INDUSTRIAL AUTOMATION INSIGHTS
JANUARY 2024

Citizens

EXECUTIVE SUMMARY

INTRODUCTION

Citizens is pleased to present our Industrial Automation Insights with commentary and analysis on trends across this dynamic space benefitting from the global automation megatrend. Our covered Industrial Automation subsectors include Automation Machinery, Connectivity Products, Flow Control, Material Handling Equipment, Motion Control, Process Equipment, Sensors and Instrumentation and the Systems Integrators that architect, code, connect and install the equipment, instruments and software. We have a dedicated team of experienced senior bankers with strong relationships across the Industrial Automation landscape of companies and investors.

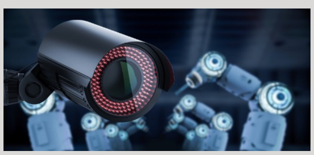
NEWSLETTER TOPICS

INDUSTRIAL AUTOMATION SUBSECTORS

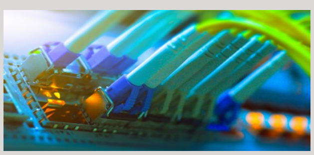
AUTOMATION MACHINERY

MATERIAL HANDLING EQUIPMENT

SENSORS & INSTRUMENTATION



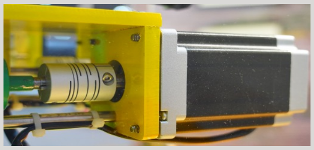
CONNECTIVITY PRODUCTS



SYSTEMS INTEGRATORS

PROCESS EQUIPMENT

MOTION CONTROL



FLOW CONTROL

INDUSTRIAL AUTOMATION TEAM

Michael Musser
Managing Director
704.496.5843
michael.musser@citizensbank.com

Matt Mueller
Managing Director
216.574.2103
matthew.mueller@citizensbank.com

Justin O'Rourke
Vice President
216.574.2106
justin.orourke@citizensbank.com

FACTS ABOUT CITIZENS M&A ADVISORY

ADVISORY SERVICES

Sell-side & buy-side advisory, capital raising, restructuring & bankruptcy, financial opinions

TRANSACTIONS

250+ transactions in the last 5 years totaling **$55B** in value

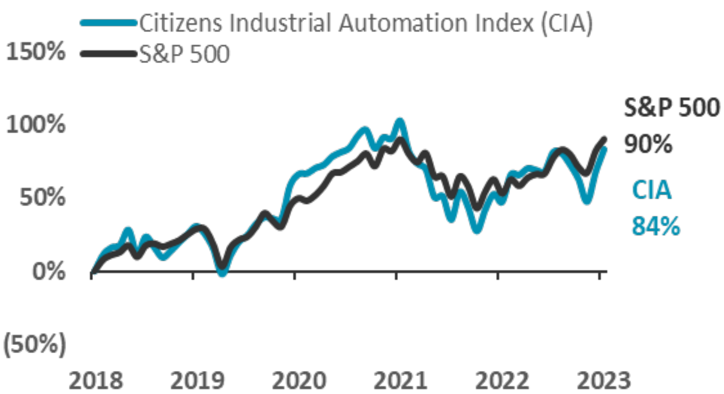
TEAM

100+ investment banking professionals across the U.S.

CORPORATE FINANCE | CAPITAL MARKETS & ADVISORY | TREASURY & RISK MANAGEMENT

INDUSTRIAL AUTOMATION: DRIVING TO INDUSTRY 4.0

PUBLIC TRADING METRICS[1]

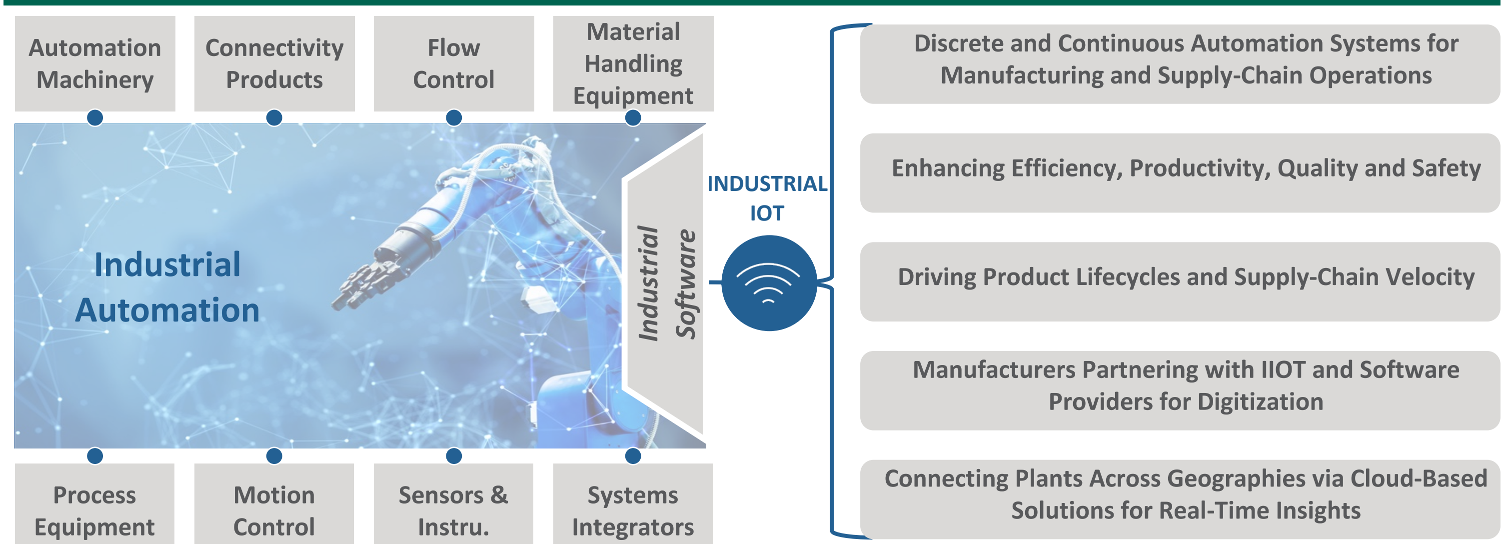


EV/NTM EBITDA (MEDIAN)		1-YR INDEX
Diversified Automation	14.7x	27.4%
Material Handling	7.9x	60.7%
Connectivity Products	9.4x	22.3%
Optoelectronics	18.3x	18.1%
Flow Control	13.2x	34.7%
Motion Control	14.3x	17.3%
Process Equipment	9.2x	10.9%
Sensors & Instruments	15.1x	8.1%
Systems Integrators	10.4x	31.6%
S&P 500	13.2x	24.8%

SELECT INDUSTRY EVENTS

SHOW	LOCATION	DATES
ATX West	Anaheim, CA	Feb. 6-8, 2024
MODEX 2024	Atlanta, GA	Mar. 11-14, 2024
AUTOMATE	Chicago, IL	May 6-9, 2024
IMTS+ powered by AMT	Chicago, IL	Sep. 9-14, 2024
The Assembly Show	Rosemont, IL	Oct. 22-24, 2024
Pack Expo International	Chicago, IL	Nov. 3-6, 2024
Rockwell Automation – Automation Fair®	Anaheim, CA	Nov. 18-21, 2024

INDUSTRIAL AUTOMATION UNDERPINNED BY IoT



1) Citizens Industrial Automation (CIA) Index consists of 124 publicly-traded industrial automation companies across 9 subsectors tracked by Citizens
Source: S&P Capital IQ (12/31/23)

CITIZENS' EXPERIENCE

REPRESENTATIVE TRANSACTIONS

AVTRON INDUSTRIAL AUTOMATION
has been acquired by
Nidec
a portfolio company of
MORGENTHALER

CIRCOR
$492,037,799
SENIOR CREDIT FACILITIES
Sole Lead Arranger and Sole Bookrunner

COLUMBUS McKINNON
$545,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger, Joint Bookrunner and Co-Syndication Agent

CONVERGIX AUTOMATION SOLUTIONS
A PORTFOLIO COMPANY OF
Crestview
$170,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger, Joint Bookrunner and Co-Syndication Agent

DRESSER NATURAL GAS SOLUTIONS
A PORTFOLIO COMPANY OF
FIRST RESERVE
$235,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

fives north american
sold its Guiding Systems business to
MAXCESS
a portfolio company of
BERTRAM CAPITAL

Godfrey & Wing
recapitalized by
TK Capital, LLC

II-VI
$4,000,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

KPI KUECKER PULSE INTEGRATION
A PORTFOLIO COMPANY OF
ARES
$20,000,000
SENIOR CREDIT FACILITIES
Administrative Agent

leadec Industrial Services
a portfolio company of
Triton
has acquired
DIVERSIFIED AUTOMATION

Matthews INTERNATIONAL
$785,000,000
SENIOR CREDIT FACILITIES
Left Lead Arranger, Joint Bookrunner and Administrative Agent

MHS ABOVE + BEYOND
FORTNA
A PORTFOLIO COMPANY OF
THL Thomas H. Lee Partners
$1,650,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger

MHS ABOVE + BEYOND
A PORTFOLIO COMPANY OF
THL Thomas H. Lee Partners
$685,500,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

PREDICTIVE SERVICE
has merged with
Lewellyn
a portfolio company of
ALIGN CAPITAL PARTNERS

Rodix
has been acquired by
HUNTER VALLEY COMPANY LLC
and
VITRUVIANGROUP

RegalRexnord
$4,700,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger

ROPER
$2,250,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

SYSTEMS CONTROL
A PORTFOLIO COMPANY OF
COMVEST PARTNERS
$215,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

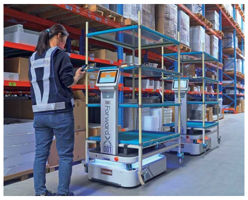
TERADYNE
$400,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Co-Syndication Agent

WATLOW Powered by Possibility
A PORTFOLIO COMPANY OF
TINICUM
$565,000,000
SENIOR CREDIT FACILITIES
Joint Lead Arranger and Joint Bookrunner

NOTABLE NEWS STORIES

FACTORY REPRESENTATION

Transforming Valve Data into Dollars
(Source: International Society of Automation)
We live in a digitally connected world, surrounded by mountains of potentially valuable process data. The underlying premise is that more data equals more value, so any device or software application that gathers more data must be worth the purchase price. (Link to Article)



Robotics as a service (RaaS) Catching Fire
(Source: Modern Materials Handling)
RaaS is not just for autonomous mobile robots. It can also apply to larger robots with more fixed infrastructure. Vendors of smart picking robots may offer RaaS, as do some providers of automated storage and retrieval. RaaS is also attractive to bundle support and services as well. (Link to Article)

Adoption of 3D Bin Picking Across Industries
(Source: Association for Advancing Automation)
In many high-volume manufacturing environments, the shift to automated bin picking has been taking place for several years. AI and machine vision are unlocking new handling, gripping and manipulation technologies. Advancements in 3D picking may entice new industries to evaluate automation. (Link to Article)

Trends Driving Automation on the Farm
(Source: McKinsey & Company)
Economic pressures and the push toward more sustainable practices are driving next-generation automation technologies, benefitting farmer, regulators and consumers alike. Automation improves working conditions, lowers operating skills required by works and reduces a farm's labor costs. (Link to Article)

Getting Warehouse Automation Right
(Source: McKinsey & Company)
A warehouse automation revolution is underway, but too many project are not delivering the results. To maximize ROI, leaders must select solutions that can adapt to their company's unique business needs. (Link to Article)

Building (and Maintaining) your MRO Tech Workforce
(Source: Material Handling 24/7)
Maintenance techs are a challenging group to hire and retain. Being successful at hiring and retaining techs is much more than a dollars and cents equation. There are challenges to being successful both within and outside the organization. (Link to Article)

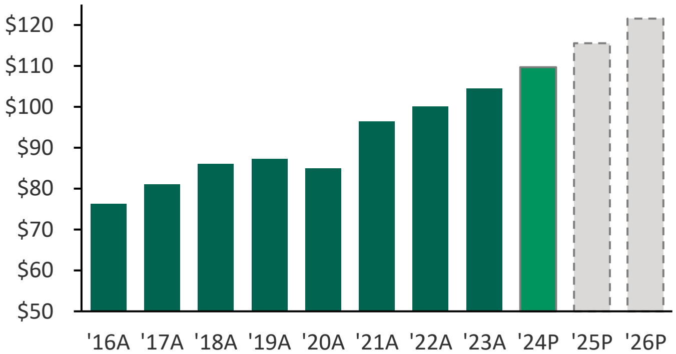
15 Robots Powered by AI and Their Insane Demo Videos
(Source: Indian Express)
From Tesla Bot to Alter3, here is a look at humanoid robots that stunned the world in 2023. The humanoid robots mentioned have unique capabilities, are backed by AI and have advanced monitoring mechanism. (Link to Article)

KEY ECONOMIC INDICATORS

GLOBAL ECONOMIC INDICATORS

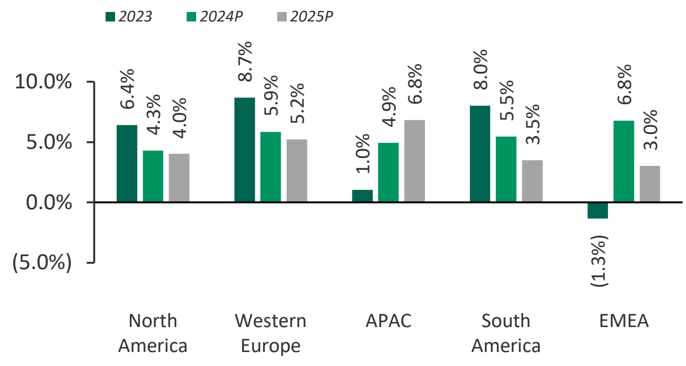
Global Annual Real GDP

($ in trillions)



Source: International Monetary Fund as of June 2023

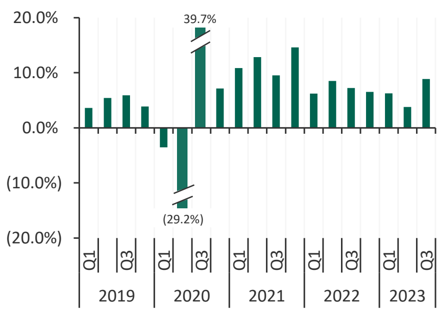
G20 Weighted Average Real GDP Growth Outlook



Source: International Monetary Fund as of June 2023

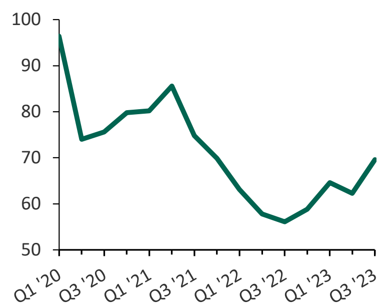
U.S. ECONOMIC INDICATORS

Real US GDP Growth



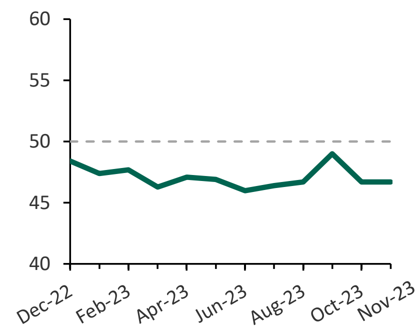
Source: Federal Reserve Bank of St. Louis

Consumer Sentiment Index



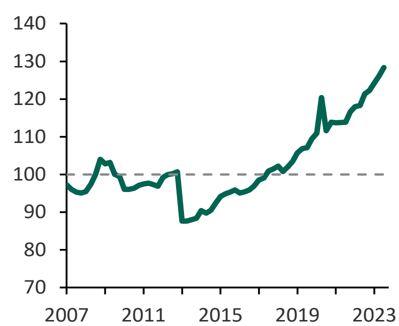
Source: University of Michigan as of Q3'23

ISM® Purchasing Managers Index – Mfg.



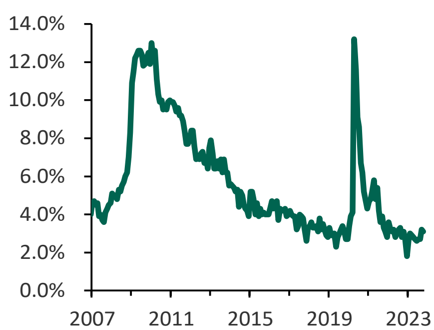
Source: Institute for Supply Management®

Manufacturing Unit Labor Cost Index



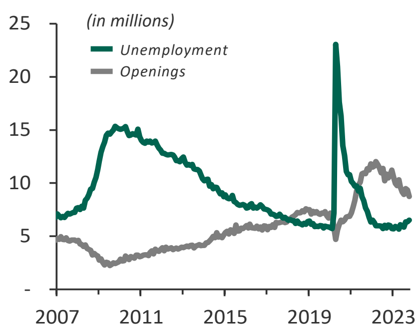
Source: Bureau of Labor Statistics as of Q3'23

Manufacturing Unemployment Rate



Source: Bureau of Labor Statistics as of October 2023

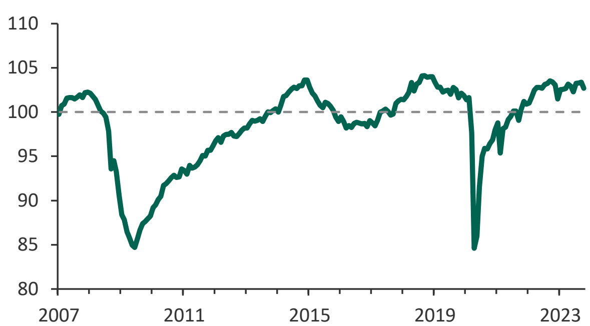
Job Openings Vs. Unemployment



Source: Economic Policy Institute as of October 2023

INDUSTRY TRENDS

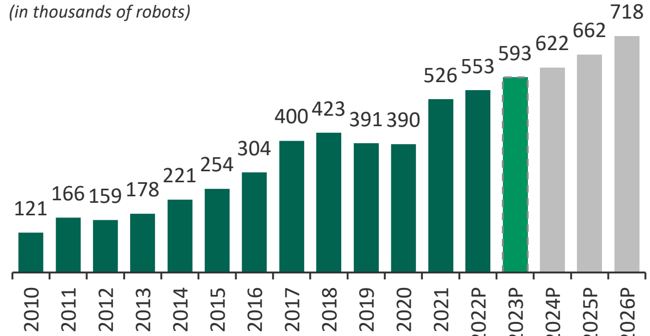
Industrial Production Index



Source: Federal Reserve Bank of St. Louis as of October 2023

Global Installations of Industrial Robots

(in thousands of robots)



Source: International Federation of Robotics

SPOTLIGHT TRANSACTIONS

AMI ADVANCED MICRO INSTRUMENTS
a portfolio company of
McNally CAPITAL
has been acquired by
ENPRO

- In December 2023, Enpro (NYSE: NPO) announced it had entered into a definitive agreement to acquire Advanced Micro Instruments, a portfolio company of McNally Capital, for $210 million, representing a valuation of approximately 13x normalized 2023 EBITDA
- Advanced Micro Instruments is a provider of highly engineered, application-specific analyzers and sensing technologies that detect contaminants in a variety of markets, including natural gas, biogas, industrial, cryogenic, food, laboratory and aerospace
- The acquisition will bolster Enpro's strategy of investing in both products and technologies that safeguard critical environments in key secular growth markets

FW MURPHY PRODUCTION CONTROLS
a subsidiary of
GENISYS CONTROLS LLC
to be acquired by
DOVER

- In December 2023, Dover Corporation (NYSE: DOV) acquired FW Murphy Production Controls from Genisys Controls for $530 million
- FW Murphy Production Controls is a provider of control, remote monitoring, digital-twin-based predictive maintenance and adaptive performance optimization components, solutions and instrumentation for reciprocating compressors and associated drive systems
- FW Murphy will become part of Dover Precision Components within Dover's Pumps and Process Solutions segment
- FW Murphy Production Controls expected to generate revenues of $120 million and adjusted EBITDA of $41 million in 2023

DESTACO
a subsidiary of
DOVER
to be acquired by
STABILUS

- In October 2023, Stabilus (ETR: STM) announced an agreement to acquire DESTACO, a subsidiary of Dover Corporation (NYSE: DOV) for $680 million
- DESTACO is a manufacturer of automation, work holding and remote handling components and solutions, including clamping and gripping, linear positioning and robotic tooling and gripping systems
- This acquisition will strengthen Stabilus' industrial automation business and underline their setup as an industrial and automotive supplier while also improving total revenue generation and EBIT margins

CLEARPATH ROBOTICS™
has been acquired by
Rockwell Automation

- In October 2023, Rockwell Automation (NYSE: ROK) acquired Clearpath Robotics, a developer of Autonomous Mobile Robots for $565 million in cash, with up to $50 million in contingent consideration
- Clearpath Robotics manufactures autonomous robotics for industrial applications. Its OTTO Motors division develops AMRs and fleet management and navigation software
- This acquisition will assist Rockwell Automation in their goal of simplifying and transforming the function of material handling throughout the manufacturing plant with an end-to-end production logistics solution

Source: S&P Capital IQ; Mergermarket, Pitchbook, Press Releases

NOTABLE M&A TRANSACTIONS

($ in millions)

Announced Date	Target	Acquiror	Target Business Description	EV	EV / EBITDA
Dec-23	Spectrum Automation Company	Bulldog Factory Automation; Huizenga Group	Designs, develops and manufactures specialty parts feeding and material handling systems	ND	
Dec-23	ACI	Dwyer; Arcline Investment Management	Designer, manufacturer, and distributor of sensors and instruments for the building automation, data center, and indoor air quality markets	ND	
Nov-23	RLE Technologies	May River Capital	Provider of facility environment monitoring, fluid leak detection, and airflow management products	ND	
Nov-23	Sentry Equipment and Erectors	ProMach; LGP	Supplier of conveyors, packaging equipment, container handling solutions and services	ND	
Nov-23	FCI Fluid Components International LLC	PST Process Sensing Technologies; AEA	Specialist manufacturer of thermal mass flow meters and switches	ND	
Nov-23*	MHM Automation	Bettcher; KKR	Designer and supplier of automated systems and equipment for food processing and material handling applications	$121	21.4x
Nov-23	Fabmatics	Scio Automation; AEA	Specializes in automating intralogistics processes in semiconductor fabs, semiconductor process plants and other high-tech production environments	ND	
Nov-23	Svanehøj	ITT	Supplier of deep well gas cargo pumps, fuel and energy pumps and tank control systems, as well as aftermarket services	$395	ND
Nov-23	AdapTek Systems	Huizenga Group	Designer of custom automation systems for assembly, testing and other unique process	ND	
Oct-23	cei	2Connect interconnection solutions; Rivean Capital	Manufacturer of specialty high speed cable assemblies for machine vision and Industry 4.0 environments	ND	
Oct-23	AG Automation Group	E Tech Group; Falfurrias Capital	System Integrator specialized in automation, robotics and cybersecurity	ND	
Oct-23	Sirius Automation	Addtronics; Kaho Partners	Developer of laboratory robotic systems for biotech and pharmaceutical companies	ND	
Oct-23	Ferretto Group Automation & Services Business	wipro	Provides turnkey intralogistics automation solutions including ASRS and material handling systems, and WMS software and aftermarket service	ND	
Sep-23	Sierramotion	Allient	Designs and engineers turn-key motion components and mechatronic solutions for robotic, medical, industrial, defense, semiconductor and other precision applications	ND	

Source: S&P Capital IQ; Mergermarket, Pitchbook, Company Announcements
* Denotes transaction is pending

NOTABLE M&A TRANSACTIONS

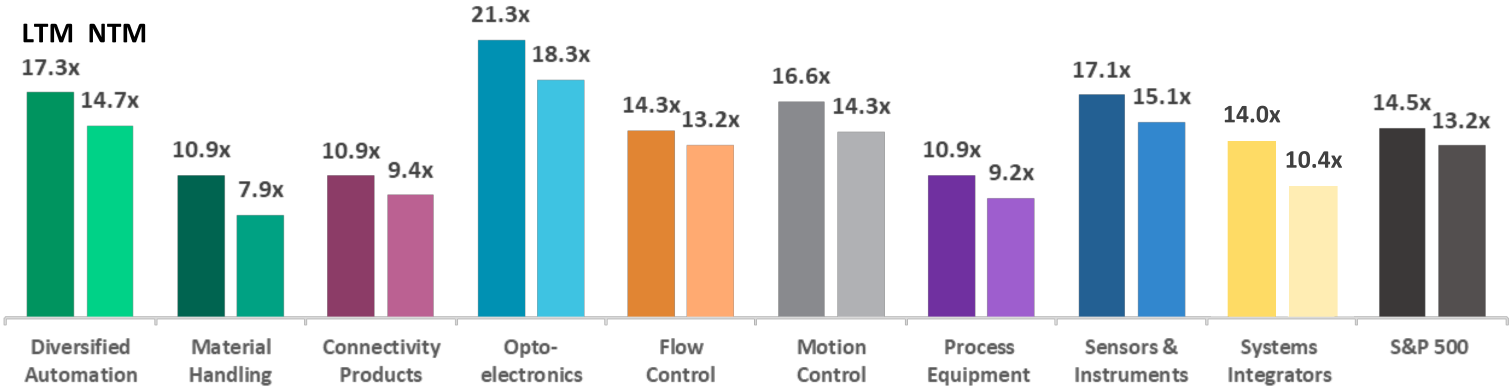
($ in millions)

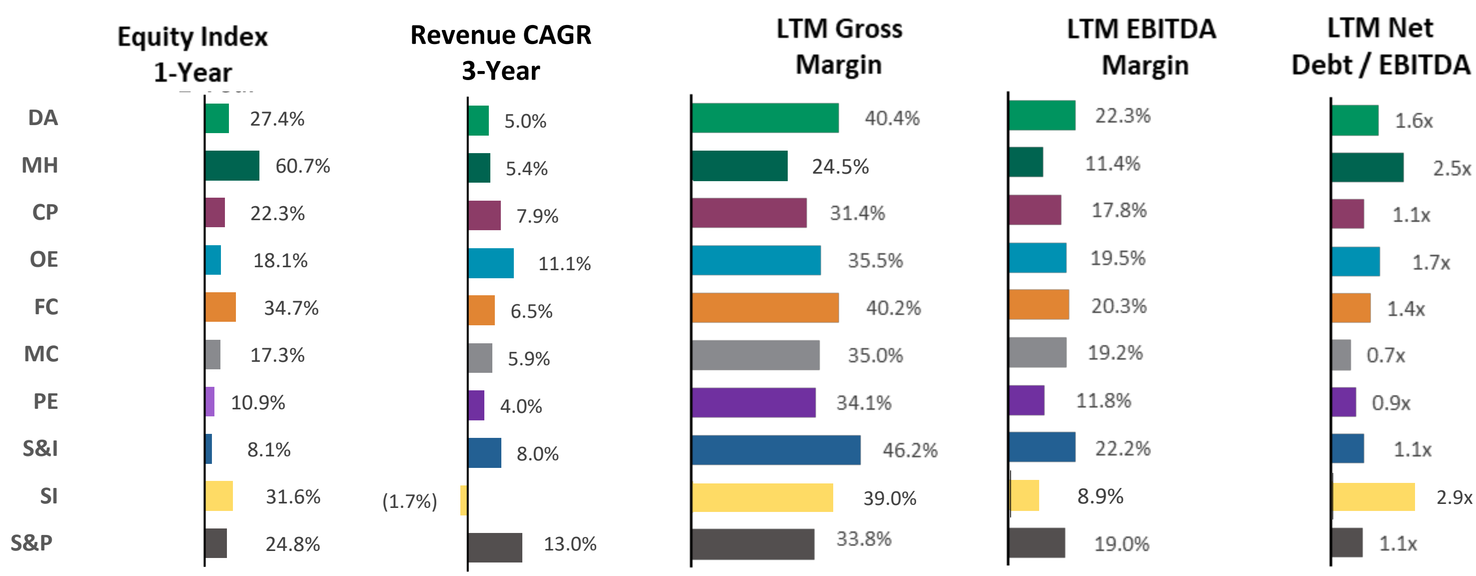
Announced Date	Target	Acquiror	Target Business Description	EV	EV / EBITDA
Sep-23	RegalRexnord Motor and Generator Business	WEG	Industrial Motors and Generators business, which designs and manufactures electric motors and generators for diverse industrial applications	$400	7.8x
Sep-23	Avidity Science / ShoreView	ATS	Designer and manufacturer of automated water purification solutions and delivery, control and monitoring, and service solutions for biomedical and life science applications	$195	ND
Sep-23	United Electronic Industries	AMETEK	Provider of data acquisition and control solutions for the aerospace, defense, energy and semiconductor industries	ND	
Aug-23	SCIO Automation / Quadriga Capital	AEA	An industrial automation systems integrator, providing automated intralogistics, discrete and process automation solutions and services	ND	
Aug-23	Ultimation	MCE Motion & Control Enterprises / Frontenac	Provider of proprietary conveyor solutions and integrator of Jervis Webb Conveyor Systems	ND	
Aug-23*	afag	Emerson	Provider of electric linear motion, feeding and handling automation solutions	ND	
Aug-23	Flexim when measuring matters	Emerson	Provider of clamp-on ultrasonic flow measurement solutions for liquids, gases and steam	ND	
Aug-23	NPI	Duravant / Warburg Pincus	Designer and manufacturer of sorters and other automated material handling solutions for high volume sortation and fulfillment of parcels and packages	ND	
Jul-23	QEI The Solutions Provider	HC	Offers automation products, SCADA software solutions, distribution management systems and related services	ND	
Jul-23	PPM	Duravant / Warburg Pincus	Provider of smartly engineered equipment and integrated lines for the food processing industry	ND	
Jul-23	Strahman Group Precision and Performance	Flow Control Holdings / Audax Group	Manufacturer of washdown equipment, sampling valves, and valve automation products for pharma, food and beverage and industrial markets	ND	
Jul-23	Process Insights / Union Park Capital	IGP	Designs and manufactures analytical instrumentation used to provide compositional analysis and measure contaminants within gases and liquids	ND	
Jul-23	Automation & Control Concepts	GrayMatter / Hamilton Robinson Capital Partners	Provides systems integration, industrial controls, MES data collection and HMI/SCADA design	ND	
Jul-23	yazzoom	ATS	Provider of artificial intelligence and machine learning-based tools for industrial production	ND	

Source: S&P Capital IQ; Mergermarket, Pitchbook, Company Announcements
* Denotes transaction is pending

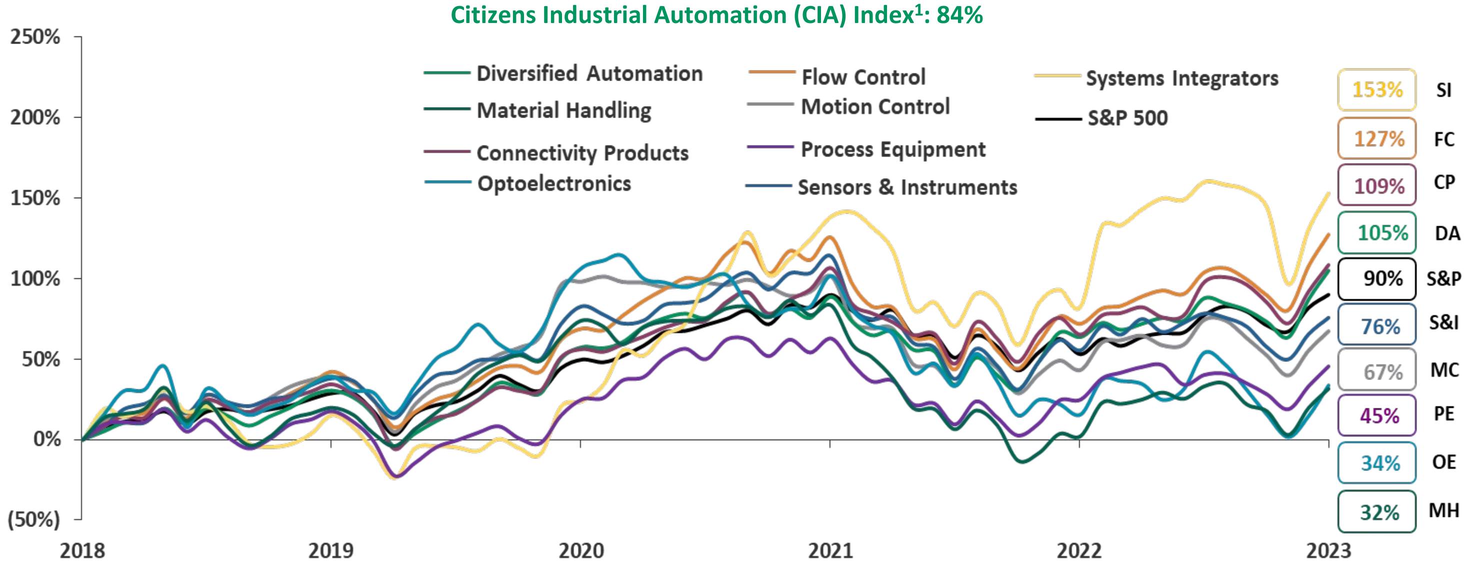
PUBLIC MARKET VALUATIONS

EV/EBITDA MULTIPLES (MEDIAN)





Citizens Industrial Automation (CIA) Index[1]: 84%

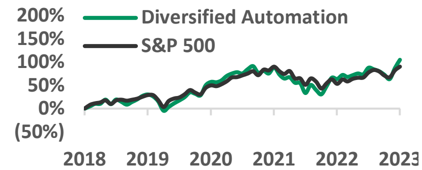


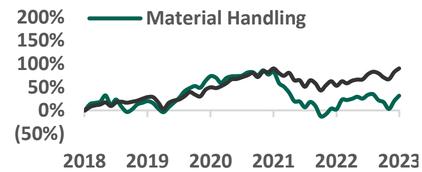
1) Citizens Industrial Automation (CIA) Index consists of 124 publicly-traded industrial automation companies across 9 subsectors tracked by Citizens
Source: S&P Capital IQ (12/31/23)

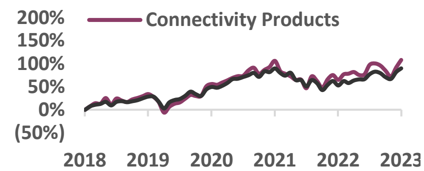
PUBLIC MARKET VALUATION

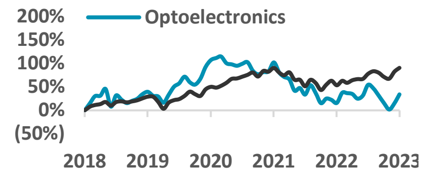
Segment	Select Index Members	NTM EBITDA Multiple (Low)	NTM EBITDA Multiple (Median)	NTM EBITDA Multiple (High)
DIVERSIFIED AUTOMATION	ABB, Emerson, Roper, Teradyne, Honeywell, Schneider Electric	11.1x	14.7x	20.5x
MATERIAL HANDLING	CMCO (Columbus McKinnon), Daifuku, Interroll, Kardex, KION Group, Noblelift	5.9x	7.9x	22.2x
CONNECTIVITY PRODUCTS	Amphenol, Belden, Hubbell, TT Electronics, Legrand, TE Connectivity	6.2x	9.4x	16.9x
OPTO-ELECTRONICS	Coherent, IPG Photonics, nLight, Novanta, Lumentum	11.4x	18.3x	31.2x
FLOW CONTROL	Atlas Copco, Curtiss-Wright, Flowserve, Graco, IDEX, Nordson	5.5x	13.2x	35.0x
MOTION CONTROL	Fanuc, Nidec, Rockwell Automation, Rotork, WEG, Yaskawa	4.2x	14.3x	31.2x
PROCESS EQUIPMENT	Alfa Laval, Hillenbrand, Kadant, Krones, Valmet	2.2x	9.2x	30.2x
SENSORS & INSTRUMENTS	Ametek, Cognex, Fortive, Keyence, MTS, Teledyne Technologies	6.0x	15.1x	34.4x
SYSTEMS INTEGRATORS	ATS, aumann, max automation, manz, Mikron	8.3x	10.4x	13.8x

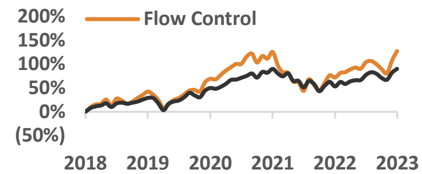
5-YR STOCK RETURN

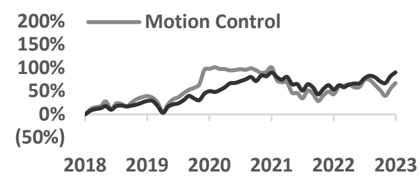


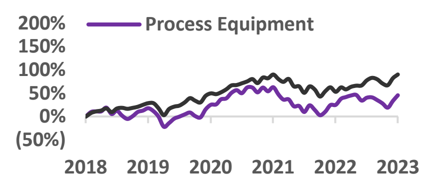


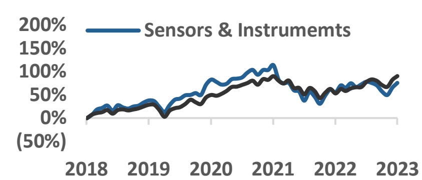


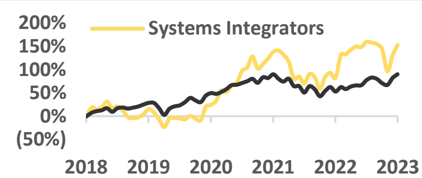












Source: S&P Capital IQ (12/31/23)

PUBLIC COMPARABLES

Diversified Automation

Company	As of 12/31	% of 52-Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Siemens	$186.48	99.3%	$146,748	$191,453	$85,348	38.1%	13,065	15.3%	2.4x	2.2x	2.1x	14.7x	11.1x	20.2%	7.2%
Honeywell Intn'l	209.71	96.5%	138,251	151,154	36,408	34.0%	$8,713	23.9%	1.4	4.2	3.8	17.3	14.9	6.1%	(1.1%)
Schneider Electric S.E.	199.50	99.4%	111,888	127,711	39,214	41.5%	7,411	18.9%	2.1	3.3	3.0	17.2	14.5	18.9%	8.0%
Eaton Corporation plc	240.82	99.5%	96,159	103,438	22,613	35.5%	4,654	20.6%	1.8	4.6	4.2	22.2	19.4	14.3%	(1.0%)
ABB Ltd	44.05	98.5%	81,183	85,429	31,814	34.7%	5,269	16.6%	0.9	2.7	2.2	16.2	14.3	9.7%	1.7%
Roper Technologies, Inc.	545.17	98.8%	58,236	64,815	5,995	69.8%	2,438	40.7%	3.0	10.8	9.6	26.6	20.5	20.9%	4.3%
Emerson Electric Co.	97.33	96.7%	55,626	61,641	15,165	49.0%	3,869	25.5%	0.1	4.1	3.5	15.9	12.4	(12.0%)	(9.1%)
Hexagon AB	11.84	89.8%	31,776	36,117	5,928	65.2%	1,800	30.4%	2.1	6.1	5.8	20.1	15.0	32.3%	9.7%
Teradyne, Inc.	108.52	91.0%	16,590	15,793	2,738	57.6%	689	25.2%	(0.8)	5.8	5.4	22.9	17.2	(25.5%)	11.2%
ESCO Technologies Inc.	117.03	98.7%	3,020	3,100	956	39.3%	180	18.8%	0.7	3.2	2.7	17.2	13.8	31.0%	5.7%
Mean					**$24,618**	**46.5%**	**$4,809**	**23.6%**	**1.3x**	**5.0x**	**4.2x**	**19.0x**	**15.3x**	**10.6%**	**3.3%**
Median					**$18,889**	**40.4%**	**$4,262**	**22.3%**	**1.6x**	**4.1x**	**3.7x**	**17.3x**	**14.7x**	**16.6%**	**5.0%**

Material Handling Equipment

Company	As of 12/31	% of 52-Wk HI	Maket Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Material Handling Equipment															
KION GROUP AG	$42.44	94.6%	$5,565	$12,503	$12,335	23.2%	$1,529	12.4%	5.4x	1.0x	1.0x	8.2x	6.0x	5.5%	8.1%
Daifuku Co., Ltd.	19.83	91.5%	7,351	6,963	4,209	17.6%	439	10.4%	(0.9)	1.7	1.6	15.9	14.6	26.1%	3.7%
AutoStore Holdings Ltd.	1.93	71.8%	6,471	6,903	618	66.0%	228	36.9%	1.8	11.2	9.6	30.3	20.8	60.3%	51.8%
Jungheinrich	36.46	89.3%	3,719	6,476	5,911	38.9%	579	9.8%	3.3	1.1	1.1	11.2	6.4	24.0%	5.4%
Konecranes Plc	44.56	98.1%	3,529	4,097	4,194	54.7%	529	12.6%	1.3	1.0	0.9	7.7	6.9	21.7%	0.4%
Symbotic Inc.	51.33	80.0%	4,297	3,749	1,177	17.8%	(192)	NM	7.1	3.2	1.8	NM	22.2	NM	81.0%
Interroll Holding AG	3,133.91	78.5%	2,573	2,445	716	57.6%	129	18.1%	(0.9)	3.4	3.4	18.9	17.4	(7.5%)	5.9%
Mitsubishi Logisnext	9.57	93.2%	1,021	2,360	4,707	24.5%	493	10.5%	NA	0.5	NA	4.8	NA	66.1%	1.2%
Kardex Holding AG	255.88	96.9%	1,974	1,876	702	32.2%	90	12.8%	(1.3)	2.7	2.4	20.8	16.1	33.7%	6.3%
Columbus McKinnon	39.02	91.0%	1,120	1,567	978	36.8%	143	14.7%	3.4	1.6	1.5	10.9	8.9	35.1%	1.1%
Hyster-Yale Materials	62.19	94.2%	1,069	1,511	4,076	17.7%	234	5.7%	NA	0.4	0.4	6.4	6.1	28.5%	2.5%
Noblelift Intelligent	2.64	69.2%	680	639	1,027	21.2%	87	8.5%	(0.6)	0.6	0.6	7.3	5.9	18.9%	29.5%
Haulotte Group SA	2.76	65.5%	81	411	786	16.6%	12	1.5%	12.5	0.5	0.5	NM	6.4	38.2%	(0.1%)
Mean					**$3,187**	**32.7%**	**$331**	**12.8%**	**2.8x**	**2.2x**	**2.1x**	**12.9x**	**11.5x**	**29.2%**	**15.1%**
Median					**$1,177**	**24.5%**	**$228**	**11.4%**	**1.8x**	**1.1x**	**1.3x**	**10.9x**	**7.9x**	**27.3%**	**5.4%**

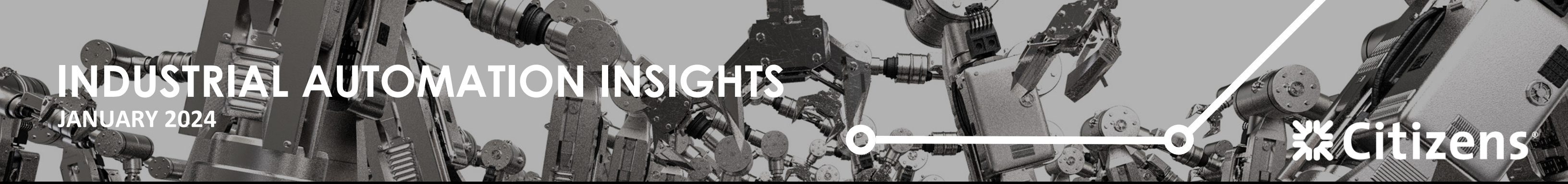
Connectivity Products

Company	As of 12/31	% of 52-Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Amphenol Corporation	$99.13	116.3%	$59,310	$61,950	$12,645	32.0%	$3,011	23.8%	1.0x	4.9x	4.3x	20.6x	16.5x	10.4%	15.3%
TE Connectivity Ltd.	140.50	99.8%	43,664	46,730	16,457	31.2%	3,575	21.7%	0.9	2.8	2.9	13.1	12.1	8.1%	(0.1%)
Legrand SA	103.13	101.9%	27,079	29,438	9,253	50.6%	1,938	20.9%	1.2	3.2	3.0	15.2	12.6	14.2%	8.0%
Hubbell Incorporated	328.93	98.8%	17,638	18,522	5,077	31.6%	956	18.8%	1.3	3.6	3.4	19.4	16.9	15.6%	7.8%
Belden Inc.	77.25	79.9%	3,220	3,844	2,638	36.5%	442	16.8%	1.5	1.5	1.7	8.7	6.7	9.8%	6.9%
Methode Electronics	22.73	44.2%	809	1,019	1,180	22.4%	152	12.8%	1.1	0.9	1.2	6.7	6.2	(0.4%)	5.2%
Bel Fuse Inc.	66.77	110.6%	848	809	690	29.4%	100	14.6%	0.5	1.2	0.4	8.1	6.5	21.1%	9.9%
TT Electronics plc	1.97	73.3%	349	524	743	22.0%	67	9.0%	2.3	0.7	0.7	7.8	6.2	14.7%	8.9%
Mean					**$6,085**	**32.0%**	**$1,280**	**17.3%**	**1.2x**	**2.3x**	**2.2x**	**12.4x**	**10.5x**	**11.7%**	**7.7%**
Median					**$3,858**	**31.4%**	**$699**	**17.8%**	**1.1x**	**2.1x**	**2.3x**	**10.9x**	**9.4x**	**12.3%**	**7.9%**

Optoelectronics

Company	As of 12/31	% of 52-Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Coherent Corp.	$43.53	72.0%	$6,594	$12,219	$4,869	34.0%	$994	20.4%	3.1x	2.5x	2.5x	12.3x	11.5x	53.4%	34.5%
Novanta Inc.	168.41	89.8%	6,031	6,312	888	44.8%	173	19.5%	1.7	7.1	6.8	36.5	31.2	18.7%	11.2%
Lumentum Holdings Inc.	52.42	80.4%	3,512	4,384	1,578	35.5%	161	10.2%	1.6	2.8	2.7	27.3	25.0	(9.3%)	3.0%
IPG Photonics Corp	108.54	76.5%	5,093	3,959	1,322	36.9%	259	19.6%	(2.7)	3.0	2.4	15.3	11.4	(11.0%)	2.8%
nLIGHT, Inc.	13.50	84.9%	630	519	215	19.6%	(36)	NM	NM	2.4	0.4	NM	NM	(21.4%)	11.1%
Mean					**$1,774**	**34.2%**	**$310**	**17.4%**	**0.9x**	**3.6x**	**3.0x**	**22.8x**	**19.8x**	**6.1%**	**12.5%**
Median					**$1,322**	**35.5%**	**$173**	**19.5%**	**1.7x**	**2.8x**	**2.5x**	**21.3x**	**18.3x**	**(9.3%)**	**11.1%**

$ in millions, except per share
Note: NL stands for Net Leverage (Debt less cash / LTM EBITDA)
Source: S&P Capital IQ (12/31/23)



PUBLIC COMPARABLES

Motion Control

Company	As of 12/31	% of 52 - Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics Rev	GM%	EBITDA	%	NL	TEV/ LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA	LTM Growth	3 Yr CAGR
Parker-Hannifin Corp	$460.70	99.3%	$59,189	$70,932	$19,680	35.0%	$4,679	23.8%	3.2x	3.6x	3.5x	15.2x	14.6x	32.3%	3.5%
Rockwell Automation	310.48	89.1%	35,575	37,658	9,058	41.0%	1,850	20.4%	1.3	4.2	4.0	20.4	17.9	24.3%	5.0%
WEG S.A.	7.24	83.3%	31,607	31,235	6,516	32.4%	1,355	20.8%	(0.4)	4.8	4.1	23.1	19.6	26.1%	30.9%
SMC Corporation	524.76	90.3%	33,836	29,750	5,519	49.8%	1,789	32.4%	(2.2)	5.4	5.3	16.6	14.9	31.3%	8.0%
Nidec Corporation	39.45	65.2%	22,666	26,047	15,742	19.3%	1,679	10.7%	1.9	1.7	1.6	15.5	10.2	31.5%	9.1%
Fanuc Corporation	28.72	77.5%	27,194	23,588	5,780	35.6%	1,467	25.4%	(2.2)	4.1	4.2	16.1	15.5	33.0%	4.9%
Shenzhen Inovance Tech	8.81	81.4%	23,558	23,145	3,751	34.9%	605	16.1%	(0.8)	6.2	4.7	38.2	25.9	39.3%	46.0%
Regal Rexnord Corporatio	148.02	89.2%	9,821	15,805	5,887	33.1%	1,069	18.2%	5.5	2.7	2.4	14.8	10.7	37.1%	17.2%
YASKAWA Electric Corp	40.80	85.6%	10,668	11,127	4,027	35.5%	593	14.7%	0.7	2.8	2.7	18.8	17.2	(10.1%)	1.9%
Woodward, Inc.	136.13	96.7%	8,176	8,760	2,915	23.9%	424	14.6%	1.5	3.0	2.7	20.6	15.4	29.5%	(6.3%)
OMRON Corporation	45.60	70.3%	8,979	8,564	6,042	44.1%	742	12.3%	(0.5)	1.4	1.5	11.5	11.0	25.1%	1.4%
The Timken Company	80.15	84.3%	5,655	7,606	4,760	30.3%	913	19.2%	2.3	1.6	1.6	8.3	8.2	12.5%	5.9%
AirTAC International	32.49	80.8%	6,499	6,570	924	45.9%	347	37.5%	0.2	7.1	5.9	18.9	14.9	10.6%	17.9%
Novanta Inc.	168.41	89.8%	6,031	6,312	888	44.8%	173	19.5%	1.7	7.1	6.8	36.5	31.2	18.7%	11.2%
Allient Inc.	30.21	67.3%	490	691	569	31.7%	71	12.5%	NA	1.2	NA	9.7	NA	36.5%	10.7%
Allied Motion Tech	0.00	0.0%	2,450	4,805	294	87.9%	241	81.9%	NA	16.3	NA	19.9	NA	22.7%	10.6%
Rotork plc	4.11	93.5%	3,535	3,412	885	45.8%	195	22.1%	(0.6)	3.9	3.5	17.5	13.9	23.3%	(1.4%)
Hiwin Technologies Corpo	7.56	86.1%	2,675	2,751	787	32.5%	164	20.9%	0.3	3.5	3.1	16.7	12.8	(15.2%)	13.2%
THK Co., Ltd.	19.15	83.6%	2,347	2,052	2,592	24.4%	374	14.4%	(0.7)	0.8	0.8	5.5	4.2	11.5%	2.5%
Columbus McKinnon	39.02	91.0%	1,120	1,567	978	36.8%	143	14.7%	3.4	1.6	1.5	10.9	8.9	35.1%	1.1%
CKD Corporation	17.59	99.3%	1,174	1,195	1,010	28.8%	165	16.3%	NA	1.2	1.2	7.3	4.9	27.5%	7.1%
Mean					**$4,827**	**37.5%**	**$923**	**22.3%**	**0.8x**	**4.0x**	**3.1x**	**17.5x**	**14.2x**	**21.4%**	**9.4%**
Median					**$3,751**	**35.0%**	**$593**	**19.2%**	**0.7x**	**3.5x**	**2.9x**	**16.6x**	**14.3x**	**25.1%**	**5.9%**

Flow Control

Company	As of 12/31	% of 52 - Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics Rev	GM%	EBITDA	%	NL	TEV/ LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA	LTM Growth	3 Yr CAGR
Atlas Copco AB	$16.92	99.0%	$78,779	$81,091	$16,356	43.2%	$4,042	24.7%	0.6x	5.0x	4.4x	20.1x	16.7x	45.9%	10.8%
Ingersoll Rand Inc.	77.34	99.0%	31,307	32,900	6,678	41.3%	1,615	24.2%	1.1	4.9	4.6	20.4	17.4	24.6%	43.1%
Xylem Inc.	114.36	96.4%	27,570	29,146	6,752	37.6%	1,119	16.6%	1.7	4.3	3.5	26.0	17.7	29.6%	1.7%
IDEX Corporation	217.11	90.4%	16,419	17,153	3,296	44.5%	922	28.0%	0.9	5.2	5.2	18.6	18.5	15.1%	8.4%
Nordson Corporation	264.16	99.3%	15,061	16,699	2,629	54.2%	793	30.2%	2.2	6.4	5.8	21.0	18.1	7.5%	5.7%
VAT Group AG	494.74	98.7%	14,833	15,066	1,233	60.5%	391	31.7%	0.5	12.2	12.8	38.5	35.0	8.6%	0.1%
Graco Inc.	86.76	98.7%	14,644	14,147	2,184	51.9%	696	31.9%	(0.8)	6.5	6.1	20.3	18.5	7.7%	9.2%
Pentair plc	72.71	99.2%	12,019	13,875	4,123	36.4%	924	22.4%	2.4	3.4	3.2	15.0	14.0	5.8%	11.7%
Spirax-Sarco Engineering	133.49	84.7%	9,825	10,889	2,175	70.7%	524	24.1%	1.9	5.0	4.7	20.8	18.9	22.4%	9.0%
ITT Inc.	119.32	98.5%	9,796	9,627	3,229	33.1%	659	20.4%	NA	3.0	2.8	14.6	12.9	15.6%	1.6%
Curtiss-Wright Corp	222.79	99.1%	8,520	9,422	2,817	37.4%	622	22.1%	1.8	3.3	3.2	15.1	14.4	14.1%	0.9%
Crane Company	118.14	95.4%	6,712	6,691	3,379	41.8%	693	20.5%	NA	2.0	3.0	9.7	7.7	8.5%	3.2%
Watts Water Tech	208.34	97.7%	6,943	6,675	2,011	45.9%	385	19.2%	(0.9)	3.3	2.8	17.3	14.8	8.2%	7.3%
IMI plc	21.40	96.3%	5,531	6,510	2,746	46.2%	560	20.4%	1.9	2.4	2.2	11.6	9.4	13.8%	3.0%
Flowserve Corporation	41.22	98.2%	5,408	6,295	4,194	29.9%	491	11.7%	2.4	1.5	1.4	12.8	11.4	19.7%	(2.8%)
Interpump Group S.p.A.	51.21	85.5%	5,478	6,063	2,462	35.3%	580	23.5%	1.4	2.5	2.4	10.5	9.9	31.2%	14.9%
Aalberts N.V.	42.90	80.5%	4,744	5,642	3,641	62.1%	627	17.2%	1.3	1.5	1.5	9.0	7.5	9.9%	4.4%
Franklin Electric Co., Inc.	96.65	90.0%	4,458	4,527	2,082	33.8%	322	15.5%	0.4	2.2	2.1	14.1	13.6	16.9%	15.8%
Badger Meter, Inc.	154.37	90.3%	4,530	4,367	668	39.2%	135	20.2%	(1.5)	6.5	5.8	32.3	27.2	28.6%	10.0%
Sulzer Ltd	100.83	92.9%	3,421	3,784	3,832	31.4%	435	11.4%	0.8	1.0	0.9	8.7	7.0	3.1%	(5.2%)
Mueller Water Products	14.40	86.6%	2,248	2,535	1,276	29.7%	194	15.2%	1.5	2.0	2.1	13.1	12.5	11.3%	8.8%
Burckhardt Compression	595.09	81.7%	2,018	2,079	1,058	26.9%	170	16.0%	0.6	2.0	1.6	12.3	11.7	39.7%	2.8%
CIRCOR International	0.47	94.2%	493	2,027	2,585	42.9%	149	5.8%	3.6	0.8	0.7	13.6	5.5	17.7%	3.8%
Lindsay Corporation	129.16	80.2%	1,425	1,373	659	31.8%	118	17.9%	(0.6)	2.1	2.0	11.6	9.9	5.4%	20.2%
The Gorman-Rupp	35.53	96.8%	931	1,321	645	28.2%	105	16.2%	7.1	2.0	1.9	12.6	10.5	64.8%	9.4%
Thermon Group Holdings	32.57	96.9%	1,098	1,177	475	43.8%	96	20.3%	1.7	2.5	2.3	12.2	10.2	63.6%	(4.8%)
Mean					**$3,199**	**41.5%**	**$668**	**20.3%**	**1.3x**	**3.6x**	**3.4x**	**16.6x**	**14.3x**	**20.7%**	**7.4%**
Median					**$2,607**	**40.2%**	**$542**	**20.3%**	**1.4x**	**2.7x**	**2.8x**	**14.3x**	**13.2x**	**15.3%**	**6.5%**

$ in millions, except per share
Note: NL stands for Net Leverage (Debt less cash / LTM EBITDA)
Source: S&P Capital IQ (12/31/23)

PUBLIC COMPARABLES

Process Equipment

Company	As of 12/31	% of 52-Wk HI	Maket Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Process Equipment															
Alfa Laval Corporate AB	$39.33	98.6%	$16,255	$17,589	$6,068	32.8%	$1,041	17.1%	1.4x	2.9x	2.5x	16.9x	12.7x	46.3%	3.9%
GEA Group	41.01	84.8%	7,037	6,764	5,876	34.7%	671	11.4%	(0.4)	1.2	NA	10.1	7.5	12.9%	1.9%
Valmet Oyj	28.53	78.8%	5,254	5,842	6,089	25.6%	741	12.2%	0.9	1.0	1.0	7.9	7.5	38.0%	12.7%
Andritz AG	61.63	83.6%	6,095	5,581	9,348	44.9%	918	9.8%	(0.6)	0.6	0.6	6.1	5.5	31.7%	4.2%
Hillenbrand, Inc.	47.85	89.0%	3,346	5,146	2,826	34.1%	483	17.1%	3.6	1.8	1.5	10.6	9.2	3.2%	8.6%
Krones AG	122.70	92.9%	3,876	3,676	5,152	49.5%	471	9.1%	(0.5)	0.7	0.7	7.8	6.5	23.6%	1.9%
Marel hf.	3.43	76.2%	2,587	3,505	1,926	34.2%	190	9.8%	4.7	1.8	1.8	18.5	12.7	26.0%	10.0%
Kadant Inc.	280.31	97.2%	3,282	3,336	951	43.4%	200	21.0%	0.3	3.5	3.2	16.7	15.5	13.1%	8.7%
John Bean Tech	99.45	79.0%	3,166	3,285	2,237	29.3%	297	13.3%	0.4	1.5	1.8	11.1	11.0	23.8%	3.6%
FLSmidth & Co. A/S	42.08	81.9%	2,387	2,561	3,609	23.6%	234	6.5%	0.9	0.7	0.7	10.9	7.7	32.6%	1.9%
Dürr Aktiengesellschaft	23.36	58.0%	1,617	2,207	4,955	22.5%	346	7.0%	1.6	0.4	7.7	36.0	30.2	24.2%	3.2%
Komax Holding AG	235.34	64.7%	1,207	1,326	884	58.3%	118	13.3%	1.1	1.5	1.4	11.2	9.9	68.7%	13.0%
Piovan S.p.A.	11.69	95.1%	597	692	627	54.0%	75	11.9%	NA	1.1	NA	9.3	NA	76.5%	31.6%
Shibuya Corporation	16.92	87.9%	468	210	698	18.7%	82	11.8%	NA	0.3	0.3	NM	2.2	(5.5%)	(4.0%)
Mean					**$3,661**	**36.1%**	**$419**	**12.2%**	**1.1x**	**1.4x**	**1.9x**	**13.3x**	**10.6x**	**29.6%**	**7.2%**
Median					**$3,217**	**34.1%**	**$321**	**11.8%**	**0.9x**	**1.1x**	**1.5x**	**10.9x**	**9.2x**	**25.1%**	**4.0%**

Sensors & Instruments

Company	As of 12/31	% of 52-Wk HI	Maket Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
Keyence Corporation	$430.28	86.1%	$104,353	$97,494	$6,542	82.0%	$3,518	53.8%	(2.4x)	14.9x	13.7x	27.7x	26.0x	57.9%	8.8%
AMETEK, Inc.	164.89	99.6%	38,056	39,375	6,492	35.9%	1,977	30.5%	0.8	6.1	5.4	19.9	17.9	12.1%	6.0%
Mettler-Toledo Intn'l Inc.	1,212.96	75.1%	26,302	28,340	3,911	59.4%	1,243	31.8%	1.7	7.2	7.4	22.8	22.0	2.6%	9.2%
Fortive Corporation	73.63	92.2%	25,876	27,900	6,012	58.9%	1,593	26.5%	1.5	4.6	4.4	17.5	15.9	11.9%	8.5%
Teledyne Technologies	446.29	99.5%	21,058	23,798	5,629	43.2%	1,375	24.4%	2.1	4.2	4.0	17.3	16.3	9.7%	19.9%
Halma plc	29.02	90.3%	10,947	11,734	2,450	52.0%	529	21.6%	1.5	4.8	4.3	22.2	18.3	39.9%	8.0%
MKS Instruments, Inc.	102.87	90.1%	6,880	10,894	3,816	45.0%	835	21.9%	4.7	2.9	3.1	13.0	12.2	27.3%	23.1%
Sensata Technologies	37.57	69.1%	5,686	8,594	4,076	32.8%	905	22.2%	3.3	2.1	2.1	9.5	8.8	5.8%	5.3%
MSA Safety Incorporated	168.83	91.0%	6,637	7,218	1,736	46.7%	454	26.2%	1.8	4.2	3.9	15.9	15.1	22.0%	2.9%
Cognex Corporation	41.74	70.1%	7,185	6,673	880	72.2%	189	21.5%	(1.5)	7.6	6.9	35.3	34.4	(18.5%)	11.5%
Spectris plc	48.02	96.9%	4,877	4,684	1,855	57.1%	302	16.3%	(0.6)	2.5	2.3	15.5	11.2	23.8%	(6.7%)
Yokogawa Electric Corp	18.63	84.6%	4,866	4,326	3,498	46.2%	595	17.0%	(1.6)	1.2	1.2	7.3	7.4	33.4%	(1.2%)
INFICON Holding AG	1,415.54	96.7%	3,460	3,476	632	45.5%	141	22.3%	NA	5.5	5.3	24.6	23.6	19.3%	15.1%
Renishaw plc	45.47	83.0%	3,306	3,060	875	51.2%	200	22.9%	(1.0)	3.5	7.7	36.0	32.0	14.7%	5.3%
Chroma ATE Inc.	6.85	69.6%	2,904	2,902	635	55.5%	170	26.7%	(0.1)	4.6	4.0	17.1	12.4	11.4%	16.6%
Jenoptik AG	31.08	84.9%	1,779	2,320	1,149	35.6%	216	18.8%	2.6	2.0	NA	10.7	9.1	30.0%	4.7%
CTS Corporation	43.74	88.2%	1,363	1,278	568	35.7%	133	23.4%	(0.4)	2.2	2.4	9.6	8.3	6.7%	7.8%
Basler Aktiengesellschaft	12.72	29.0%	391	450	245	44.5%	3	1.1%	1.1	1.8	1.7	NM	13.1	(0.8%)	18.9%
Mistras Group, Inc.	7.32	88.1%	222	421	692	32.5%	53	7.7%	4.4	0.6	0.7	7.9	6.0	1.0%	(2.8%)
Vishay Precision Group	34.07	74.6%	461	419	362	42.0%	60	16.5%	NA	1.2	1.2	7.0	6.1	8.0%	8.5%
FARO Technologies, Inc.	22.53	61.3%	427	420	364	47.8%	(12)	(3.2%)	0.4	1.2	1.2	NM	19.3	7.6%	(3.2%)
Mean					**$2,496**	**48.7%**	**$690**	**21.4%**	**1.0x**	**4.0x**	**4.1x**	**17.7x**	**16.0x**	**15.5%**	**7.9%**
Median					**$1,736**	**46.2%**	**$302**	**22.2%**	**1.1x**	**3.5x**	**3.9x**	**17.1x**	**15.1x**	**11.9%**	**8.0%**

Systems Integrators

Company	As of 12/31	% of 52-Wk HI	Market Cap.	Ent. Value	LTM Operating Statistics				NL	TEV/				LTM Growth	3 Yr CAGR
					Rev	GM%	EBITDA	%		LTM Rev	NTM Rev	LTM EBITDA	NTM EBITDA		
SYSTEM INTEGRATORS															
ATS Corporation	$43.24	90.4%	$4,277	$4,991	$2,120	28.9%	$292	13.8%	2.5x	2.4x	2.3x	17.1x	13.8x	105.3%	20.3%
Hirata Corporation	44.62	74.5%	463	637	543	21.4%	55	10.2%	NM	1.2	1.1	NM	10.8	(15.4%)	(4.6%)
MAX Automation SE	6.39	93.1%	263	386	467	53.1%	36	7.6%	3.3	0.8	0.8	10.9	8.5	32.7%	(1.4%)
Aumann AG	20.82	103.1%	304	187	284	32.2%	11	4.0%	NM	0.7	NA	NM	8.3	47.0%	(6.1%)
Manz AG	13.64	49.5%	117	178	299	45.9%	10	3.5%	NM	0.6	0.5	NM	10.4	10.1%	1.0%
Mikron Holding AG	18.17	93.2%	301	173	382	63.9%	41	10.8%	NM	0.5	NA	NM	NA	34.8%	(2.0%)
Mean					**$682**	**40.9%**	**$74**	**8.3%**	**2.9x**	**1.0x**	**1.2x**	**14.0x**	**10.4x**	**21.8%**	**1.2%**
Median					**$424**	**39.0%**	**$38**	**8.9%**	**2.9x**	**0.7x**	**0.9x**	**14.0x**	**10.4x**	**33.7%**	**(1.7%)**

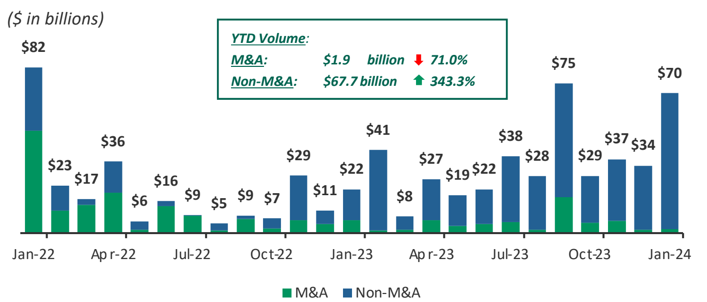
$ in millions, except per share
Note: NL stands for Net Leverage (Debt less cash / LTM EBITDA)
Source: S&P Capital IQ (12/31/23)

CAPITAL MARKETS: FINANCING MARKET TRENDS

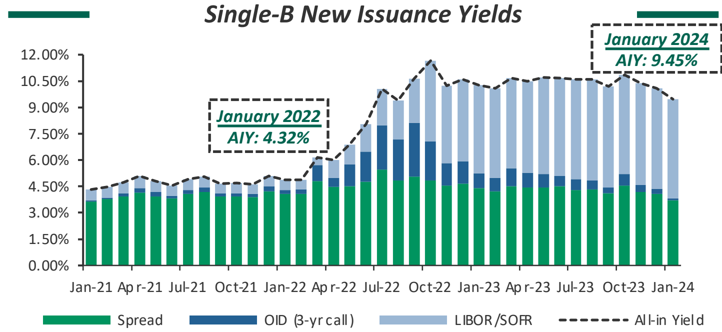
INSTITUTIONAL LOAN MARKET

- **Cautiously Optimistic Tone:** The tone in the Institutional Loan Market is cautiously optimistic as 4Q momentum carries into the new year. The Fed's direction on (and number of) rate cuts could continue to accelerate the recovery in loan issuance.
- **Increasing Opportunistic Volume:** Primary market volume has picked up considerably in recent weeks, with over 70 transactions coming to market for January YTD volume of ~ $110 billion. Opportunistic transactions continue to drive the bulk of market activity, with repricings and refinancings representing >75% of deal flow in January YTD, with a handful of dividend recaps and M&A financings thrown in the mix.
- **2024 Volume Outlook:** Market participants expect volume to rise by ~20% in 2024, although the total is expected to remain below the 10-year average of $380 billion. Refinancings / Amend & Extend transactions should continue to drive activity, but we could see a rise in M&A starting in 2Q. LBO volume is forecasted to rise by 10% from a 13-year low of $31 billion in 2023.
- **Technical Concerns and Muted Leverage:** In addition to broader headwinds such as macroeconomic uncertainty and geopolitical concerns, the loan asset class faces its own unique challenges. Elevated SOFR could translate to more downgrades and rise in loan defaults, while competition from high yield and the private market will persist in 2024. Leverage levels are materially lower than prior years, driven by the cost of capital paradigm. As rates start to tick down and the current stock and bond rally persists, we expect more aggressive structures and leverage levels will follow suit as we progress through 2024.
- **Yields Contracting as Secondary Approaches Par:** As rates recede and SOFR is projected to decline alongside the Fed, single B new issuance yields have started contracting and the Secondary Market is approaching par. Limited new money M&A, in particular, is driving spreads lower.
- **CLO Outlook:** Coming off an outstanding year for loan returns, the forecast for CLO issuance is flat, with a greater share coming from middle-market CLOs. There are diverse views on the direction of AAA spreads, but upcoming Basel III regulatory capital standards could pave the way for the return of U.S. bank buyers.

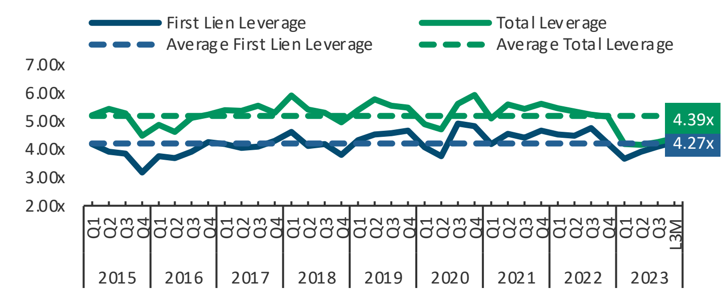
Institutional Loan Volume



Single-B New Issuance Yields



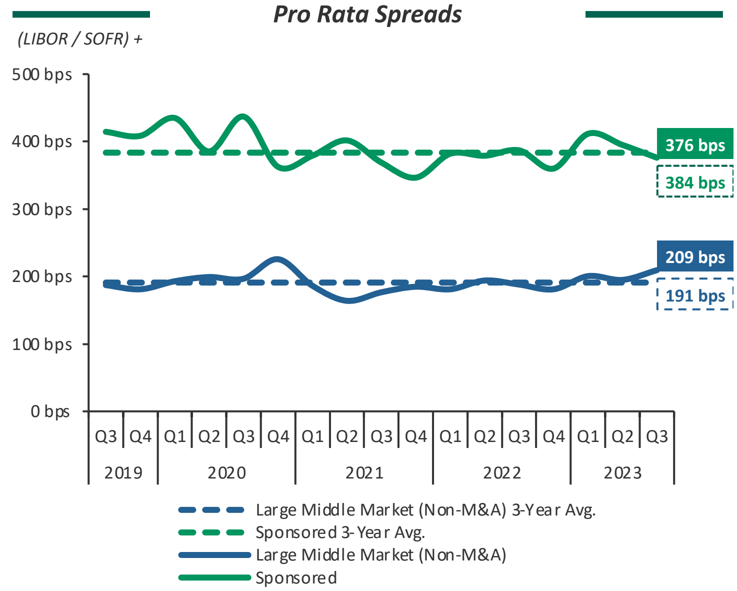
Adjusted Leverage for M&A Driven Loan Deals



PRO RATA MARKET

- **2023 Volume Recap:** After 2022's record year in volume, the Pro Rata Market was more modest in 2023 due to banks being more selective when evaluating refinancings and new lending opportunities. As a result, many borrowers elected to stay on the sidelines unless a refinancing was necessary to address a looming maturity or additional capital was required to finance an acquisition or working capital needs.
- **Strategically Deploying Capital:** A primary focus for many banks in 2023 was needing cross-sell / deposits in order to commit capital to a transaction. This theme is expected to remain in 2024, although the magnitude of these asks toned-down in the latter part of 2023, providing signs for a more open Pro Rata Market in 2024.
- **2024 Outlook:** With budgets being reset and uncertainty around potential capital requirements from regulators in 2024, banks will be eager to put capital to work in early 2024; accordingly, both refinancing and new activity are expected to be strong out of the gate, with many deals launching in early January. Returns are expected to remain a key discussion point when electing to commit capital and new financings are expected to come at a premium to the market to garner sufficient interest through syndication.

Pro Rata Spreads



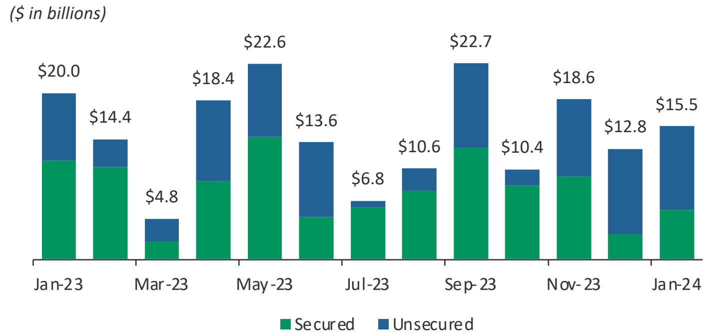
Source: Citizens Capital Markets Research; Lev Fin Insights; Pitchbook LCD

CAPITAL MARKETS: FINANCING MARKET TRENDS

HIGH YIELD MARKET

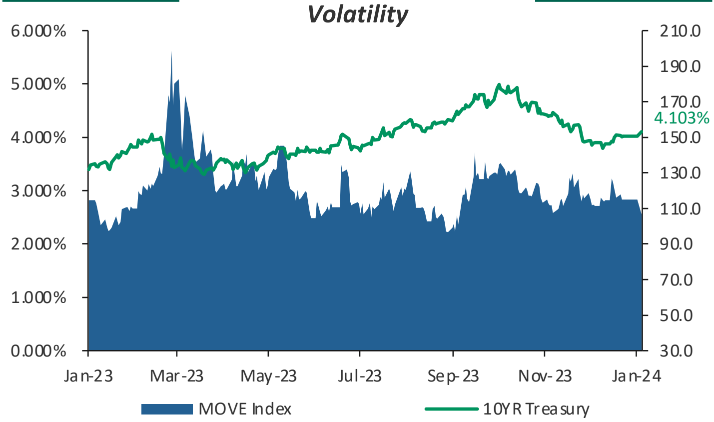
- **Challenging 2023 Market:** Another tough year in High Yield issuance was characterized by further rate hikes, rate volatility, high new issue premiums and scarcity of strong market issuance windows for issuers. While the worst of new issue supply may be behind us, there are still plenty of catalysts that could drive the rate market significantly higher or modestly tighter.
- **Recent Rally in Volume:** Following a relatively strong late-year rally in 2023, there has been over $15 billion of issuance YTD January, a 31% increase over YTD 2023. The High Yield primarily market remains slow however, as issuers are carefully choosing windows to access the market.
- **Market Anticipation of Fed Rate Cuts:** History tells us the results of Fed hiking are followed by market disruption in the form of a recession or some other episode, spreads go wider in such an event and Fed policy usually reverses. Thus far, following market anticipation of rate cuts, spreads and yields have tightened considerably heading into 2024, providing perhaps the strongest backdrop for issuers since late 2021.
- **Looming Maturity Wall:** In addition, and in stark contrast to 2022 and 2023, a looming maturity wall approaches with the High Yield Index at its 2nd lowest effective duration on record at ~3.2 years with $1.3 trillion in the Index. In other words, borrowers will be forced to address maturities irrespective of the rate environment and we urge issuers to take advantage of attractive windows with so much uncertainty ahead.
- **2024 Outlook:** All told, we expect $225 - $250 billion of High Yield new issuer supply, or a 35% increase over 2023.

High Yield Issuance Volume

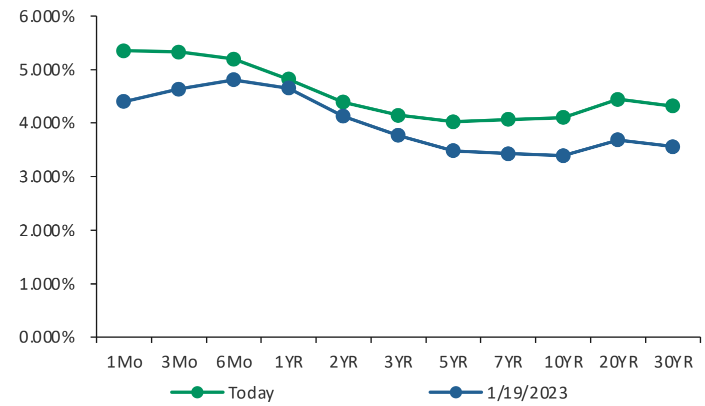


High Yield Trading Levels

10-Year U.S. Treasury and Volatility



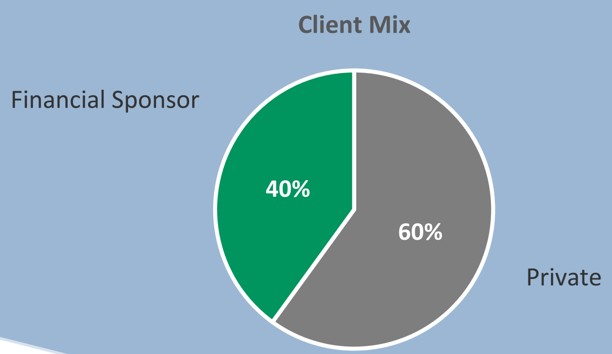
Forward Yield Curve



Source: Citizens Capital Markets Research; Lipper; LCD; Bloomberg
Note: Secondary performance, Spread and Yield Curve as of January 19, 2024

CITIZENS OVERVIEW

The Citizens Capital Markets platform has a deep institutional commitment to creating value for financial sponsors and has greatly enhanced its value proposition for the middle-market private equity community. Our team is firmly committed to rapidly expanding our high-touch, value-added coverage and building a leading middle-market presence.



- Citizens' M&A executes more than ~90+ transactions annually
- Approximately 40% of our clients are private equity firms

Nine dedicated senior bankers covering ~200 firms with funds ranging from $250M - $5B

Platform committed to providing best-in-class advisory services across product suite

Sector intelligence provides unique market insights and value-creating idea generation

High quality M&A deal flow combined with premier bookrunner position creates powerful sourcing engine for sponsors

We invest in building long-term partnerships based on trust and unbiased advice

RECENT FINANCIAL SPONSOR M&A CLIENTS

ae Industrial Partners, AEA, American Industrial Partners, American Infrastructure MLP Funds, American Securities, Apollo, Arcapita, Baird Capital, BIP Capital, Brown Brothers Harriman, bv Investment Partners, Caltius Equity Partners, Camden Partners, Capitala, Catalyst Investors, FCP Farragut Capital Partners, Genstar Capital, Graham Partners, Gridiron Capital, Gryphon Investors, Guidepost Growth Equity, H.I.G. Capital, Heritage Group, HealthX Ventures, High Street Capital, Industrial Opportunity Partners, Levine Leichtman Capital Partners, Lincolnshire Management, Linx Partners, Longshore Capital Partners, MCM, Merit Capital Partners, Morgenthaler, MSouth Equity Partners, New State Capital Partners, Onex, Partners Group, Platinum Equity, Quad-C, Ridgemont Equity Partners, Riverside, Shore Capital Partners, ShoreView, Roark Capital Group, Stonehenge Partners, Summit Partners, Thomabravo, Union Capital, Warren Equity Partners, Valesco Industries

Citizens

CITIZENS M&A ADVISORY

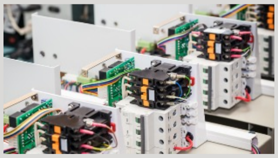
INDUSTRIAL BANKING COVERAGE

AUTOMOTIVE

BUILDING PRODUCTS

CHEMICALS

ELECTRONICS MFG SERVICES (EMS)



INDUSTRIAL AUTOMATION

INDUSTRIAL DISTRIBUTION

INDUSTRIAL EQUIPMENT / CAPITAL GOODS

PAPER & PACKAGING

Citizens M&A Advisory supports clients across a focused set of industry sectors. Our bankers thrive on delivering keen market insights that are both strategic and thoughtful, while driving extraordinary outcomes for our clients.

TRANSACTIONS

250+ transactions in the last 5 years totaling **$55B** in value

SERVICES

Sell-side & buy-side advisory, capital raising, restructuring & bankruptcy, financial opinions

TEAM

100+ investment banking professionals across the U.S.

SPONSOR COVERAGE

Dedicated financial sponsor coverage team

TAILORED SOLUTIONS

Engagements tailored to clients' specific objectives and relevant market dynamics

CITIZENS CAPITAL MARKETS OFFICES

Atlanta
3550 Lenox Road NE
Atlanta, GA 30326

Boston
28 State St.
Boston, MA 02109

Charlotte
4250 Congress St.
Charlotte, NC 28209

Chicago
10 South Wacker Dr.
Chicago, IL 60606

Cleveland
200 Public Square
Cleveland, OH 44114

Los Angeles
11755 Wilshire Blvd.
Los Angeles, CA 90025

Minneapolis
8530 Eagle Point Blvd.
Lake Elmo, MN 55402

New York
437 Madison Ave.
New York, NY 10022

New York
450 Park Ave.
New York, NY 10022

San Francisco
600 Montgomery St.
San Francisco, CA 94111

CORPORATE FINANCE | CAPITAL MARKETS & ADVISORY | TREASURY & RISK MANAGEMENT