclosed. Transaction values reported on the basis of enterprise value in USD millions.		

Selected Valuation Metrics

(\$ in USD millions, except per share data)

Company	Market & Capitalization			LTM Performance ⁽³⁾			Valuation			Margins	
	Price ⁽¹⁾	Equity Value	Enterprise Value ⁽²⁾	Revenue	EBITDA ⁽⁴⁾	EPS	Enterprise Value/Revenue	EBITDA	Price/EPS	Gross Profit	EBITDA
Aerospace											
The Boeing Company (BA)	\$385.62	\$219,417	\$224,771	\$101,127	\$14,058	\$12.39	2.22x	16.0x	31.1x	19.4%	13.9%
United Technologies Corporation (UTX)	118.07	101,940	143,598	66,501	11,256	5.62	2.16x	12.8x	21.0x	25.1%	16.9%
Honeywell International Inc. (HON)	143.63	106,328	113,110	41,802	8,961	6.40	2.71x	12.6x	22.5x	30.5%	21.4%
Airbus SE (ENXTPA:AIR)	114.80	89,060	91,543	80,378	7,278	4.01	1.14x	12.6x	28.6x	13.5%	9.1%
Rolls-Royce Holdings plc (LSE:RR.)	11.62	21,919	22,043	22,614	2,314	0.58	0.97x	9.5x	20.2x	18.3%	10.2%
Thales S.A. (ENXTPA:HO)	110.72	23,535	21,127	18,818	2,268	5.02	1.12x	9.3x	22.1x	25.2%	12.1%
Textron Inc. (TXT)	53.23	12,933	15,838	13,972	1,585	2.50	1.13x	10.0x	21.3x	9.1%	11.3%
Embraer S.A. (BOVESPA:EMBR3)	5.30	3,894	5,628	4,482	197	-0.04	1.26x	28.5x	NM	16.6%	4.4%
Mean		\$72,378	\$79,707	\$43,712	\$5,990	\$4.56	1.59x	13.9x	23.8x	19.7%	12.4%
Median		56,297	56,793	32,208	4,796	4.51	1.20x	12.6x	22.1x	18.8%	11.7%
Defense											
Lockheed Martin Corporation (LMT)	\$289.69	\$81,403	\$94,790	\$53,762	\$8,299	\$12.93	1.76x	11.4x	22.4x	13.7%	15.4%
General Dynamics Corporation (GD)	171.17	49,416	60,870	36,193	5,265	8.69	1.68x	11.6x	19.7x	12.4%	14.5%
Northrop Grumman Corporation (NOC)	275.55	46,771	59,790	30,095	5,003	13.50	1.99x	12.0x	20.4x	22.7%	16.6%
Raytheon Company (RTN)	164.76	46,887	48,745	27,058	3,876	6.95	1.80x	12.6x	23.7x	27.7%	14.3%
BAE Systems plc (BA.)	6.72	21,480	24,033	23,181	2,388	0.33	1.04x	10.1x	20.1x	63.1%	10.3%
L3 Technologies, Inc. (LLL)	196.88	15,494	17,817	10,244	1,347	7.42	1.74x	13.2x	26.5x	26.4%	13.1%
Huntington Ingalls Industries, Inc. (HII)	206.45	8,868	10,082	7,973	1,216	13.20	1.26x	8.3x	15.6x	19.6%	15.3%
Mean		\$38,617	\$45,161	\$26,929	\$3,913	\$9.00	1.61x	11.3x	21.2x	26.5%	14.2%
Median		46,771	48,745	27,058	3,876	8.69	1.74x	11.6x	20.4x	22.7%	14.5%

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

Source: CapitalIQ

(1) As of close January 31, 2019.

(2) Enterprise value is defined as equity value plus net debt, preferred stock and minority interests. Net Debt includes long term debt, short term debt, post-retirement benefits and unfunded pensions, if applicable, less cash and cash equivalents.

(3) As of December 31, 2018 excluding TXT (December 29, 2018); AIR, EMBR3 and HII (September 30, 2018); and BA, HO and RR (June 30, 2018).

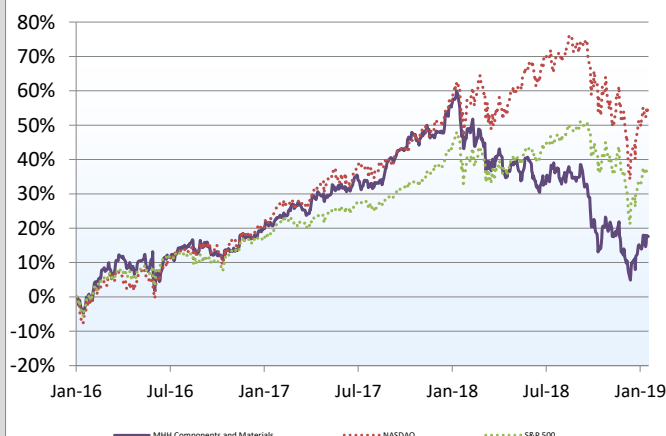
(4) Excludes non-recurring and discontinued operations.

Comparative Index Performance

The Mufson Howe Hunter Components & Materials Index^(a) increased by 0.4% during the three months ending January 31, 2019.

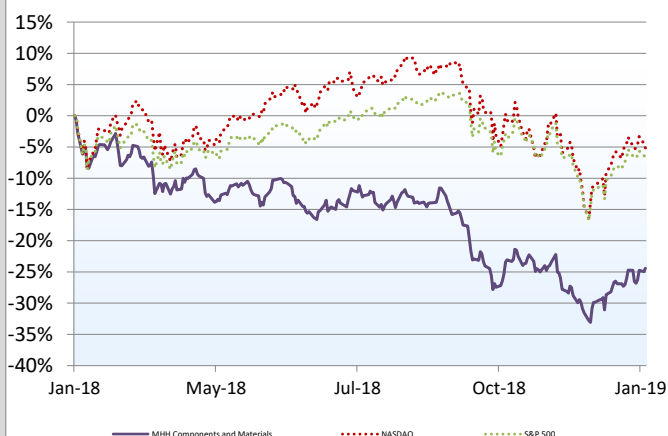
Last Three Years

Daily from January 29, 2016 to January 31, 2019
Price as Percent of Base (January 29, 2016 = 0%)



Last Twelve Months

Daily from January 31, 2018 to January 31, 2019
Price as Percent of Base (January 31, 2018 = 0%)





Price Performance

	3-Year	LTM	3 Month
Mufson Howe Hunter Components & Materials Index ^(a)	17.6%	-25.0%	0.4%
NASDAQ	57.8%	-1.8%	-0.3%
S&P 500	39.4%	-4.2%	-0.3%

(a) Market cap weighted index assuming no dividend reinvestment. Mufson Howe Hunter Components & Materials Index is comprised of all companies listed on the following page.

Please see Page 14 for sector news

Highlighted M&A Transaction – Components & Materials

Target	Acquirer	Value*
		ND
<p>PPG Industries, Inc. (NYSE:PPG) has reached a definitive agreement to acquire Hemmelrath Lackfabrik GmbH on January 7, 2019. Hemmelrath Lackfabrik manufactures and supplies hydro primers for the automotive industry. It serves customers through its network of business partners, and sales and service subsidiaries in Germany and internationally. The company was founded in 1946 and is based in Klingenberg, Germany with subsidiaries in Spain, Brazil, China, the United States, and South Africa. It also has production companies in Brazil and the United States.</p>		
<p>*ND – Not disclosed. Transaction values reported on the basis of enterprise value in USD millions.</p>		

Components & Materials

Selected Valuation Metrics

(\$ in USD millions, except per share data)

Company	Market & Capitalization			LTM Performance ⁽³⁾			Valuation			Margins	
	Price ⁽¹⁾	Equity Value	Enterprise Value ⁽²⁾	Revenue	EBITDA ⁽⁴⁾	EPS	Enterprise Value/Revenue	EBITDA	Price/EPS	Gross Profit	EBITDA
Electronic Components											
Corning Inc. (GLW)	\$33.26	\$26,209	\$32,246	\$11,290	\$3,031	\$1.11	2.86x	10.6x	30.1x	40.5%	26.8%
TE Connectivity Ltd (TEL)	80.95	27,430	30,956	13,999	3,099	4.15	2.21x	10.0x	19.5x	33.5%	22.1%
Amphenol Corp. (APH)	87.92	26,493	28,819	8,202	1,995	3.15	3.51x	14.4x	27.9x	32.4%	24.3%
Omron Corp. (TSE:6645)	40.88	8,458	7,596	7,936	991	1.96	0.96x	7.7x	20.8x	41.5%	12.5%
Alps Electric Ltd (TSE:6770)	21.01	4,599	5,275	7,826	909	1.14	0.67x	5.8x	18.4x	20.8%	11.6%
Belden Inc. (BDC)	53.61	2,161	3,336	2,535	452	3.65	1.32x	7.4x	14.7x	39.9%	17.8%
Vishay Intertechnology (VSH)	19.50	2,812	2,340	3,035	634	1.79	0.77x	3.7x	10.9x	29.3%	20.9%
AVX Corp. (AVX)	17.75	2,996	2,142	1,799	362	1.05	1.19x	5.9x	16.8x	24.8%	20.1%
Encore Wire Corp. (WIRE)	53.90	1,125	991	1,270	107	2.75	0.78x	9.3x	19.6x	14.1%	8.4%
Mean		\$11,365	\$12,633	\$6,432	\$1,287	\$2.31	1.59x	8.3x	19.9x	30.7%	18.3%
Median		4,599	5,275	7,826	909	1.96	1.19x	7.7x	19.5x	32.4%	20.1%
Specialty Materials											
DowDuPont Inc. (DWDP)	\$53.81	\$122,094	\$150,632	\$85,977	\$16,436	\$2.86	1.75x	9.2x	18.8x	25.9%	19.1%
3M Company (MMM)	200.30	115,488	126,877	32,765	8,358	6.82	3.87x	15.2x	29.4x	49.2%	25.5%
BASF SE (DE:BAS)	73.42	67,439	89,188	76,185	12,544	5.11	1.17x	7.1x	14.4x	30.5%	16.5%
PPG Industries, Inc. (PPG)	105.44	25,293	29,274	15,374	2,355	4.54	1.90x	12.4x	23.2x	41.5%	15.3%
Akzo Nobel N.V. (ENXTAM:AKZA)	86.32	19,660	23,241	10,725	1,071	1.75	2.17x	21.7x	NM	42.9%	10.0%
Celenese Corp. (CE)	95.76	12,809	16,265	7,155	1,595	6.92	2.27x	10.2x	13.8x	27.6%	22.3%
Evonik Industries AG (DE:EVK)	27.18	12,655	16,245	17,372	3,101	2.42	0.94x	5.2x	11.2x	31.4%	17.9%
Solvay SA (ENXTBR:SOLB)	108.91	11,253	15,402	12,890	2,267	6.97	1.19x	6.8x	15.6x	27.7%	17.6%
Ferro Corporation (FOE)	16.67	1,388	2,205	1,594	239	1.00	1.38x	9.2x	16.7x	28.6%	15.0%
Mean		\$43,120	\$52,148	\$28,893	\$5,330	\$4.27	1.85x	10.78x	17.90x	33.9%	17.7%
Median		19,660	23,241	15,374	2,355	4.54	1.75x	9.22x	16.19x	30.5%	17.6%
Vehicle Parts and Supplies											
Johnson Controls Inc. (JCI)	\$33.77	\$31,205	\$43,294	\$31,559	\$4,724	\$2.02	1.37x	9.2x	16.7x	29.8%	15.0%
Denso Corp. (TSE:6902)	45.83	35,506	35,849	49,117	5,625	2.42	0.73x	6.4x	19.0x	15.7%	11.5%
Continental AG (DB:CON)	158.08	31,616	35,254	51,654	5,803	14.85	0.68x	6.1x	10.6x	25.4%	11.2%
Aptiv PLC (APTIV)	79.13	20,849	24,837	14,435	2,240	3.47	1.72x	11.1x	22.8x	18.9%	15.5%
Lear Corp. (LEA)	153.93	9,878	10,507	21,149	2,201	14.01	0.50x	4.8x	11.0x	11.3%	10.4%
Autoliv, Inc. (ALV)	79.85	6,958	8,585	8,678	1,293	5.87	0.99x	6.6x	13.6x	19.7%	14.9%
Bosch Ltd. (BSE:500530)	265.29	8,097	7,694	1,776	327	6.02	4.33x	23.5x	NM	45.5%	18.4%
Stanley Electric Co. Ltd. (TSE:6923)	28.99	4,738	4,005	4,045	829	1.81	0.99x	4.8x	16.0x	22.8%	20.5%
Delphi Automotive PLC (DLPH)	17.91	1,585	2,944	4,976	777	3.41	0.59x	3.8x	5.2x	19.0%	15.6%
Mean		\$16,715	\$19,219	\$20,821	\$2,647	\$5.99	1.32x	8.5x	14.4x	23.1%	14.8%
Median		9,878	10,507	14,435	2,201	3.47	0.99x	6.4x	14.8x	19.7%	15.0%

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

Source: CapitalIQ

(1) As of close January 31, 2019.

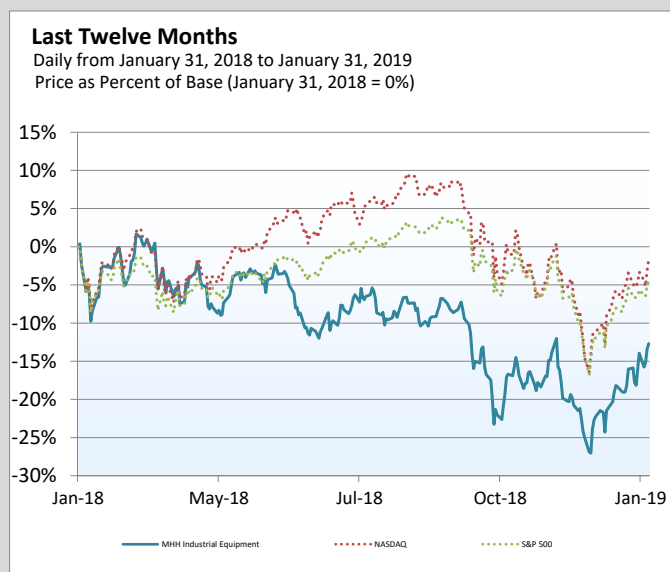
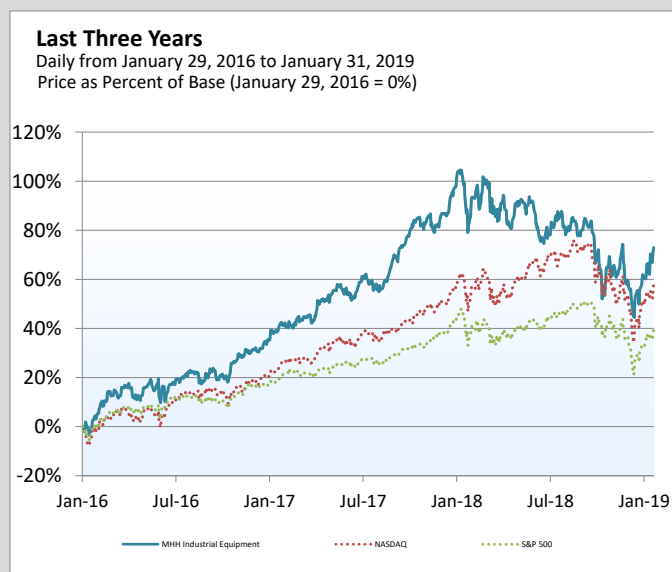
(2) Enterprise value is defined as equity value plus net debt, preferred stock and minority interests. Net Debt includes long term debt, short term debt, post-retirement benefits and unfunded pensions, if applicable, less cash and cash equivalents.

(3) As of December 31, 2018 excluding TEL (December 29, 2018); AKZA, BAS, BDC, CON, DLPH, EVK, FOE, SOLB and WIRE (September 30, 2018); and 500530 (March 31, 2018).

(4) Excludes non-recurring and discontinued operations.

Comparative Index Performance

The Mufson Howe Hunter Industrial Equipment Index^(a) increased by 8.4% during the three months ending January 31, 2019.



Price Performance

	3-Year	LTM	3 Month
Mufson Howe Hunter Industrial Equipment Index ^(a)	72.9%	-12.7%	8.4%
NASDAQ	57.8%	-1.8%	-0.3%
S&P 500	39.4%	-4.2%	-0.3%

(a) Market cap weighted index assuming no dividend reinvestment. Mufson Howe Hunter Industrial Equipment Index is comprised of all companies listed on the following page.

Please see Page 16 for sector news

Highlighted M&A Transaction – Industrial Equipment

Target	Acquirer	Value*
		\$3,866.1

Entegris, Inc. (NasdaqGS:ENTG) signed an agreement to acquire Versum Materials, Inc. (NYSE:VSM) for \$3.9 billion in a merger of equals transaction on January 27, 2019. The transaction is expected to close in the second half of 2019. Versum develops, manufactures, transports, and handles specialty materials for the semiconductor and display industries in the United States, Taiwan, South Korea, China, Europe, and rest of Asia. The company operates through two segments, Materials, and Delivery Systems and Services (DS&S). Versum was founded in 2015 and is headquartered in Tempe, Arizona.

*ND – Not disclosed. Transaction values reported on the basis of enterprise value in USD millions.

Industrial Equipment

Selected Valuation Metrics

(\$ in USD millions, except per share data)

Company	Market & Capitalization			LTM Performance ⁽³⁾			Valuation			Margins	
	Price ⁽¹⁾	Equity Value	Enterprise Value ⁽²⁾	Revenue	EBITDA ⁽⁴⁾	EPS	Enterprise Value/Revenue	EBITDA	Price/EPS	Gross Profit	EBITDA
Construction Equipment											
Caterpillar Inc. (CAT)	\$133.16	\$78,579	\$107,316	\$54,722	\$11,043	\$8.18	1.96x	9.7x	16.3x	27.2%	20.2%
Deere & Company (DE)	164.00	52,460	91,796	37,318	5,940	7.88	2.46x	15.5x	20.8x	24.1%	15.9%
Cummins Inc. (CMI)	147.11	23,546	25,473	23,771	3,001	10.29	1.07x	8.5x	14.3x	24.1%	12.6%
Hyundai Heavy Industries Co. Ltd (KOSE:A009540)	124.48	8,803	10,120	11,619	-199	(9.81)	0.87x	NM	NM	1.0%	NM
Navistar International Corp. (NAV)	32.84	3,249	7,361	10,250	778	2.28	0.72x	9.5x	14.4x	17.2%	7.6%
Oshkosh Corp. (OSK)	75.05	5,257	5,915	7,923	862	5.83	0.75x	6.9x	12.9x	18.3%	10.9%
Terex Corp. (TEX)	30.71	2,263	3,071	4,956	343	1.69	0.62x	9.0x	18.1x	19.0%	6.9%
Mean		\$24,880	\$35,865	\$21,508	\$3,110	\$3.76	1.21x	9.8x	16.1x	18.7%	12.4%
Median		8,803	10,120	11,619	862	5.83	0.87x	9.2x	15.3x	19.0%	11.8%
Electrical Equipment											
Schneider Electric SE (ENXTPA:SU)	\$71.11	\$38,744	\$47,377	\$29,036	\$4,695	\$4.13	1.63x	10.1x	17.2x	38.6%	16.2%
Emerson Electric Co. (EMR)	65.47	40,995	44,705	17,739	3,641	2.74	2.52x	12.3x	23.9x	42.8%	20.5%
Eaton Corporation plc (ETN)	76.25	33,047	40,163	21,609	3,874	3.86	1.86x	10.4x	19.8x	32.8%	17.9%
Rockwell Automation Inc. (ROK)	169.52	20,265	21,378	6,722	1,476	6.37	3.18x	14.5x	26.6x	43.3%	22.0%
Amelec Inc. (AME)	72.90	16,921	18,304	4,846	1,270	2.65	3.78x	14.4x	27.5x	34.2%	26.2%
Hubbell Inc. (HUBB)	109.33	5,981	7,681	4,482	705	5.21	1.71x	10.9x	21.0x	29.0%	15.7%
Regal Beloit Corporation (RBC)	76.76	3,312	4,433	3,646	508	4.31	1.22x	8.7x	17.8x	26.5%	13.9%
Powell Industries, Inc. (POWL)	27.91	321	273	468	9	(0.18)	0.58x	NM	NM	14.8%	NM
Mean		\$19,948	\$23,039	\$11,068	\$2,022	\$3.64	2.06x	11.6x	22.0x	32.8%	18.9%
Median		18,593	19,841	5,784	1,373	3.99	1.79x	10.9x	21.0x	33.5%	17.9%
Semiconductor Capital Equipment											
ASML Holding NV (ASML)	\$175.51	\$74,581	\$73,427	\$12,530	\$3,781	\$4.94	5.86x ‡	19.4x ‡	35.5x	46.0%	30.2%
Applied Materials, Inc. (AMAT)	39.08	37,277	38,556	17,253	5,253	2.85	2.23x	7.3x	13.7x	45.3%	30.4%
Lam Research Corp. (LRCX)	169.58	25,877	24,259	10,871	3,397	11.10	2.23x	7.1x	15.3x	46.1%	31.2%
Tokyo Electron Ltd (TSE:8035)	143.64	23,550	20,415	11,987	3,259	11.84	1.70x	6.3x	12.1x	41.6%	27.2%
KLA-Tencor Corp. (KLAC)	106.57	16,131	15,675	4,304	1,748	6.49	3.64x	9.0x	16.4x	64.3%	40.6%
Teradyne Inc. (TER)	35.99	6,451	5,714	2,101	605	1.57	2.72x	9.4x	23.0x	58.1%	28.8%
Veeco Instruments Inc. (VECO)	9.81	469	488	542	26	(0.62)	0.90x	18.8x ‡	NM	35.7%	4.8%
Mean		\$26,334	\$25,505	\$8,513	\$2,581	\$5.45	2.24x	7.8x	19.3x	48.2%	27.6%
Median		23,550	20,415	10,871	3,259	4.94	2.23x	7.3x	15.8x	46.0%	30.2%
Measurement, Control, and Testing Devices											
Danaher Corporation (DHR)	\$110.92	\$77,810	\$86,775	\$19,893	\$4,712	\$2.90	4.36x	18.4x	38.3x	55.8%	23.7%
Xcerra Corporation (XCRA)	28.64	23,363	33,226	29,534	3,648	1.57	1.13x	9.1x	18.3x	32.6%	12.4%
Entegris, Inc. (ENTG)	33.05	4,460	4,816	1,550	427	1.15	3.11x	11.3x	28.8x	46.9%	27.6%
MKS Instruments, Inc. (MKSI)	81.63	4,407	4,037	2,075	581	5.54	1.95x	6.9x	14.7x	47.2%	28.0%
Brooks Automation, Inc. (BRKS)	31.13	2,172	2,124	668	82	0.26	3.18x	26.0x	NM	39.6%	12.2%
FormFactor, Inc. (FORM)	15.02	1,113	1,043	530	79	0.28	1.97x	13.1x	NM	39.7%	15.0%
FARO Technologies, Inc. (FARO)	42.52	734	599	397	28	0.36	1.51x	21.6x	NM	56.9%	7.0%
Axcelis Technologies, Inc. (ACLS)	20.83	675	574	443	66	1.01	1.30x	8.8x	20.7x	40.6%	14.8%
Nanometrics Incorporated (NANO)	30.59	741	568	325	74	1.73	1.75x	7.7x	17.7x	57.0%	22.8%
Cohu, Inc. (COHU)	17.54	714	551	365	53	0.93	1.51x	10.4x	18.8x	41.0%	14.5%
Nova Measuring Instruments Ltd. (NVMI)	24.65	688	519	245	65	1.31	2.11x	8.0x	18.8x	57.7%	26.4%
Rudolph Technologies, Inc. (RTEC)	21.72	693	499	274	57	1.04	1.82x	8.7x	21.0x	54.2%	21.0%
Mean		\$9,797	\$11,277	\$4,692	\$823	\$1.51	2.14x	12.5x	21.9x	47.4%	18.8%
Median		927	821	486	77	1.09	1.88x	9.8x	18.8x	47.0%	18.0%

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

Source: CapitalIQ

(1) As of close January 31, 2019.

(2) Enterprise value is defined as equity value plus net debt, preferred stock and minority interests. Net Debt includes long term debt, short term debt, post-retirement benefits and unfunded pensions, if applicable, less cash and cash equivalents.

(3) As of December 31, 2018 excluding FORM, NANO and RBC (December 29, 2018); LRCX (December 23, 2018); NAV (October 31, 2018); AMAT and DE (October 28, 2018); A009540, FARO, NVMI and TEX (September 30, 2018); COHU (September 28, 2018); and SU and XCRA (June 30, 2018).

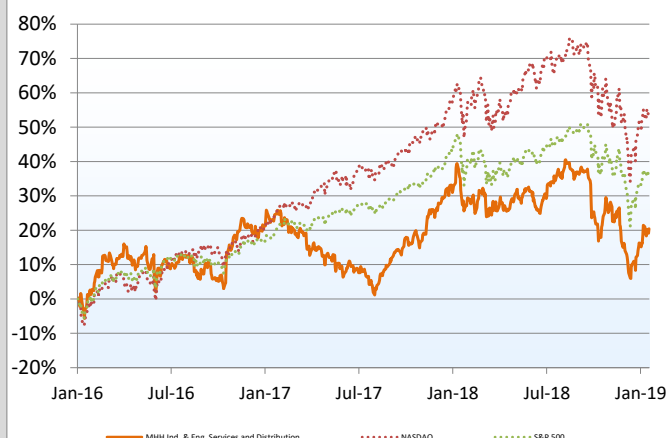
(4) Excludes non-recurring and discontinued operations.

Comparative Index Performance

The Mufson Howe Industrial & Engineering Services and Distribution Index^(a) decreased by 0.4% during the three months ending January 31, 2019.

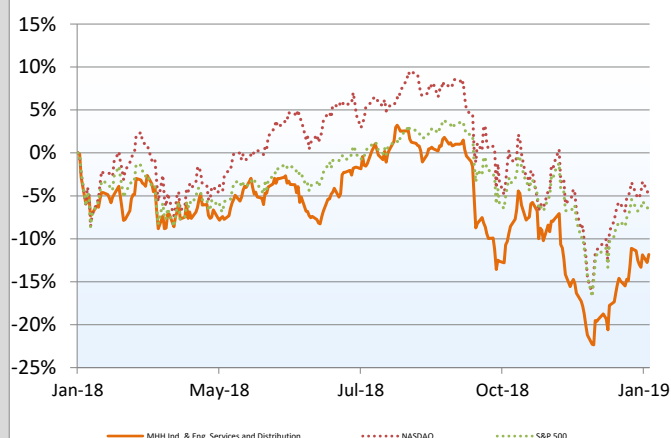
Last Three Years

Daily from January 29, 2016 to January 31, 2019
Price as Percent of Base (January 29, 2016 = 0%)



Last Twelve Months

Daily from January 31, 2018 to January 31, 2019
Price as Percent of Base (January 31, 2018 = 0%)



Price Performance

	3-Year	LTM	3 Month
Mufson Howe Hunter Industrial & Engineering Services and Distribution Index ^(a)	22.0%	-10.7%	-0.4%
NASDAQ	57.8%	-1.8%	-0.3%
S&P 500	39.4%	-4.2%	-0.3%

(a) Market cap weighted index assuming no dividend reinvestment. Mufson Howe Hunter Industrial & Engineering Services and Distribution Index is comprised of all companies listed on the following page.

Please see Page 18 for sector news

Highlighted M&A Transaction – Industrial & Engineering Services and Distribution

Target



(Multiple Business Units)

Acquirer

UNDISCLOSED

Value*

\$28.0

An undisclosed buyer agreed to acquire a stake in RMS A13 Holdings Ltd, Power Machinery Ltd, Centro Energia Teverola and Ferrara S.r.l from John Wood Group PLC (LSE:WG.) for \$28 million in December, 2018. John Wood Group is selling 25% stake in RMS A13, 52% stake in Power Machinery, and 41.65% stake in Centro Energia. Cash proceeds are expected to be around \$28 million, of which \$9 million was received in December with the remainder anticipated in the first half of 2019.

**ND – Not disclosed. Transaction values reported on the basis of enterprise value in USD millions.*

Selected Valuation Metrics

(\$ in USD millions, except per share data)

Company	Market & Capitalization			LTM Performance ⁽³⁾			Valuation		Margins		
	Price ⁽¹⁾	Equity Value	Enterprise Value ⁽²⁾	Revenue	EBITDA ⁽⁴⁾	EPS	Enterprise Value/Revenue	EBITDA	Price/EPS	Gross Profit	EBITDA
Industrial and Engineering Services											
Jacobs Engineering Group Inc. (JEC)	\$64.80	\$9,223	\$10,672	\$16,284	\$960	\$2.75	0.66x	11.1x	23.6x	18.8%	5.9%
AECOM (ACM)	30.61	4,785	7,711	20,282	774	0.95	0.38x	10.0x	32.2x	3.3%	3.8%
John Wood Group PLC (LSE:WG.)	7.11	4,782	6,373	8,367	417	0.18	0.76x	15.3x	39.1x	11.7%	5.0%
Fluor Corporation (FLR)	36.57	5,144	5,103	19,393	757	1.75	0.26x	6.7x	20.9x	3.7%	3.9%
Tetra Tech, Inc. (TTEK)	55.19	3,053	3,247	2,209	242	2.09	1.47x	13.4x	26.3x	17.6%	10.9%
KBR, Inc. (KBR)	17.20	2,423	3,035	4,520	302	1.00	0.67x	10.0x	17.1x	8.8%	6.7%
Balfour Beatty plc (LSE:BBY)	3.60	2,448	2,640	8,698	131	0.10	0.30x	20.2x	35.9x	5.4%	1.5%
Primoris Services Corporation (PRIM)	19.95	1,022	1,337	2,641	186	1.07	0.51x	7.2x	18.7x	11.0%	7.0%
Mean		\$4,110	\$5,015	\$10,299	\$471	\$1.24	0.63x	11.7x	26.7x	10.0%	5.6%
Median		3,918	4,175	8,532	359	1.03	0.58x	10.6x	25.0x	9.9%	5.4%
Industrial Distribution											
W.W. Grainger, Inc. (GWW)	\$295.39	\$16,501	\$18,183	\$11,221	\$1,601	\$13.28	1.62x	11.4x	22.2x	38.7%	14.3%
Fastenal Company (FAST)	60.46	17,286	17,618	4,965	1,137	2.15	3.55x	15.5x	28.2x	48.3%	22.9%
HD Supply Holdings, Inc. (HDS)	41.94	7,470	9,409	5,784	788	1.94	1.63x	11.9x	21.6x	39.3%	13.6%
MSC Industrial Direct Co., Inc. (MSM)	83.49	4,620	5,131	3,267	523	4.92	1.57x	9.8x	17.0x	43.3%	16.0%
WESCO International, Inc. (WCC)	52.40	2,447	3,574	8,177	417	3.78	0.44x	8.6x	13.9x	19.2%	5.1%
MRC Global Inc. (MRC)	15.62	1,411	2,456	4,066	185	0.56	0.60x	13.3x	28.0x	15.6%	4.5%
Lawson Products, Inc. (LAWS)	29.60	264	272	344	12	0.36	0.79x	22.4x	NM	55.4%	3.5%
Transcat, Inc. (TRNS)	22.40	161	186	159	16	0.77	1.17x	11.4x	29.2x	24.4%	10.3%
Mean		\$6,270	\$7,104	\$4,748	\$585	\$3.47	1.42x	13.0x	22.9x	35.5%	11.3%
Median		3,533	4,353	4,516	470	2.04	1.37x	11.7x	22.2x	39.0%	11.9%
Industrial Recycling Services											
Veolia Environnement S.A. (ENXTPA:VIE)	\$21.10	\$11,670	\$24,978	\$29,407	\$3,313	\$1.04	0.85x	7.5x	20.4x	13.9%	11.3%
Clean Harbors, Inc. (CLH)	59.21	3,316	4,687	3,190	467	1.00	1.47x	10.0x	NM	29.9%	14.7%
Commercial Metals Company (CMC)	17.45	2,053	3,338	4,845	339	0.87	0.69x	9.9x	20.1x	13.2%	7.0%
Dow Chemicals Company (DOW)	31.97	1,892	2,964	4,124	358	2.43	0.72x	8.3x	13.2x	12.8%	8.7%
Aurubis AG (DE:NDA)	54.67	2,458	2,213	12,133	522	5.17	0.18x	4.2x	10.6x	9.4%	4.3%
Sims Metal Management Limited (ASX:SGM)	7.55	1,531	1,306	4,778	219	0.58	0.27x	6.0x	13.0x	12.1%	4.6%
Cardno Limited (ASX:CDD)	0.68	309	323	826	40	0.04	0.39x	8.1x	19.2x	7.7%	4.9%
Mean		\$3,318	\$5,687	\$8,472	\$751	\$1.59	0.65x	7.7x	16.1x	14.1%	7.9%
Median		2,053	2,964	4,778	358	1.00	0.69x	8.1x	16.2x	12.8%	7.0%

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

Source: CapitalIQ

(1) As of close January 31, 2019.

(2) Enterprise value is defined as equity value plus net debt, preferred stock and minority interests. Net Debt includes long term debt, short term debt, post-retirement benefits and unfunded pensions, if applicable, less cash and cash equivalents.

(3) As of December 31, 2018 excluding TTEK (December 30, 2018); TRANS (December 29, 2018); JEC (December 28, 2018); MSM (December 1, 2018); CMC (November 30, 2018); HDS (October 28, 2018); CLH, FLR, KBR, LAWS, MRC, NDA, PRIM and VIE (September 30, 2018); CDD, SGM and WG (June 30, 2018); and BBY (June 29, 2018).

(4) Excludes non-recurring and discontinued operations.

Selected News – Aerospace & Defense

BAE Systems plc (LSE:BA.) announced the appointment of **Nicole Piasecki** as a non-executive director of the company with effect from 1 June 2019.

General Dynamics Corporation (NYSE:GD) reported net income of \$3,345.0 million for fiscal year 2018 as compared to \$2,912.0 million for the prior year. Earnings per share were \$11.18 versus \$9.56 for the prior year. Revenues for the year increased to \$36,193.0 million from \$30,973.0 million for fiscal year 2017.

General Dynamics Corporation (NYSE:GD) announced that **Robert W. Helm**, currently serving as Senior Vice President for Planning and Development, will assume the role of special advisor to the CEO.

L3 Technologies, Inc. (NYSE:LLL) reported net income of \$1,005.0 million for fiscal year 2018 as compared to \$677.0 million for the prior year. Earnings per share were \$12.63 versus \$8.51 for the prior year. Revenues for the year increased to \$10,244.0 million from \$9,573.0 million for fiscal year 2017.

Lockheed Martin Corporation (NYSE:LMT) reported net income of \$5,046.0 million for fiscal year 2018 as compared to \$1,963.0 million for the prior year. Earnings per share were \$17.59 versus \$6.75 for the prior year. Revenues for the year increased to \$53,762.0 million from \$49,960.0 million for fiscal year 2017.

Lockheed Martin Corporation (NYSE:LMT) announced the appointment of **Ken Possenriede** as new CFO on February 11, 2019 replacing Bruce Tanner.

Northrop Grumman Corporation (NYSE:NOC) reported net income of \$3,229.0 million for fiscal year 2018 as compared to \$2,869.0 million for the prior year. Earnings per share were \$18.49 versus \$16.34 for the prior year. Revenues for the year increased to \$30,095.0 million from \$26,004.0 million for fiscal year 2017.

Raytheon Company (NYSE:RTN) reported net income of \$2,909.0 million for fiscal year 2018 as compared to \$2,024.0 million for the prior year. Earnings per share were \$10.15 versus \$6.95 for the prior year. Revenues for the year increased to \$27,058.0 million from \$25,348.0 million for fiscal year 2017.

Raytheon Company (NYSE:RTN) named **Scott Weiner** vice president, Corporate Development reporting to chief financial officer Toby O'Brien.

Textron Inc. (NYSE:TXT) reported net income of \$1,222.0 million for fiscal year 2018 as compared to \$307.0 million for the prior year. Earnings per share were \$4.83 versus \$1.14 for the prior year. Revenues for the year decreased to \$13,972.0 million from \$14,198.0 million for fiscal year 2017.

The Boeing Company (NYSE:BA) reported net income of \$10,460.0 million for fiscal year 2018 as compared to \$8,458.0 million for the prior year. Earnings per share were \$17.85 versus \$13.85 for the prior year. Revenues for the year increased to \$101,127.0 million from \$94,005.0 million for fiscal year 2017.

United Technologies Corporation (NYSE:UTX) reported net income of \$5,269.0 million for fiscal year 2018 as compared to \$4,552.0 million for the prior year. Earnings per share were \$6.50 versus \$5.70 for the prior year. Revenues for the year increased to \$66,501.0 million from \$59,837.0 million for fiscal year 2017.

Note: All per share results are reported on a fully-diluted basis.

Selected News – Components & Materials

3M Company (NYSE:MMM) reported net income of \$5,349.0 million for fiscal year 2018 as compared to \$4,858.0 million for the prior year. Earnings per share were \$8.89 versus \$7.93 for the prior year. Revenues for the year increase to \$32,765.0 million from \$31,657.0 million for fiscal year 2017.

Alps Alpine Co., Ltd. (TSE:6770) reported third quarter net income of \$89.2 million for fiscal year 2019 as compared to \$173.6 million for the prior year period. Earnings per share were \$0.46 versus \$0.89 for the prior year period. Revenues for the quarter decrease to \$2,015.9 million from \$2,078.4 million for the same period in fiscal year 2018.

Amphenol Corporation (NYSE:APH) reported net income of \$1,205.0 million for fiscal year 2018 as compared to \$650.5 million for the prior year. Earnings per share were \$3.85 versus \$2.06 for the prior year. Revenues for the year increase to \$8,202.0 million from \$7,011.3 million for fiscal year 2017.

Autoliv, Inc. (NYSE:ALV) reported net income of \$190.4 million for fiscal year 2018 as compared to \$427.1 million for the prior year. Earnings per share were \$2.19 versus \$4.87 for the prior year. Revenues for the year decrease to \$8,678.2 million from \$10,382.6 million for fiscal year 2017.

Aptiv PLC (NYSE:APTIV) reported net income of \$1,067.0 million for fiscal year 2018 as compared to \$1,355.0 million for the prior year. Earnings per share were \$4.02 versus \$5.06 for the prior year. Revenues for the year increase to \$14,435.0 million from \$12,884.0 million for fiscal year 2017.

AVX Corporation (NYSE:AVX) reported third quarter net income of \$74.3 million for fiscal year 2019 as compared to (\$93.2) million for the prior year period. Earnings per share were \$0.44 versus (\$0.55) for the prior year period. Revenues for the quarter increase to \$442.4 million from \$431.8 million for the same period in fiscal year 2018.

Celanese Corporation (NYSE:CE) reported net income of \$1,207.0 million for fiscal year 2018 as compared to \$843.0 million for the prior year. Earnings per share were \$8.91 versus \$6.10 for the prior year. Revenues for the year increase to \$7,155.0 million from \$6,140.0 million for fiscal year 2017.

Celanese Corporation (NYSE:CE) announced legal veteran **A. Lynne Puckett** will join the company's executive leadership team as Senior Vice President and General Counsel, effective February 13, 2019.

Corning Incorporated (NYSE:GLW) reported net income of \$1,066.0 million for fiscal year 2018 as compared to (\$497.0) million for the prior year. Earnings per share were \$1.13 versus (\$0.66) for the prior year. Revenues for the year increase to \$11,290.0 million from \$10,116.0 million for fiscal year 2017.

DowDuPont Inc. (NYSE:DWDP) reported net income of \$3,844.0 million for fiscal year 2018 as compared to \$1,460.0 million for the prior year. Earnings per share were \$1.65 versus \$0.90 for the prior year. Revenues for the year increase to \$85,977.0 million from \$62,484.0 million for fiscal year 2017.

Lear Corporation (NYSE:LEA) reported net income of \$1,149.8 million for fiscal year 2018 as compared to \$1,313.4 million for the prior year. Earnings per share were \$17.22 versus \$18.59 for the prior year. Revenues for the year increase to \$21,148.5 million from \$20,467.0 million for fiscal year 2017.

Lear Corporation (NYSE:LEA) announced that **Mei-Wei Cheng** has been appointed to its Board of Directors.

OMRON Corporation (TSE:6645) reported third quarter net income of \$112.4 million for fiscal year 2019 as compared to \$145.3 million for the prior year period. Earnings per share were \$0.54 versus \$0.68 for the prior year period. Revenues for the quarter increase to \$1,999.9 million from \$1,902.8 million for the same period in fiscal year 2018.

Selected Highlights

PPG Industries, Inc. (NYSE:PPG) reported net income of \$1,341.0 million for fiscal year 2018 as compared to \$1,594.0 million for the prior year. Earnings per share were \$5.47 versus \$6.18 for the prior year. Revenues for the year increase to \$15,374.0 million from \$14,748.0 million for fiscal year 2017.

Stanley Electric Co., Ltd. (TSE:6923) reported third quarter net income of \$95.5 million for fiscal year 2019 as compared to \$86.7 million for the prior year period. Earnings per share were \$0.58 versus \$0.52 for the prior year period. Revenues for the quarter decrease to \$1,036.5 million from \$1,048.3 million for the same period in fiscal year 2018.

TE Connectivity Ltd. (NYSE:TEL) reported first quarter net income of \$276.0 million for fiscal year 2019 as compared to (\$40.0) million for the prior year period. Earnings per share were \$0.80 versus (\$0.11) for the prior year period. Revenues for the quarter increase to \$3,347.0 million from \$3,336.0 million for the same period in fiscal year 2018.

Note: All per share results are reported on a fully-diluted basis.

Selected News – Industrial Equipment

ASML Holding N.V. (ENXTAM:ASML) reported net income of \$2,967.3 million for fiscal year 2018 as compared to \$2,481.6 million for the prior year. Earnings per share were \$6.96 versus \$5.75 for the prior year. Revenues for the year increased to \$12,530.3 million from \$10,762.1 million for fiscal year 2017.

Caterpillar Inc. (NYSE:CAT) reported net income of \$6,147.0 million for fiscal year 2018 as compared to \$754.0 million for the prior year. Earnings per share were \$10.26 versus \$1.26 for the prior year. Revenues for the year increased to \$54,722.0 million from \$45,462.0 million for fiscal year 2017.

Cummins Inc. (NYSE:CMI) announced **Mark A. Smith**, the Company's Vice President – Financial Operations since 2016, will become the Company's Vice President – Chief Financial Officer on March 31, 2019.

Danaher Corporation (NYSE:DHR) reported net income of \$2,650.9 million for fiscal year 2018 as compared to \$2,492.1 million for the prior year. Earnings per share were \$3.74 versus \$3.53 for the prior year. Revenues for the year increased to \$19,893.0 million from \$18,329.7 million for fiscal year 2017.

Eaton Corporation plc (NYSE:ETN) reported net income of \$2,145.0 million for fiscal year 2018 as compared to \$2,985.0 million for the prior year. Earnings per share were \$4.91 versus \$6.68 for the prior year. Revenues for the year increased to \$21,609.0 million from \$20,404.0 million for fiscal year 2017.

Hyundai Heavy Industries Co., Ltd. (KOSE:A009540) reported third quarter net income of (\$46.4) million for fiscal year 2018 as compared to \$77.9 million for the prior year period. Earnings per share were (\$0.76) versus \$1.41 for the prior year period. Revenues for the quarter decreased to \$2,920.5 million from \$2,994.7 million for the same period in fiscal year 2017.

KLA-Tencor Corporation (NasdaqGS:KLAC) reported second quarter net income of \$369.1 million for fiscal year 2019 as compared to (\$134.3) million for the prior year period. Earnings per share were \$2.42 versus (\$0.86) for the prior year period. Revenues for the quarter increased to \$1,119.9 million from \$975.8 million for the same period in fiscal year 2018.

Lam Research Corporation (NasdaqGS:LRCX) reported second quarter net income of \$568.9 million for fiscal year 2019 as compared to (\$10.0) million for the prior year period. Earnings per share were \$3.51 versus (\$0.06) for the prior year period. Revenues for the quarter decreased to \$2,522.7 million from \$2,580.8 million for the same period in fiscal year 2018.

MKS Instruments, Inc. (NasdaqGS:MKSI) reported net income of \$392.9 million for fiscal year 2018 as compared to \$339.1 million for the prior year. Earnings per share were \$7.14 versus \$6.16 for the prior year. Revenues for the year increased to \$2,075.1 million from \$1,916.0 million for fiscal year 2017.

Oshkosh Corporation (NYSE:OSK) reported first quarter net income of \$109.0 million for fiscal year 2019 as compared to \$56.4 million for the prior year period. Earnings per share were \$1.51 versus \$0.74 for the prior year period. Revenues for the quarter increased to \$1,803.4 million from \$1,586.3 million for the same period in fiscal year 2018.

Rockwell Automation, Inc. (NYSE:ROK) reported first quarter net income of \$80.3 million for fiscal year 2019 as compared to (\$236.4) million for the prior year period. Earnings per share were \$0.66 versus (\$1.84) for the prior year period. Revenues for the quarter increased to \$1,642.3 million from \$1,586.6 million for the same period in fiscal year 2018.

Selected Highlights

Teradyne, Inc. (NasdaqGS:TER) reported net income of \$451.8 million for fiscal year 2018 as compared to \$257.7 million for the prior year. Earnings per share were \$2.35 versus \$1.28 for the prior year. Revenues for the year decreased to \$2,100.8 million from \$2,136.6 million for fiscal year 2017.

Tokyo Electron Limited (TSE:8035) reported third quarter net income of \$445.1 million for fiscal year 2019 as compared to \$361.5 million for the prior year period. Earnings per share were \$2.70 versus \$2.20 for the prior year period. Revenues for the quarter increased to \$2,444.2 million from \$2,288.6 million for the same period in fiscal year 2018.

Note: All per share results are reported on a fully-diluted basis.

Selected News – Industrial & Engineering Services and Distribution

Aurubis AG (XTRA:NDA) announced that the Supervisory Board of Aurubis AG unanimously passed a resolution to appoint **Roland Harings** as CEO. He will succeed Juergen Schachler, who will leave the company when his contract expires on June 30, 2019.

Commercial Metals Company (NYSE:CMC) reported first quarter net income of \$19.7 million for fiscal year 2019 as compared to \$36.8 million for the prior year period. Earnings per share were \$0.16 versus \$0.31 for the prior year period. Revenues for the quarter increased to \$1,277.3 million from \$1,076.5 million for the same period in fiscal year 2018.

Fastenal Company (NasdaqGS:FAST) reported net income of \$751.9 million for fiscal year 2018 as compared to \$578.6 million for the prior year. Earnings per share were \$2.62 versus \$2.01 for the prior year. Revenues for the year increased to \$4,965.1 million from \$4,390.5 million for fiscal year 2017.

Jacobs Engineering Group Inc. (NYSE:JEC) appointed, effective January 17, 2019, **Christopher M.T. Thompson** as its lead independent director replacing Linda Fayne Levinson following the expiration of her term as lead independent director on January 16, 2019.

MSC Industrial Direct Co., Inc. (NYSE:MSM) reported first quarter net income of \$74.2 million for fiscal year 2019 as compared to \$59.6 million for the prior year period. Earnings per share were \$1.33 versus \$1.05 for the prior year period. Revenues for the quarter increased to \$831.6 million from \$768.6 million for the same period in fiscal year 2018.

Tetra Tech, Inc. (NasdaqGS:TTEK) reported first quarter net income of \$42.0 million for fiscal year 2019 as compared to \$46.0 million for the prior year period. Earnings per share were \$0.75 versus \$0.81 for the prior year period. Revenues for the quarter increased to \$553.4 million from \$544.8 million for the same period in fiscal year 2018.

W.W. Grainger, Inc. (NYSE:GWW) reported net income of \$782.0 million for fiscal year 2018 as compared to \$585.7 million for the prior year. Earnings per share were \$13.73 versus \$10.02 for the prior year. Revenues for the year increased to \$11,221.0 million from \$10,424.9 million for fiscal year 2017.

WESCO International, Inc. (NYSE:WCC) reported net income of \$227.4 million for fiscal year 2018 as compared to \$163.5 million for the prior year. Earnings per share were \$4.82 versus \$3.38 for the prior year. Revenues for the year increased to \$8,176.6 million from \$7,679.0 million for fiscal year 2017.

Note: All per share results are reported on a fully-diluted basis.

MHH Manufacturing Universe Directory

Company	Sector
3M Company	Components & Materials
AECOM	Ind. & Eng. Services and Distribution
Airbus Group SE	Aerospace & Defense
Akzo Nobel N.V.	Components & Materials
Alps Electric Co. Ltd.	Components & Materials
AMETEK, Inc.	Industrial Equipment
Amphenol Corporation	Components & Materials
Applied Materials, Inc.	Industrial Equipment
Aptiv PLC	Components & Materials
ASML Holding N.V.	Industrial Equipment
Aurubis AG	Ind. & Eng. Services and Distribution
Autoliv, Inc.	Components & Materials
AVX Corp.	Components & Materials
Axcelis Technologies, Inc.	Industrial Equipment
BAE Systems plc	Aerospace & Defense
Balfour Beatty plc	Ind. & Eng. Services and Distribution
BASF SE	Components & Materials
Belden Inc.	Components & Materials
Bosch Ltd	Components & Materials
Brooks Automation, Inc.	Industrial Equipment
Cardno Ltd.	Ind. & Eng. Services and Distribution
Caterpillar Inc.	Industrial Equipment
Celanese Corporation	Components & Materials
Clean Harbors, Inc.	Ind. & Eng. Services and Distribution
Cohu, Inc.	Industrial Equipment
Commercial Metals Company	Ind. & Eng. Services and Distribution
Continental Aktiengesellschaft	Components & Materials
Corning Inc.	Components & Materials
Cummins Inc.	Industrial Equipment
Danaher Corporation	Industrial Equipment
Deere & Company	Industrial Equipment
Delphi Automotive PLC	Components & Materials
DENSO Corporation	Components & Materials
Dowa Holdings Co., Ltd.	Ind. & Eng. Services and Distribution
DowDupont Inc.	Components & Materials
Eaton Corporation plc	Industrial Equipment
Embraer S.A.	Aerospace & Defense
Emerson Electric Co.	Industrial Equipment
Encore Wire Corp.	Components & Materials
Entegris, Inc.	Industrial Equipment
Evonik Industries AG	Components & Materials
FARO Technologies, Inc.	Industrial Equipment
Fastenal Company	Ind. & Eng. Services and Distribution
Ferro Corporation	Components & Materials
Fluor Corporation	Ind. & Eng. Services and Distribution
FormFactor, Inc.	Industrial Equipment
General Dynamics Corporation	Aerospace & Defense
HD Supply Holdings, Inc.	Ind. & Eng. Services and Distribution
Honeywell International Inc.	Aerospace & Defense
Hubbell Incorporated	Industrial Equipment

Company	Sector
Huntington Ingalls Industries, Inc.	Aerospace & Defense
Hyundai Heavy Industries Co., Ltd.	Industrial Equipment
Jacobs Engineering Group Inc.	Ind. & Eng. Services and Distribution
John Wood Group plc	Ind. & Eng. Services and Distribution
Johnson Controls Inc.	Components & Materials
KBR, Inc.	Ind. & Eng. Services and Distribution
KLA-Tencor Corporation	Industrial Equipment
L-3 Communications Holdings Inc.	Aerospace & Defense
Lam Research Corporation	Industrial Equipment
Lawson Products, Inc.	Ind. & Eng. Services and Distribution
Lear Corp.	Components & Materials
Lockheed Martin Corporation	Aerospace & Defense
MKS Instruments, Inc.	Industrial Equipment
MRC Global Inc.	Ind. & Eng. Services and Distribution
MSC Industrial Direct Co., Inc.	Ind. & Eng. Services and Distribution
Nanometrics Incorporated	Industrial Equipment
Navistar International Corporation	Industrial Equipment
Northrop Grumman Corporation	Aerospace & Defense
Nova Measuring Instruments Ltd.	Industrial Equipment
OMRON Corporation	Components & Materials
Oshkosh Corporation	Industrial Equipment
Powell Industries, Inc.	Industrial Equipment
PPG Industries, Inc.	Components & Materials
Primoris Services Corporation	Ind. & Eng. Services and Distribution
Raytheon Company	Aerospace & Defense
Regal Beloit Corporation	Industrial Equipment
Rockwell Automation Inc.	Industrial Equipment
Rockwell Automation Inc.	Industrial Equipment
Rolls Royce Holdings plc	Aerospace & Defense
Rudolph Technologies, Inc.	Industrial Equipment
Schneider Electric S.E.	Industrial Equipment
Sims Metal Management Limited	Ind. & Eng. Services and Distribution
Solvay SA	Components & Materials
Stanley Electric Co. Ltd.	Components & Materials
TE Connectivity Ltd.	Components & Materials
Teradyne, Inc.	Industrial Equipment
Terex Corporation	Industrial Equipment
Tetra Tech, Inc.	Ind. & Eng. Services and Distribution
Textron Inc.	Aerospace & Defense
Thales SA	Aerospace & Defense
The Boeing Company	Aerospace & Defense
Tokyo Electron Limited	Industrial Equipment
Transcat, Inc.	Ind. & Eng. Services and Distribution
United Technologies Corporation	Aerospace & Defense
Veeco Instruments Inc.	Industrial Equipment
Veolia Environnement S.A.	Ind. & Eng. Services and Distribution
Vishay Intertechnology Inc.	Components & Materials
W.W. Grainger, Inc.	Ind. & Eng. Services and Distribution
WESCO International, Inc.	Ind. & Eng. Services and Distribution
Xcerra Corporation	Industrial Equipment

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Mergers & Acquisitions

- Advise buyers and sellers (public and private companies)
- Sale of businesses, strategic acquisitions, management buy-outs, and industry build-ups

Raise Capital

- Equity (control and non-control)
- Mezzanine financing
- Senior and junior debt
- Typically raise capital from banks, finance companies, private investment funds, and private equity groups

Financial Advisory Services

- Analysis of business strategies and options
- Fairness opinions
- Valuations

The Mufson Howe Hunter Manufacturing Update Indices

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