

Industrial Software Market Update

DESIGN, ENGINEERING, MANUFACTURING, ASSET MAINTENANCE, AND REPAIR SOFTWARE



Houlihan Lokey Industrial Software Coverage Team

Dear Clients and Friends,

Houlihan Lokey is pleased to present the winter 2023/2024 edition of its Industrial Software Market Update. We have continued adapting to a recovering market and remain active in advising our clients as they pursue M&A, financing, and other strategic initiatives. We have included industry insights, selected recent transaction announcements, and a public markets overview to help you stay ahead in our dynamic and constantly evolving industry.

Industrial Software Market Activity:

M&A and financing activity across the sector increased slightly throughout Q4 2023 despite continuing macro headwinds. Additionally, market activity has shown indications for continued improvement as we progress further into 2024:

- **64** M&A transactions in 2023 (down 17% from 2022)
- **187** financing transactions in 2023 (down 16% from 2022)
- 52% increase in share price performance in 2023 (5% 2024 YTD)

M&A and financing activity across industrial software is expected to accelerate in H2 2024 as macroeconomic conditions improve and ecosystem players continue to benefit from growth. This growth is driven by cost-efficiency initiatives in relation to recessionary preparation, supply chain globalization, and expansion of cloud-based supplier operations.

Regards,

U.S. Team Leads



Timothy Macholz

Director
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Global Team Leads



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Sascha Pfeiffer

Support



Head of Corporate Coverage, Industrials Dallas JLavelle@HL.com

Jim Lavelle



Representative Industrial Subsectors Covered



Design/ Engineer

- CAD/CAE/EDA
- Verification/Simulation
- CAM
- PLM/PIM/PDM



Execute/
Manufacture

- MES
- QMS
- MOM/Connected Worker
- SCADA/IIoT/DCS/PLC/HMI



Manage/ Maintain

- EAM/CMMS/Repositories
- EHS
- Risk/Requirements
- Service/Repair



Transaction Spotlight: Cadence Design to Acquire BETA CAE Systems

Transaction Overview



Houlihan Lokey acted as the exclusive financial advisor to BETA CAE Systems (BETA) on its sale to Cadence Design Systems (Cadence).

- On March 5, 2024, Cadence (NASDAQ:CDNS) announced that it has entered into a definite agreement to acquire BETA.
- BETA is a provider of CAE⁽¹⁾ software and is a pioneer in simulation solutions.
- The company's product portfolio contains modeling, simulation, analysis, project management, data management, and workflow solutions, as well as consulting, training, and support services.

Selected Transaction Commentary

We are very excited to join the Cadence team and are looking forward to advancing success through our shared values and passion for innovation and engineering, and our unwavering commitment to customers and partners.

-Panagiotis Kouvrakis
Chairman
BETA CAE Systems

Combining our computational software expertise with BETA CAE's rich technology and talent will enable us to offer a more comprehensive portfolio to customers, while opening significant new opportunities for Cadence.

-**Dr. Anirudh Devgan**President and CEO
Cadence

Transaction Highlights

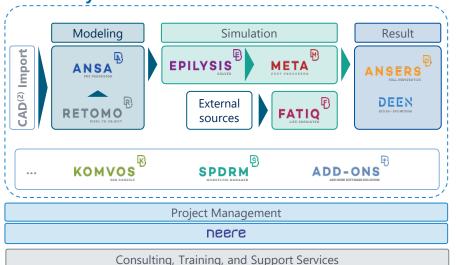


13.8x
EV/LTM Revenue Multiple

~\$90M FY23 Revenue

~450 Employees

BETA CAE Systems Solutions Overview



Manufacturing Remains Stable With no Indication of a Downturn From the Sector

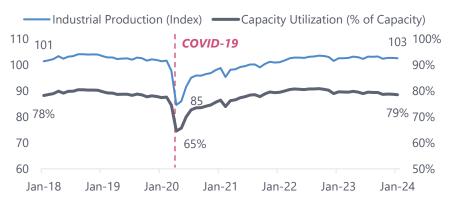
U.S. Manufacturing Corporate Sales by Quarter (\$T)⁽¹⁾

Seasonally adjusted sales for Q3 2023 totaled \$2,010 billion, up \$22.1 billion from Q2 2023; 2023 YTD was 17% higher than in 2019, fully recovering and more from COVID-19 headwinds in the past few years.



Industrial Production Index and Capacity Utilization(3)

Both the index and utilization levels remain roughly in line with historical averages, providing an outlook on economic stability in the near term.



ISM Manufacturing Purchasing Managers Index®(2)

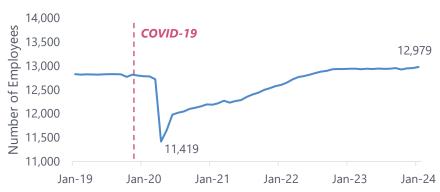
The U.S. manufacturing sector contracted in Feb-24 at 47.8%, marking 16 consecutive months of contraction (less than 50%). Demand remains soft but shows signs of improvement, and suppliers continue to have capacity.

PMI® Custom Percentage Score



U.S. Manufacturing Employment (000s)⁽⁴⁾

Manufacturing employment in 2023 remained steady following a full recovery post-COVID-19. Innovation is leading to greater efficiency and reducing labor demands of manufacturers.



Continued Strong Activity in the Space

M&A and financing market has been active and balanced, with interest from strategics and financial sponsors.



Investor Interest in the Space has Remained Consistently Strong With Nearly \$10B Raised in the Past Three Years

Selected Manufacturing Software Financings (\$M)

Announced Date	Company	Selected Investor(s)	Amount Invested	Pre-Money Valuation	Segment/ Value Chain
2/2024	RASPBERRYAI	khosla ventures	\$4.5M	Conf.	Q o
2/2024	intenseye	Lightspeed	\$64M	\$220M	
2/2024	© elevatec signals	YALETOWN	\$5.9M	Conf.	Q o
1/2024	♥ hiboo	Cleantech. Group	\$10.2M	Conf.	
1/2024	rocscience	TA ASSOCIATES	Conf.	Conf.	Q o
12/2023	\(\) Cybus		\$9.0M	Conf.	
12/2023	KIHO	JUURI PARTNERS	Conf.	Conf.	lo.
11/2023	V DIVERGENT	HEXAGON	\$230M	\$1.2B	[6]
11/2023	manufactured	TRIPLEPOINT	Conf.	Conf.	To.
10/2023	CONXAI	PI LABS	Conf.	Conf.	E
9/2023	up2parts	% SANDVIK	Conf.	Conf.	O o

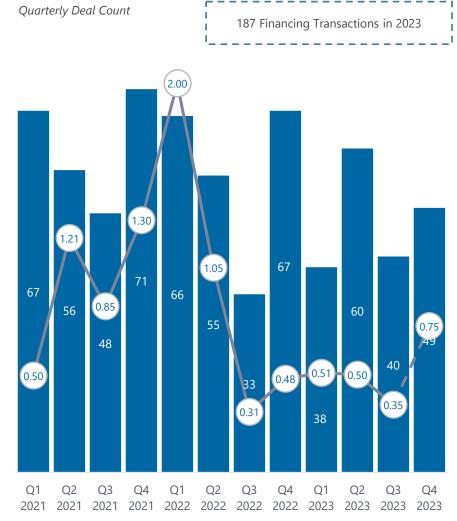
Manufacturing Software







Manufacturing Software Quarterly Financing Activity



—O—Financing Per Quarter (\$B)

M&A Continues Across the Ecosystem Driven by Strategics and Top Sponsors

Selected Manufacturing Software M&A (\$M)

Announced Date	Company	Acquirer	Transaction Value	Segment/ Value Chain
3/2024	Jama software	FIP	\$1.2B	
3/2024	BETA SIMULATION SOLUTIONS	cādence°	\$1.2B	O _o o
2/2024	Optessa -	eyelit	Conf.	
1/2024	/ \nsys	SYMOPSYS°	\$35B	O _O
11/2023	SentianAl	WEIR	Conf.	
11/2023	InsightEDA	SIEMENS	Conf.	Q o
10/2023	® ∨ER∨E	Rockwell Automation	\$185M	
10/2023	problem solved.	✓ AUTODESK	Conf.	le le
10/2023	#kcl	revalize	Conf.	Q o
10/2023	pure systems	ptc	Conf.	[a
10/2023	¶m∩iQuest	△ ALTAIR	Conf.	O _O
6/2023	get it right'	₩ KEYSIGHT	~\$1.0B	
Houlihar	Lokey Transaction			

Houlinan Lokey Transaction

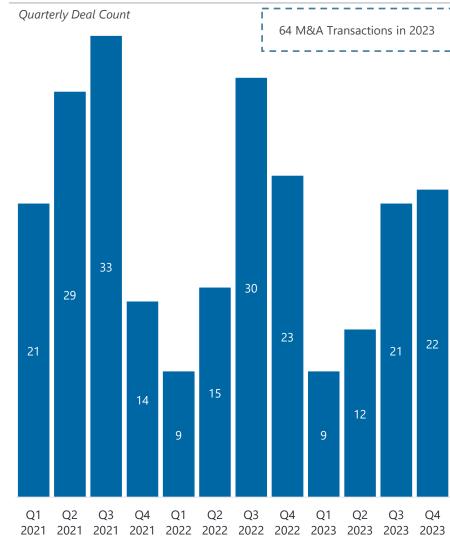
Manufacturing Software







Manufacturing Software Quarterly M&A Activity



Most Active Strategic Acquirers Since 2020

Acquirer

Acquisitions (Since Jan. 1, 2020)

Targets

FOR FULL REPORT ACCESS, PLEASE REACH OUT TO A HOULIHAN LOKEY TEAM MEMBER

Contact Information: Timothy Macholz (<u>TMacholz@HL.com</u>) or Abhishek Ashok (<u>AAshok@HL.com</u>)

Most Active Financial Sponsors Since 2020

Acquirer

Investments (Since Jan. 1, 2020)

Targets

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Industrial Software Trades at a Premium to Broader SaaS and Technology

Industrial software has traded with less volatility and now trades at a higher multiple against SaaS comparables.



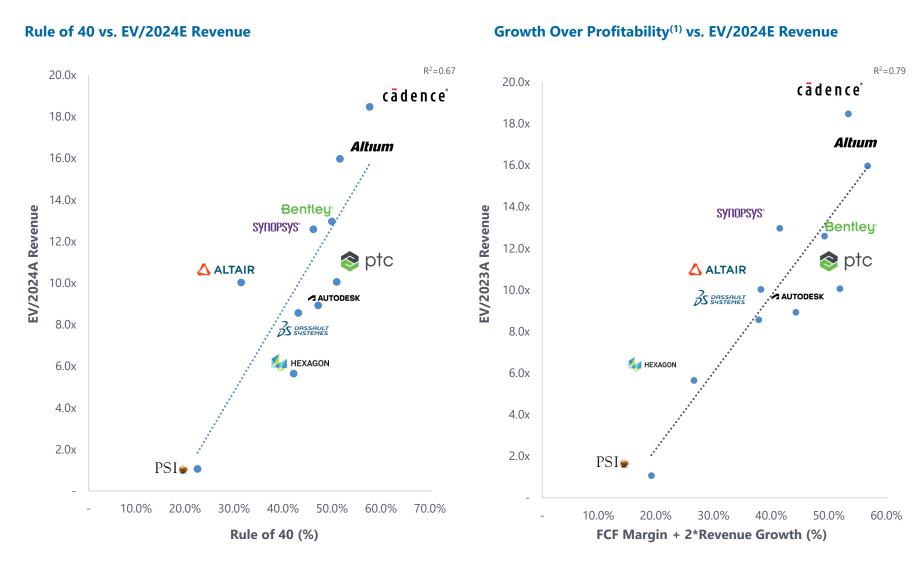
Public Company Ecosystem Segmentation





Industrial Software Valuation Correlated to Revenue Growth and EBITDA Margin

With the persistence of macroeconomic uncertainty, and when valued against profitability, growth continues to drive valuations in the industrial software sector.

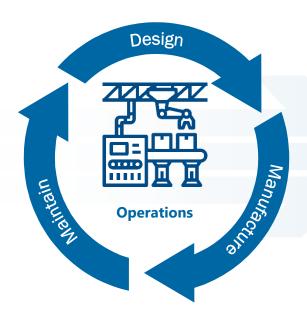


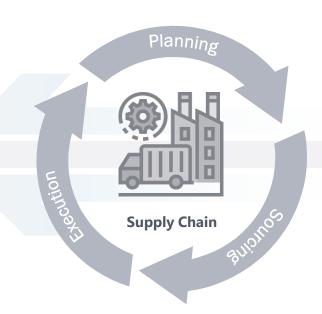
Selected Publicly Listed Comparables

	Company Name	Market Cap	EV	EV EV/Revenue		EV/EBITDA		EBITDA Margin		2023E-2024E CAGR	
		USD M	USD M	2023	2024	2023	2024	2023	2024	Revenue	EBITDA
99	Altair Engineering	\$6,657	\$6,685	10.9x	10.0x	NM	45.1x	21.1%	22.2%	4.4%	7.1%
90	Altium Limited	\$5,724	\$5,490	18.4x	16.0x	NM	44.6x	36.0%	35.8%	7.5%	7.1%
chn	Autodesk	\$54,238	\$53,860	9.8x	8.9x	25.6x	24.1x	38.2%	37.0%	4.8%	3.1%
Te	Bentley Systems	\$16,573	\$17,187	14.0x	12.6x	41.2x	36.3x	33.9%	34.7%	5.4%	6.6%
and Technology	Cadence Design Systems	\$85,275	\$84,783	20.7x	18.5x	46.7x	41.0x	44.4%	45.1%	5.9%	6.7%
و	Dassault Systèmes	\$61,359	\$59,781	9.1x	8.6x	25.7x	23.4x	35.4%	36.6%	3.1%	4.7%
Manufacturing	Hexagon	\$31,793	\$35,357	5.9x	5.6x	15.8x	15.0x	37.3%	37.6%	2.1%	2.5%
fact	PSI Software	\$344	\$345	1.2x	1.1x	15.0x	7.8x	7.7%	13.7%	4.2%	39.0%
, nu	PTC	\$21,888	\$24,047	11.0x	10.0x	29.3x	24.6x	37.7%	40.9%	4.7%	9.2%
Š	Synopsys	\$89,460	\$87,293	14.2x	13.0x	37.1x	32.6x	38.4%	39.8%	4.8%	6.6%
	Mean			11.5x	10.4x	29.5x	29.4x	33.0%	34.3%	4.7%	9.3%
	Median			11.0x	10.0x	27.5x	28.6x	36.7%	36.8%	4.8%	6.7%
	Atlassian	\$50,955	\$50,563	13.0x	11.0x	NM	NM	23.2%	21.8%	8.5%	5.2%
	Blackline	\$4,763	\$4,086	6.9x	6.3x	32.2x	27.9x	21.5%	22.7%	4.6%	7.4%
	Dropbox	\$8,217	\$8,896	3.6x	3.5x	9.0x	8.8x	39.6%	39.7%	0.9%	1.1%
	Intapp	\$2,374	\$2,442	6.2x	5.3x	NM	NM	7.6%	9.1%	8.1%	18.0%
SaaS	nCino	\$3,180	\$3,182	6.7x	5.8x	48.7x	37.8x	13.7%	15.5%	6.8%	13.5%
Sa	Q2 Holdings	\$2,721	\$2,930	4.7x	4.3x	38.1x	26.8x	12.3%	15.9%	4.8%	19.2%
	Shopify	\$95,817	\$90,678	12.8x	10.6x	NM	NM	11.5%	15.3%	9.9%	26.8%
	Twilio	\$10,694	\$7,481	1.8x	1.7x	9.2x	9.5x	19.7%	18.1%	2.5%	(1.8%)
	Veeva	\$36,523	\$31,716	13.4x	11.6x	36.2x	28.9x	37.0%	40.2%	7.6%	12.1%
	Workiva	\$4,625	\$4,618	7.3x	6.4x	NM	NM	2.4%	3.5%	7.0%	28.2%
	Zoom	\$20,581	\$13,560	3.0x	2.9x	7.2x	7.4x	41.5%	39.6%	1.0%	(1.4%)
	Mean			7.2x	6.3x	25.8x	21.0x	20.9%	21.9%	5.6%	11.7%
	Median			6.7x	5.8x	32.2x	26.8x	19.7%	18.1%	5.6%	11.7%
	Overall Mean			9.3x	8.3x	28.0x	26.1x	26.7%	27.8%	5.2%	10.5%
	Overall Median			9.1x	8.6x	29.3x	27.2x	33.9%	34.7%	4.8%	7.1%

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Convergence of Industrial and Supply Chain Software Is Accelerating









Manufacturing complexities are evolving; industrial businesses are responding by expanding and deepening interconnections of production and efficient, nimble supply chain operations.



Data Synchronization

Data correlations between the ecosystems create a feedback loop of continuous improvement, driving ever-tighter integrations and pursuit of synchronization across the industrial workflow.



Market Evolution

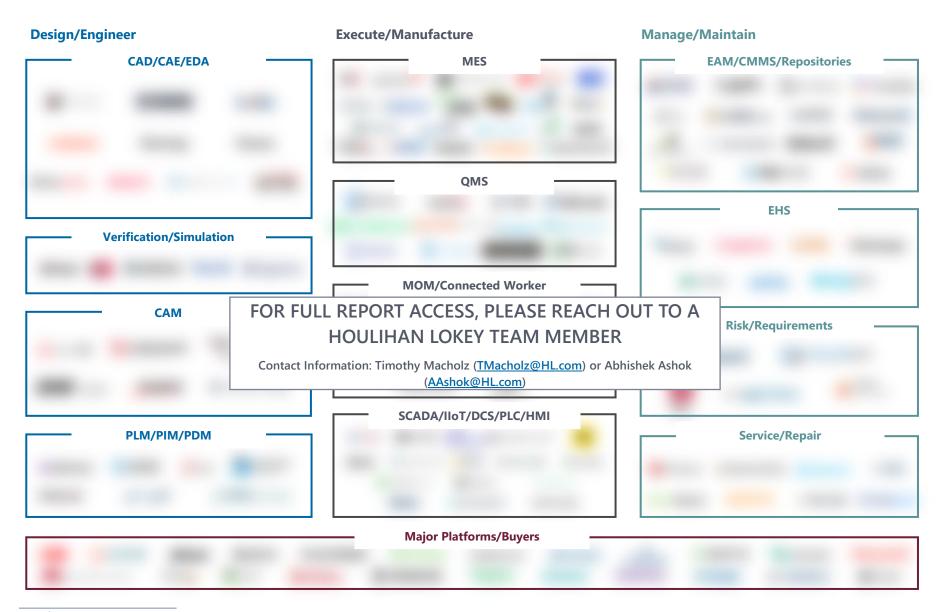
Software categories such as warehouse management systems facilitate core aspects of both domains; product suite evolution toward end-to-end functionality has become a logical opportunity for technology providers.

How Houlihan Lokey Covers the Supply Chain and Industrial Software Domains

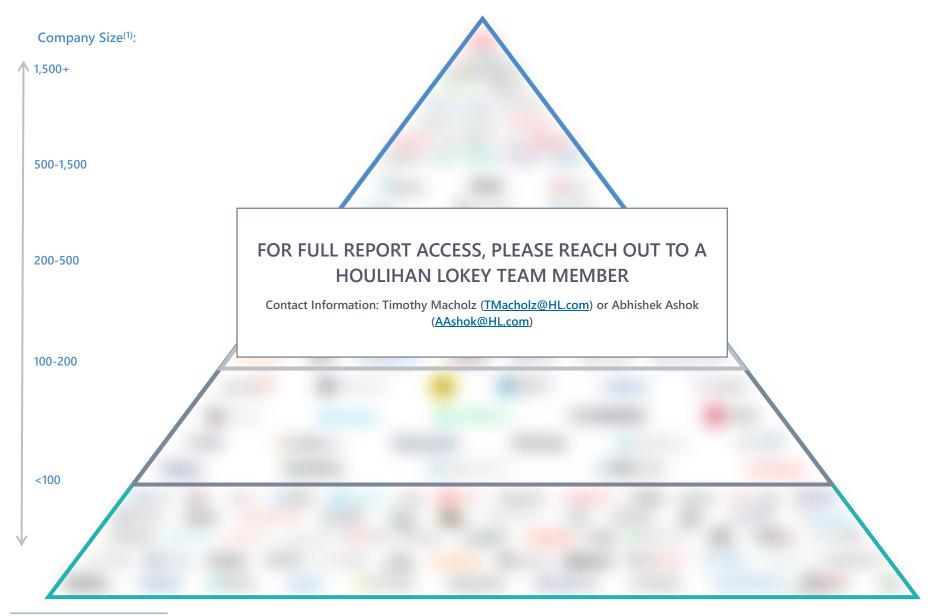
- Supply chain and manufacturing processes converge to facilitate the industrial business workflow.
- Software has enabled industrial businesses to digitalize and integrate their entire processes, from planning to manufacturing operations to supply chain execution.
- Overlap of end-customer bases for manufacturing and supply chain software has driven market incumbents to expand offerings across both categories.
- These dynamics create our holistic perspective of the industrial software ecosystem—a solution set focused on end-to-end industrial operations.



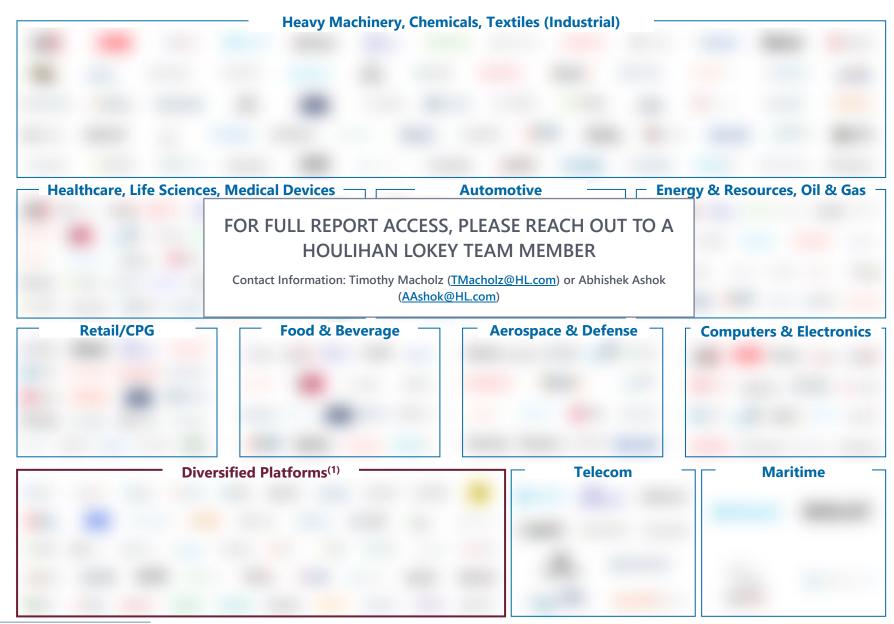
Industrial Software Landscape



Industrial Software Landscape by Size



Industrial Software Vertical Market Landscape



Houlihan Lokey's 2023 Global Tech Conference in New York City

Panel: Tying Together the Digital Convergence
Thread









Peter Engleman

SVP, Global Partners and Business Dev., Parsable

Prior Experience and Education:







Parsable offers a **leading connected worker software platform** with offerings encompassing maintenance, safety, and more, serving the **entire manufacturing ecosystem**.





Chuck Schneider
CEO, Amtech
Prior Experience and Education:







Amtech offers enterprise resource planning software solutions designed to streamline pre-production, manage logistics and inventory, automate scheduling, and control production for the packaging and corrugated manufacturing industries.

Houlihan Lokey's 2023 Global Tech Conference in New York

Sharing valuable and unique perspectives on navigating market conditions globally and positioning our clients for success.



600+

Conference Attendees



70+

Participating Companies



Targeted

One-on-One Meetings With High-Profile Capital Providers



Leading Domain Expertise



Simulation Software Solutions



Embedded Systems Testing



Industrial Aftersales/ Digital Documentation



Industrial Enterprise Digitalization



Manufacturing and Design Tech



Product Lifecycle Management Tech



PLM/CPQ for F&B Industry



Digital Process Solutions Software



Automotive Control Systems



Version Control/PLM



Digital Avatars/PLM



Manufacturing Verification Software



Enterprise Resource Planning



Enterprise Resource Planning



Industrial Manufacturing CRM



Commercial Monitoring



Operations Planning Software



Digital Content Management



Pricing and Analytics Software



Inspection Software and Sensor Tech



Network Management Software

Houlihan Lokey Is the Trusted Advisor to More Top Decision-Makers Than Any Other Independent Global Investment Bank

CORPORATE FINANCE

2023 M&A Advisory Rankings All Global Transactions

	Advisor	Deals
1	Houlihan Lokey	352
2	Rothschild & Co	349
3	Goldman Sachs & Co	300
3	JP Morgan	300
5	Morgan Stanley	253

Source: LSEG (formerly Refinitiv). Excludes accounting firms and brokers.

No. 1

Global M&A Advisor

Leading

Capital Markets Advisor

FINANCIAL RESTRUCTURING

2023 Global Distressed Debt & Bankruptcy Restructuring Rankings

	Advisor	Deals
1	Houlihan Lokey	73
2	PJT Partners Inc	64
3	Rothschild & Co	51
4	Lazard	37
5	Evercore Partners	27

Source: LSEG (formerly Refinitiv).

No. 1

Global Restructuring Advisor

1,700+

Transactions Completed Valued at More Than \$3.5 Trillion Collectively

FINANCIAL AND VALUATION ADVISORY

1999–2023 Global M&A Fairness Advisory Rankings

	Advisor	Deals
1	Houlihan Lokey	1,247
2	JP Morgan	1,035
3	Duff & Phelps, A Kroll Business	977
4	UBS	884
5	Morgan Stanley	716

Source: LSEG (formerly Refinitiv).
Announced or completed transactions.

No. 1

Global M&A Fairness Opinion Advisor Over the Past 25 Years

2,000 +

Annual Valuation Engagements

Our Product Knowledge, Industry Expertise, and Global Reach Deliver Superior Results

Product Expertise



Mergers and Acquisitions



Capital Markets



Financial Restructuring



Financial and Valuation Advisory



Private Funds Advisory

Dedicated Industry Group



Business Services



Consumer, Food, and Retail



Energy



Financial Services



FinTech



Healthcare



Industrials



Real Estate, Lodging, and Leisure



Technology

Financial Sponsors



Active Dialogue With a Diverse Group of More Than 1,000 Sponsors



Hedge Funds



Private Equity Firms



Capital Alliances

Our Tech M&A Team Is No. 1 Globally With Unparalleled Reach



	Advisor	Deals
1	Houlihan Lokey	89
2	Rothschild	76
3	JP Morgan	68
4	Goldman Sachs	63
5	Morgan Stanley	59

and brokers.

2023 M&A Advisory Rankings U.S. Technology Transactions Under \$1 Billion

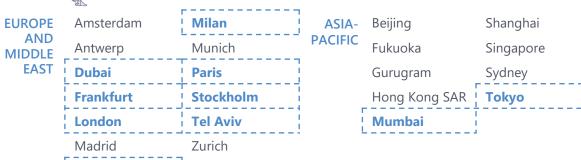
	Advisor	Deals
1	Houlihan Lokey	36
2	Canaccord Genuity Grp	31
3	Lincoln International	25
4	Raymond James Financial	24
5	Generational Equity	20

Source: LSEG (formerly Refinitiv).



Manchester

AMERICAS	Atlanta	Los Angeles	
_	Baltimore	Miami	
 	Boston	Minneapolis	
	Charlotte	New York	
	Chicago	San Francisco	
	Dallas	São Paulo	
	Houston	Washington, D.C.	
		Local Technology Team	



Houlihan Lokey Global Technology Group Positioning

LARGE-CAP TRANSACTION **EXPERTISE**

- CEO-level relationships with leading tech companies
- Large senior team with unparalleled transaction experience
- Broad network including Fortune 500 relationships
- Highest-quality client service
- M&A advisory and capital-raising expertise



MIDDLE-MARKET/ **GROWTH SECTOR FOCUS**

- Unique global access to venture capital, private equity, and strategic
- Growth company focus
- Deep sector expertise and domain knowledge
- Extensive capital markets access
- Late-stage private-through-public company orientation

How Houlihan Lokey Can Help

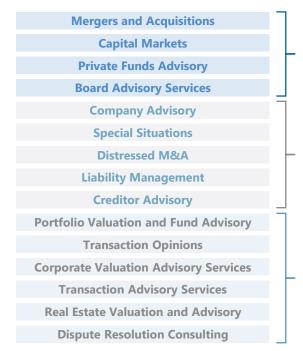
Our firm is extremely well-equipped to help our clients navigate uncertain times. We respond quickly to challenging situations and are constantly helping clients to analyze, structure, negotiate, and execute the best possible solutions from both a strategic and a financial perspective.

What We Offer









We are widely recognized as a leading M&A advisor to the mid-cap and have long-standing relationships with capital providers, including commercial banks and other senior credit providers, insurance funds, asset managers, and mezzanine fund investors. Few other investment banks maintain the breadth of relationships and capital markets intelligence that we do.

We have the largest restructuring practice of any global investment bank. Since 1988, we have advised on more than 1,700 restructuring transactions (with aggregate debt claims in excess of \$3.5 trillion). We served as an advisor in 12 of the 15 largest bankruptcies from 2000 to 2023.

Over five decades, we have established ourselves as one of the largest financial and valuation advisory firms. Our transaction expertise and leadership in the field of valuation help inspire confidence in the financial executives, boards of directors, special committees, investors, and business owners we serve.

Why We're Different



No. 1 for U.S.⁽¹⁾ and Global⁽²⁾ M&A



Significant Experience With Financing Markets



Senior-Level Commitment and Dedication



Deep, Industry-Specific Expertise



Superior Work Product/ Technical Abilities



Creativity, Imagination, Tenacity, and Positivity

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