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Recent Industry Performance

Companies in the metal forming industry use a variety of processes to convert metals into intermediate- or end-use products for various markets. Industry intelligence firm First Research reports that there are currently about 51,000 metal forming companies in the U.S., with combined annual revenue of approximately \$338.0 billion. According to the most recent information from the U.S. Census Bureau, U.S. sales of fabricated metal products, one sub-segment of the metal forming industry, reached \$60.86 billion (not seasonally-adjusted) during the quarter of 2020, down from \$65.70 billion in the first quarter of 2020 and \$65.63 billion in the second quarter of 2019.

During 2020, the metal forming industry has faced multiple challenges due to the COVID-19 pandemic. Some businesses were forced to shut down as mitigation measures and stay-athome orders were put in place across the globe. As a result, many customers of metal forming companies — including original equipment manufacturers — closed their production facilities for between five and six weeks on average during the second quarter of 2020. In addition, a number of metal forming companies temporarily halted production. Toward the end of the second quarter, many facilities gradually reopened,

but overall production volumes remained below pre-pandemic levels.

Not surprisingly, disruptions from the COVID-19 pandemic significantly impacted the financial performance of several of the largest metal forming companies, but some bright spots in the outlook are emerging:

Mayville Engineering Companies - During the second quarter of 2020, Mayville's net sales declined 57.0% year-over-year. However, during the third quarter of 2020, the company's net sales fell only 29.0% year-over-year, with sales of \$91.1 million, compared to \$128.5 million in the third quarter of 2019. Accordingly, for the first nine months of 2020, Mayville's net sales reached \$262.3 million, down from \$417.4 million during the same period one year prior. Based on the ongoing uncertainty due to the pandemic and the related economic impacts, the company decided to forgo providing a financial outlook, although the company believes the second quarter of 2020 will be the low point of the year. According to Robert D. Kamphuis, chairman, president and CEO of Mayville, "Overall, current data trends indicate that customer de-stocking seen in the last 12 months is largely complete in most end markets. We are encouraged by the general demand trends we are



starting to see and believe we are in a good position to continue our third quarter performance, concluding the year on a positive note. With continued stability in our end markets, we believe we are positioned to deliver improved performance over the medium- to long-term."

- Arconic Corporation On April 1, 2020, Arconic Inc. separated into two standalone companies - Arconic Corporation ("Arconic") and Howmet Aerospace Inc. Arconic continues to be a leader in advanced aluminum sheet, plate, extruded and architectural products for a variety of markets, including ground transportation, aerospace, industrial, packaging and commercial building. Similar to Mayville, Arconic experienced significant difficulties in its second quarter but is showing signs of a rebound in the latest quarter. During the second quarter of 2020, Arconic reported a revenue decline of 38.0% yearover-year. For the third quarter, Arconic reported revenue of \$1.4 billion, down 22.0% year-over-year. In addition, the company reported net income of \$5.0 million during the third quarter of 2020 compared to a net loss of \$24.0 million in the third quarter of 2019. Moreover, thirdquarter revenue was up 19.0% from the second quarter of 2020 due to strength in automotive end-market volumes. Overall, Arconic forecasts that 2020 revenue will fall somewhere in the range of \$5.6 billion to \$5.7 billion, with adjusted EBITDA for the full year between \$610.0 million and \$200.0 million.
- Shiloh Industries Shiloh Industries recorded \$157.9 million in revenues during the second quarter (latest available) of the company's fiscal year, which ended on April 30, 2020. Shiloh's net loss for the second quarter of 2020 was \$58.7 million, compared to the \$1.1 million of net income in the second quarter of 2019. For the six months ending April 30, 2020, Shiloh recorded net revenues of \$401.4 million, down from \$532.3 million during the six months ending April 30, 2019. Moreover, on May 8, 2020, Shiloh officially withdrew its fiscal year 2020 outlook due to the economic uncertainty caused by the COVID-19 pandemic.

Overall, First Research estimates that revenue for the U.S. metal forming industry will decline 12.8% during 2020. Looking longer-term, however, the metal forming industry is expected

to recover due to the fact that its products are utilized in a diverse array of end-markets. Indeed, First Research forecasts that industry revenue will grow at an annual compounded rate of approximately 4.0% between 2020 and 2024. At the same time, *MarketWatch* projects that the global metal forming market will see a compound annual growth rate of 3.2% over the forecast period from 2020 to 2027 pointing to a promising recovery as we hopefully move past the pandemic sometime next year.

Metal Forming Industry Trends/Drivers

Although COVID-19 is front and center for the near-term, there are other trends and drivers currently impacting the metal forming industry, including the following:

- Stress on Global Supply Chains According to Metal Forming Magazine, the COVID-19 pandemic has further stressed already-challenged manufacturing supply chains. Even before the onset of the pandemic, global supply chains were being challenged by the U.S.-China trade war; the COVID-19 pandemic exacerbated those issues. As a result, many global supply chain leaders are transferring sourcing and manufacturing away from China or plan to do so within the next three years. Popular alternative locations for sourcing and manufacturing include Vietnam, India and Mexico. While some domestic leaders are advocating for all manufacturing to be brought back to the U.S. to mitigate supply-chain issues, others point out that this would, in turn, raise other challenges, such as increased costs, workforce issues and a need for more infrastructure.
- Embedded Safety Measures According to the Fabricators & Manufacturers Association, embedded safety – where safety capabilities are being integrated directly into manufacturing systems – is a new trend in the metal forming and manufacturing sectors. These safety measures track changes and movements and can prevent injury or damage by issuing alerts to appropriate parties. Some examples of embedded safety include fall detection sensors, augmented reality safety glasses, smart lighting, unmanned automated vehicles, voice-recording components, integrated safety check systems and location -based analytics, among others.



Recent M&A Trends for the Metal Forming Industry

First Research notes that the U.S. fabricated metal product manufacturing industry is "very fragmented," with the largest 50 companies in the industry accounting for only 20.0% of revenue. At the same time, however, concentration does tend to be high in certain product segments, such as boilers, cutlery and hand tools, metal cans and springs.

Since the industry is so fragmented, over the past several years, the metal forming industry has been marked by robust M&A activity. In fact, according to industry analyst FactSet, there were 40 M&A deals closed for North American-based target companies in the metal forming industry during the fourth quarter of 2019 alone.

Notably, during the first quarter of 2020, a significant number of transactions were announced in the North American metal forming sector. However, once the COVID-19 pandemic began to impact the U.S., the number of new transactions began to slow as investors became more cautious. Despite

this more cautious M&A market, lower middle market private equity funds have remained active acquirers in 2020. Notable platform investments by private equity funds include Core Industrial Partners' acquisition of Incodema, Wynnchurch Capital's acquisition of Pennsylvania Machine Works and AE Industrial Partners' acquisition of G.S. Precision.

Looking at the broader metals and mining sector, S&P Global Market Intelligence reports that the sector outperformed other resources sectors in terms of deal-making in the first half of 2020 despite the COVID-19 pandemic and ensuing economic slowdown. While the average annualized transaction value of metals and mining deals dropped to US\$45.0 million in the first six months of 2020, compared to US\$60.0 million in the same period in 2019 (a 25.0% drop), the slowdown in deals pales in comparison to the 60.0% decline for the oil and gas sector and the 69.0% drop for the chemicals sector. However, since the future of the pandemic remains uncertain, analysts believe that deal-making in the sector may become more conservative in the near future.

Notable M&A Transactions

Foundries, Forging & Castings

Year							
Closed	Target	Acquirer	Target Business Description				
	Name:	Name:					
2020	PRL, Inc.	Compass Partners Capital LLC	Manufacturer of metal castings				
2020	Certain Assets of Renaissance Manufacturing Group - Waukesha	Grede Holdings LLC	Iron foundry business operations				
2020	Damascus Steel Casting Company	Temperform, LLC	Manufacturer of steel castings				
2020	Assets of Western Forge & Flange Company, Inc.	Pennsylvania Machine Works, LLC	Manufacturer of forgings and flanges				
2020	Pennsylvania Machine Works, LLC	Wynnchurch Capital, L.P	Manufacturer of forged pressure fittings				
2019	American Axle & Manufacturing, Grede Division	Gamut Capital Management	Manufacturer of automotive iron castings				
2019	Mattco Forge Inc.	Blue Point Capital Partners	Manufacturer of forged metal products				
2019	Cast Roll Manufacturing Facility of Ampco-Pittsburgh Corp	WHEMCO, Inc.	Cast rolling manufacturing facility				
2019	Walker Die Casting, Inc./C&R Tool and Engineering, Inc.	Allison Transmission Holdings, Inc.	Manufacturer of aluminum die castings				
2019	Alloy Die Casting Company	Perella Weinberg Partners LP, Investment Arm	Manufacturer of aluminum and zinc castings				
2019	Avalon Precision Metalsmiths	Sigma Electric Manufacturing Corp.	Manufacturer of turnkey investment castings				
2019	All Assets of Hazleton Casting Co.	Speyside Foundry Holdings, LLC	Manufacturer of steel castings				
2019	All Assets of Weatherly Casting and Machine Co.	Speyside Foundry Holdings, LLC	Manufacturer of iron and iron alloy castings				
2019	Faircast, Gray Iron and Ductile Foundry	Cimco Resources, Inc.	Scrap iron processing foundry				
2018	Trident Components, LLC	Sage Metals Limited	Designer and manufacturer of die cast components and parts				
2018	Substantially All Assets of Sivyer Steel Corporation	Crestwood Capital Management, Inc.	Manufacturer of custom steel castings and components				
2018	Canton Drop Forge, Inc.	Park-Ohio Holdings Corp.	Manufacturer of closed die forgings				
2018	Consolidated Casting Corporation	Signicast Corporation	Manufacturer of customer precision investment castings				
2018	Wellman Dynamics Corporation	TCTM Financial FS LLC	Manufacturer of aluminum and magnesium sand castings				

Sources: S&P Capital IQ and public data

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Metal Stamping

Year	Toward	Acquirer	Tarret Pusiness Description			
Closed	Target Name:	Acquirer Name:	Target Business Description			
2020	Incodema Inc.	CORE Industrial Partners LLC	Manufacturer of prototype sheet metal stampings			
2020	Precision Industries, Inc.	Live Ventures Incorporated (NasdaqCM:LIVE)	Manufacturer of stampings and assemblies			
2020	Traverse City Products, Inc.	Charter Capital Partners, Colfax Creek Capital, LLC	Manufacturer of roll forms, stampings and assemblies			
2020	P-K Tool & Manufacturing Co.	Modineer Co., Inc.	Manufacturer of metal stampings for automotive applications			
2019	Tooling Dynamics, LLC	Sigma Electric Manufacturing Corp	Manufacturer of metal stampings and machined parts			
2019	Phoenix Metal Fabricating, Inc.	Canerector Inc.	Manufacturer of metal stampings			
2019	Morris & Broms, LLC	Mearthane Products Corporation	Manufacturer of metal stampings and fabricated products			
2019	Michigan Spring & Stamping LLC	Hugo Kern und Liebers GmbH & Co. KG	Manufacturer of metal stamped engineered products			
2018	Defiance Metal Products Inc.	Mayville Engineering Company, Inc.	Manufacturer of metal stamped and fabricated components			
2018	Prestige Stamping, Inc.	Auxo Investment Partners	Manufacturer of washers and small stampings			
2018	Fanello Industries, Inc.	Ryerson Holding Corporation	Provider of blanking and stamping services			

Metal Machining

	Name:	Name:	
2020	Instrument Development Corporation, Inc.	BERKS Group	Manufacturer of precision machined components
2020	Broad Peak Manufacturing, LLC	Oberg Medical	Provider of high-precision machining and finishing services
2020	Axis Machine Company, Inc.	Rol-Tec, Inc.	Provider of grinding and machining services
2020	G.S. Precision, Inc.	AE Industrial Partners, LP	Manufacturer of precision machined components
2020	UMA Precision Machining, Inc.	Prather Capital Partners	Provider of precision machining services
2020	Mill Creek Machining, Inc.	Consolidated Machine & Tool Holdings, LLC	Provider of contract machining and assembly services
2019	Swiss-Tech, LLC.	BERKS Group	Manufacturer of precision machined components
2019	Geauga Machine and Tool	Custom Materials, Inc.	Manufacturer of steel and aluminum machining and molds
2019	Velocity Manufacturing Corp	Movement Industries Corporation	Provider of CNC machining services
2019	Alco Manufacturing Corporation LLC	MiddleGround Capital	Manufacturer of machined products for industrial OEMs
2018	K-Fab, Inc.	Danco Machine DPMS, Inc.	Provider of precision machining, milling, and turning services
2018	Imperial Machine & Tool Co Inc	Kaiser Aluminum Corporation	Manufacturer of machined and fabricated components
2018	Tech Manufacturing, LLC	Domaille Engineering, LLC	Aerospace parts and components machining
2018	Mid-America Precision Products, LLC	TGP Investments, LLC	Manufacturer of custom machined precision parts
2018	Hayes Manufacturing Services	Prototek Sheetmetal Fabrication	Metal machine shop
2018	Ameriflex, Inc	MW Industries Inc	Manufacturer of machined metal components
2018	LCP Machine, Inc	Consolidated Machine & Tool Holdings, LLC	Provider of precision machining services
2018	C&A Tool Engineering, Inc.	New Hampshire Ball Bearings, Inc.	Manufacturer of machined parts and components

Sources: S&P Capital IQ and public data

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Metal Fabrication

Year							
Closed	<u>Target</u>	<u>Acquirer</u>	Target Business Description				
	Name:	Name:					
2020	Finnco Fabricating, LLC	Newel Capital, LLC; Optimus Capital Partners, LLC	Provider of metal fabrication services				
2020	Mainstay Manufacturing Solutions, Inc.	IMH Products, Inc.	Provider of metal fabrication and machining services				
2020	Delva Tool & Machine Corp	Consolidated Machine & Tool Holdings, LLC	Provider of contract fabrication, assembly services				
2020	ReFab Liquidation, LLC	DeWys Manufacturing, Inc.	Provider of metal fabrication services				
2020	Gerard Daniel Worldwide, Inc.	Graycliff Partners LP	Manufacturer of wire cloth, mesh and related components				
2020	Business and Assets of Moz Designs, Inc.	Armstrong World Industries, Inc. (NYSE:AWI)	Provider of custom metal fabrication services				
2020	CVIP Inc.	Air Products and Chemicals, Inc. (NYSE:APD)	Welder, fabricator, and assembler of process piping				
2020	Pipe Fabrication Assets of McDermott and The Shaw Group	Shaw Acquisitions Holdings	Manufacturer of pipes				
2020	Rainier Welding Inc.	Ranch Creek Partners, LLC	Provider of aluminum fabrication services				
2020	Laser Access, Inc.	Blitzblow USA LLC; US Advanced Systems LLC	Provider of laser cutting and welding services				
2020	Excel Fabrication, LLC	Alpine 4 Technologies, Ltd. (OTCPK:ALPP)	Provider of fabrication and installation services				
2020	Fab-Tech, Inc.	Whiterock Capital	Manufacturer of sheet metal components				
2019	Altair Technologies, Inc	Integrated Manufacturing Group, LLC	Provider of contract manufacturing and brazing services				
2019	Porter's Group, LLC	Maysteel Industries, LLC	Manufacturer of fabricated metal parts				
2019	MRK Industries, Inc	Armstrong World Industries, Inc.	Manufacturer of standard and custom metal products				
2019	Global Brass and Copper Holdings	Wieland-Werke AG	Fabricator and processor of non-ferrous metal products				
2019	Matrix Composites Inc.	ITT Inc.	Fabricator of metal composites				
2019	Pierce Industries LLC	Enbi Global, Inc	Manufacturer of fabricated metal products				
2019	CNC Products LLC	Parker Holdings, Inc	Precision sheet metal fabricator				
2019	Seitz Stainless LLC	Caloris Engineering LLC	Custom and contract fabricator of metal products				
2019	Advanced Manufacturing And Development, Inc.	Montage Partners, Inc.	Provider of custom precision sheet metal fabricating services				
2019	Quality Industries	Anchor Partners	Precision sheet metal fabricator				
2019	Mid-State Machine & Fabricating Corporation	CenterGate Capital	Provider of metal fabricating, welding, and machining service				
2018	Vander-Bend Manufacturing, Inc.	Aterian Investment Partners, LLC	Provider of fabrication and contract manufacturing services				
2018	Metal Tronics	NSA Industries	Precision sheet metal fabricator				
2018	Modineer Co	Westbourne Capital Partners	Manufacturer of custom metal parts				
2018	Carlson Products LLC	The Vollrath Company, LLC	Manufacturer of fabricated components and parts				
2018	American Precision Fabricators	Alpine 4 Technologies	Precision sheet metal fabricator				
2018	Man-Tex Mfg & Welding, Inc	FEMCO HOLDINGS, LLC	Provider of fabricating, welding, and machining services				
2018	KMS Fab	Reliance Steel & Aluminum	Precision sheet metal fabricator				
2018	CEEMCO, Inc	Arsco Custom Metals	Manufacturer of fabricated metal parts and subassemblies				
2018	Hirschfeld Holdings LP	W&W-AFCO Steel LLC	Fabricator of engineered structural steel components				
2018	John White Tank Company, Inc	Cohn & Gregory Supply	Provider of metal fabrication services				
2018	Voyager, Inc.	Wait Industries, LLC	Manufacturer of precision fabricated metal products				

Sources: S&P Capital IQ and public data



Performance of Metal Forming Indices vs. S&P 500



Publicly-traded metal forming companies are currently trading at 8.6x LTM EBITDA while metal machining and fabrication peers are trading at 10.7x LTM EBITDA. Both indices have lagged the performance of the S&P 500 over the prior two years.

Publicly Traded Metal Forming Companies

(\$ in millions)	Stock	Enterprise	% of 52-	<u>LT</u>	<u>M</u>	<u>Revenue</u>	<u>Growth</u>	LTM M	argins	<u>EV /</u>	LTM_	<u>EV /</u>	NFY_
Company	<u>Ticker</u>	<u>Value</u>	Wk. High	<u>Revenue</u>	<u>EBITDA</u>	<u>1 Year</u>	3 Years	<u>G. Profit</u>	<u>EBITDA</u>	<u>Revenue</u>	<u>EBITDA</u>	<u>Revenue</u>	<u>EBITDA</u>
Metal Forming													
Allegheny Technologies Incorporated	ATI	\$ 2,563	48.1%	\$ 3,342	281	(19.3%)	(0.7%)	12.5%	8.4%	0.8x	9.1x	0.9x	11.6x
American Axle & Manufacturing	AXL	3,936	65.7%	4,703	629	(30.8%)	(5.0%)	11.3%	13.4%	0.8x	6.3x	0.7x	4.2x
Arconic Inc.	ARNC	3,599	93.8%	5,921	501	(19.7%)	-	15.0%	8.5%	0.6x	7.2x	0.6x	5.1x
Kaiser Aluminum Corporation	KALU	1,265	61.9%	1,269	158	(17.3%)	(2.7%)	19.8%	12.4%	1.0x	8.0x	1.1x	7.9x
Mayville Engineering Company, Inc.	MEC	278	94.6%	365	25	(28.3%)	-	8.7%	6.8%	0.8x	11.2x	0.7x	6.3x
Worthington Industries, Inc.	WOR	2,707	89.8%	2,906	211	(19.9%)	(2.4%)	15.1%	7.2%	0.9x	12.9x	0.9x	9.4x
		Median	77.8%	\$3,124	\$ 246	(19.8%)	(1.5%)	13.7%	8.4%	0.8x	8.6x	0.8x	7.1x
		Mean	81.2%	\$3,033	\$ 305	(23.2%)	(2.0%)	14.0%	9.7%	0.8x	9.1x	0.8x	6.6x
Metal Machining & Fabrication													
Kaman Corporation	KAMN	1,485	70.7%	837	141	12.4%	(22.0%)	31.8%	16.9%	1.8x	10.5x	1.8x	10.5x
Magellan Aerospace Corporation	MAL	345	45.9%	609	75	(20.8%)	(5.8%)	13.5%	12.4%	0.6x	4.6x	0.6x	4.3x
Northwest Pipe Company	NWPX	282	74.0%	289	43	9.1%	28.4%	17.3%	14.9%	1.0x	6.6x	1.0x	6.1x
Proto Labs, Inc.	PRLB	3,219	77.2%	441	101	(4.0%)	11.0%	50.3%	22.8%	7.3x	32.0x	7.3x	29.3x
RBC Bearings Incorporated	ROLL	3,739	85.0%	666	174	(7.3%)	1.6%	39.9%	26.1%	5.6x	21.5x	6.1x	24.6x
Rexnord Corporation	RXN	5,280	91.4%	1,981	375	(3.4%)	2.3%	39.4%	18.9%	2.7x	14.1x	2.6x	11.7x
Shiloh Industries, Inc.	SHLO	348	n/a	816	17	(25.6%)	(8.3%)	6.2%	2.0%	0.4x	21.1x	n/a	n/a
Spirit AeroSystems Holdings, Inc.	SPR	4,502	29.6%	4,488	(156)	(42.0%)	(13.1%)	(3.9%)	(3.5%)	1.0x	(28.8x)	1.2x	37.5x
The Timken Company	TKR	6,642	96.1%	3,518	683	(7.5%)	6.9%	29.5%	19.4%	1.9x	9.7x	1.8x	9.4x
Valmont Industries, Inc.	VMI	3,742	94.0%	2,781	344	(0.0%)	0.9%	26.7%	12.4%	1.3x	10.9x	1.3x	10.5x
		Median	77.2%	\$ 826	\$ 121	(5.7%)	1.2%	28.1%	15.9%	1.6x	10.7x	1.8x	10.5x
		Mean	73.8%	\$1,642	\$ 180	(8.9%)	0.2%	25.1%	14.2%	2.4x	10.2x	2.6x	16.0x

Note: Valuation data as of 11/12/2020 Sources: S&P Capital IQ and public data





About Prairie Capital Advisors

Prairie offers investment banking, ESOP advisory, valuation advisory

and financial reporting valuations to support the growth and ownership transition strategies of middlemarket companies. Headquartered in Oakbrook Terrace, Illinois, Prairie is a leading advisor to closely-held

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use of or reliance upon the information

companies nationwide.

Industry Experience



























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