

The logo for KROLL, featuring the word "KROLL" in a bold, white, sans-serif font. The letter "O" is stylized with a green leaf-like shape on its left side. The background is a dark blue, futuristic digital landscape with glowing blue and yellow lines and icons representing technology and industry.

KROLL

Industry Insights

Global Software Sector Update

Winter 2023

Highlights

↓ 77%

decrease in quarterly deal value versus Q4 2021

Global software M&A activity showed resilience when viewed on an annual basis in 2022, however, quarterly data reveals a continuous slowdown through the year, with a sharp drop in deal value in Q4

↓ 52%

y-over-y decline in valuations of publicly traded software companies and an even more dramatic drop in valuations of publicly traded SaaS companies to levels not seen since 2017

Table of Contents

1. M&A Activity in the Quarter by Deal Volume and Deal Value
2. Software and SaaS M&A Valuations Dynamics
3. Software Transactions to Note
4. Technology M&A Practice Tracked Public Market Software Universe
5. Public Software Market Multiples
6. Recent IPOs and Historical Performance
7. Public Trading Data for Software Companies
8. Firm Overview

Executive Summary

Overview

Global software M&A activity showed resilience when viewed on an annual basis in 2022 both by number of deals (2,400+) and total disclosed value (\$290bn). Quarterly data, however, reveals a continuous slowdown through the year, with a sharp drop in deal value in Q4 (77% decrease versus Q4 2021) and with no >\$10bn deals for the first time in ten quarters. PE activity was not immune to the slowdown, with the number of PE exits in Q4 the weakest since 2009. Tougher credit markets, macro uncertainty and a large bid-ask spread are key factors.

Heightened recessionary risks and a hawkish Fed have prevented public market valuations recovering. At 5.2x next twelve months revenue, Kroll's Software-as-a-Service (SaaS) index has dropped back to levels not seen since 2017, perhaps pricing in investor sentiment that earnings growth is likely to disappoint as sales cycles elongate. In contrast, private market software valuations have been less impacted, with average disclosed multiples for strategic deals softening to 5.4x while PE multiples averaged 6.3x last twelve months revenue. This reflects a higher bar in getting deals done and a sticky bid-ask spread.

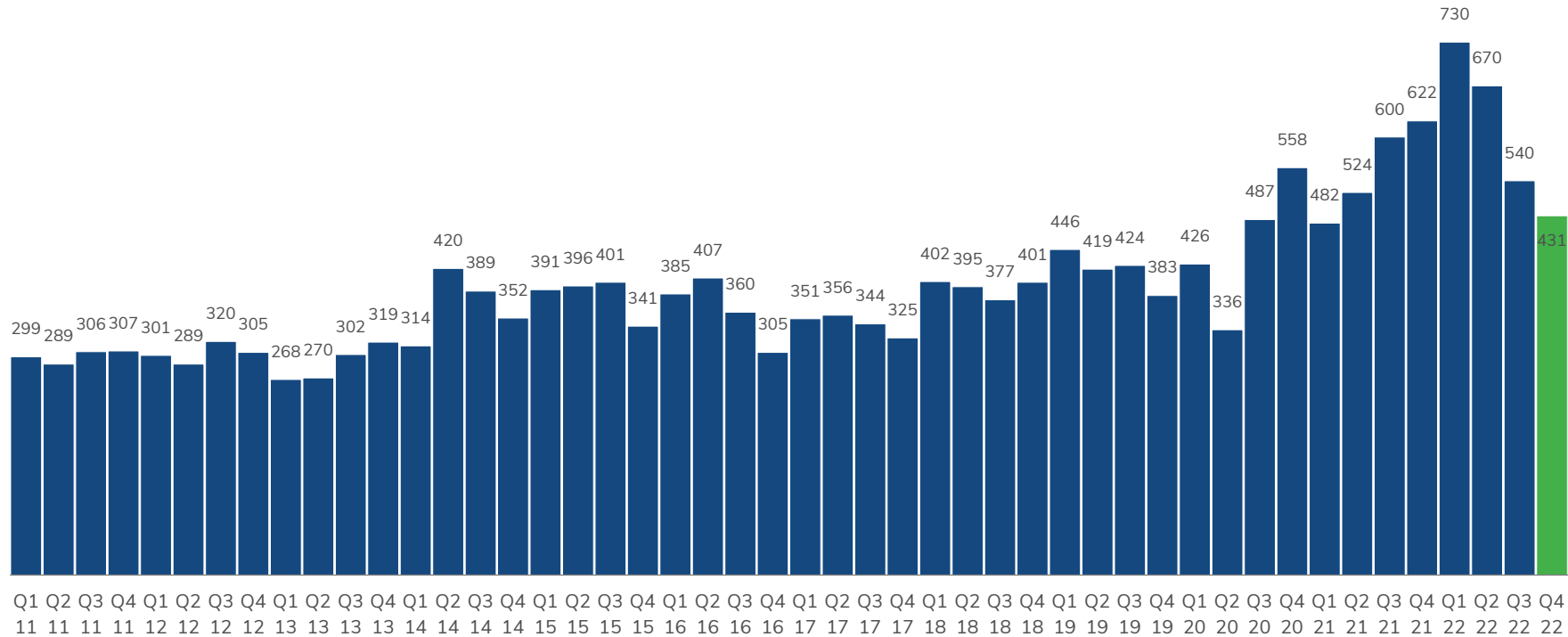
Pipeline and deal preparation activity is robust, and market participants are exhibiting an acceptance of the recalibration of multiples over the last year to levels that many accept represent a "new normal". A recent survey by S&P Global/451 Research revealed expectations for deal activity to increase despite a decrease in valuations in 2023. The latter could be a welcome catalyst for activity to pick up. With Gartner seeing enterprise software spending globally accelerating back above 10% in 2023, we remain optimistic that any slowdown in sales will taper off with diminishing uncertainty. Putting aside the recent unprecedented COVID-fueled activity, there are many reasons to welcome a return to pre-COVID levels of activity in 2023.

Q4 2022 Marked a Significant Decline in Quarterly Deal Activity

Q4 2022 Recorded a 20% Drop in Deal Activity Compared to Previous Four Quarters

Quarterly Deal Volume (Q1 2011 to Q4 2022)¹

Top number in each bar indicates total deal volumes in quarter



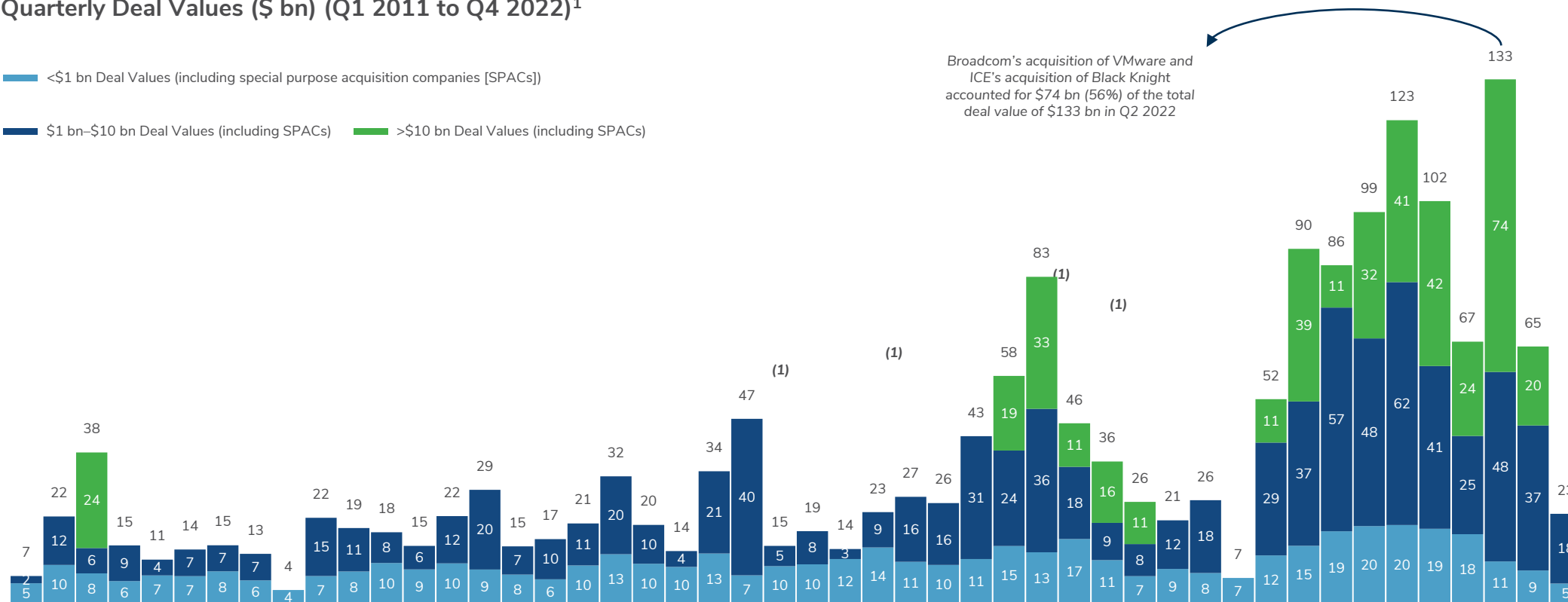
¹Between January 1, 2011, and December 31, 2022
Source: 451 Research as of December 31, 2022

Significant Reduction in Deal Value in Q4 2022, with Q2 Accounting for the Largest Share of the Year

Almost 70% Decrease in Deal Value for >\$1 bn Deals in Q4 2022 Compared to Q3 2022

Quarterly Deal Values (\$ bn) (Q1 2011 to Q4 2022)¹

■ <\$1 bn Deal Values (including special purpose acquisition companies [SPACs])
■ \$1 bn–\$10 bn Deal Values (including SPACs) ■ >\$10 bn Deal Values (including SPACs)

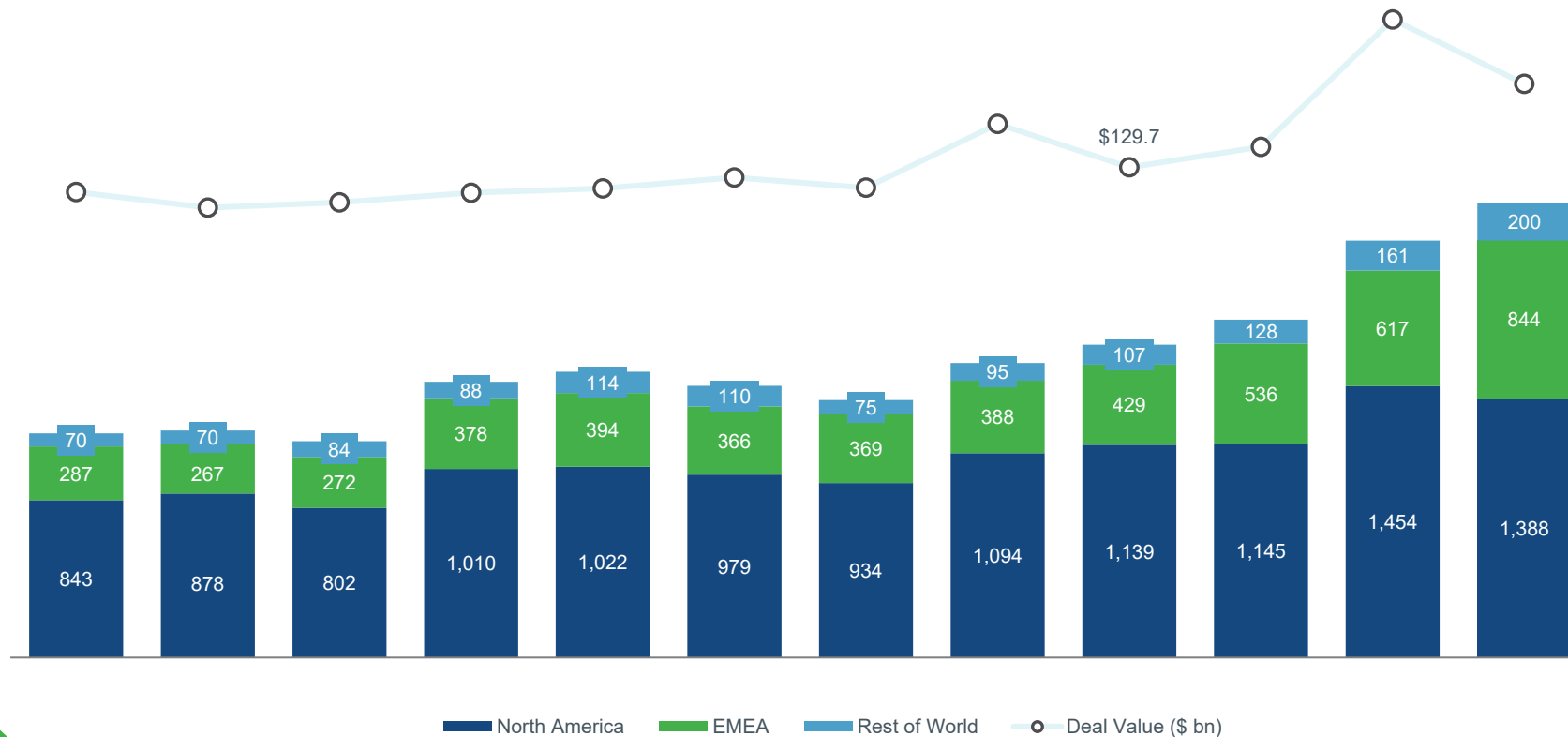


¹Between January 1, 2011, and December 31, 2022
Source: 451 Research as of December 31, 2022

Strong Deal Volume and Value in 2022, Second Only to Record Year of 2021

EMEA and Rest of the World Driving Higher Share of Deal Volume to Previous Years

Annual Deal Volume and Deal Value

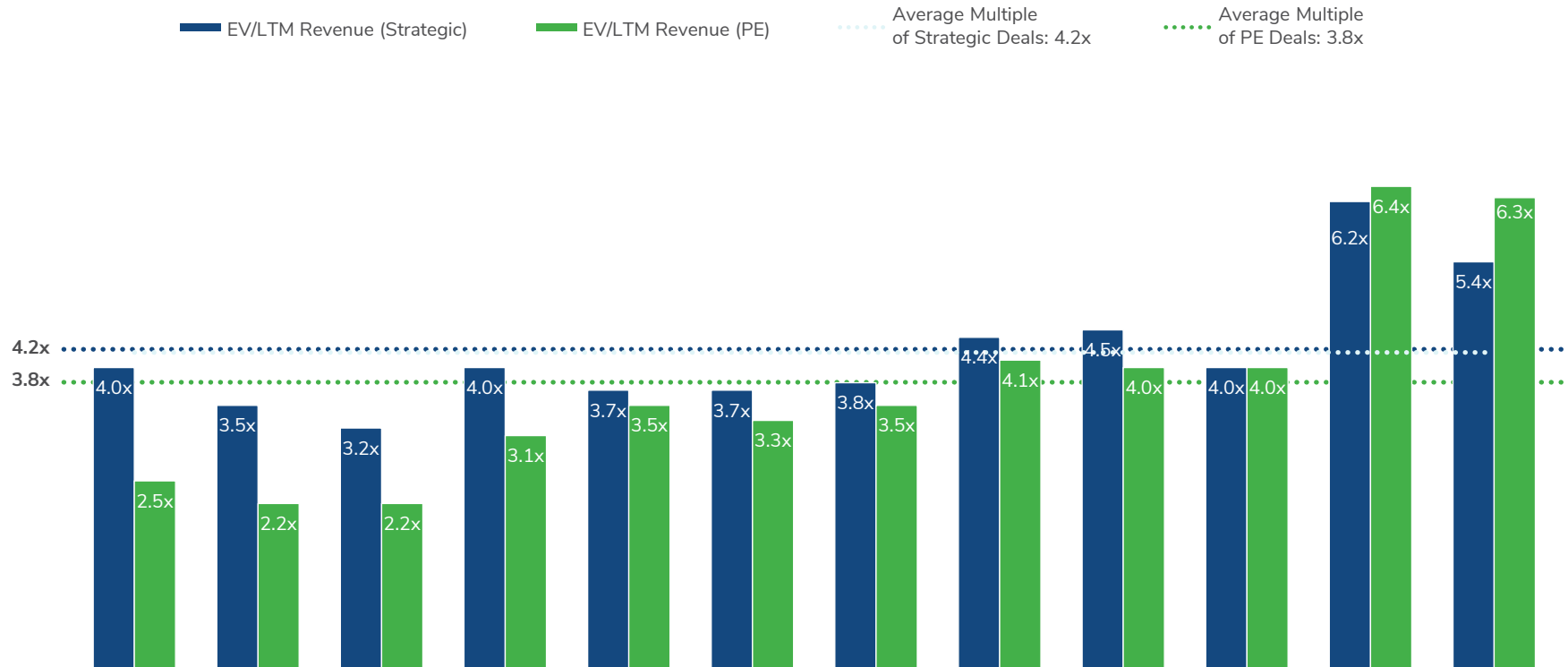


Source: 451 Research as of December 31, 2022

After a Record 2021, Strategic Deal Multiples Are Converging Toward Long-Term Average

Tighter Strategic Valuations Also Driven by Significantly Lower Public Valuations

Annual Median Deal Multiples

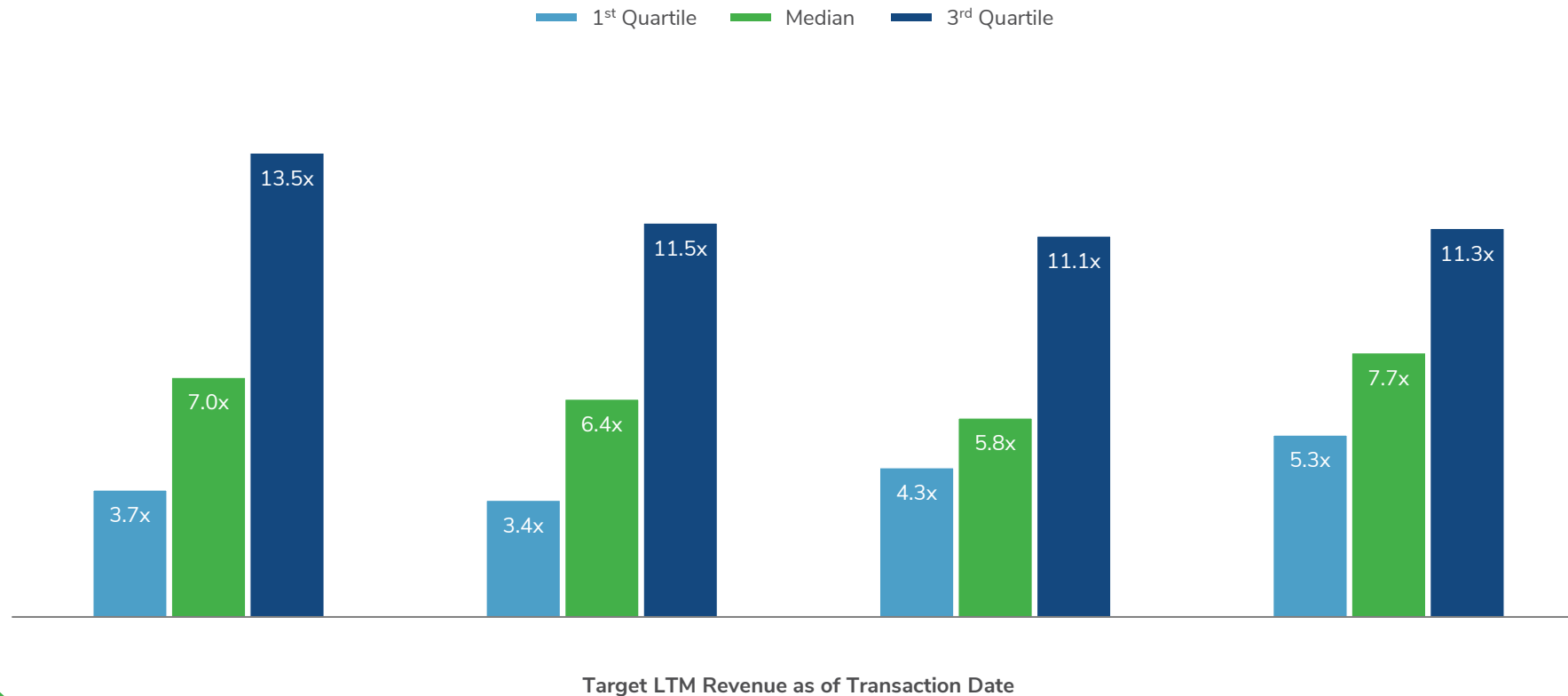


EV = Enterprise Value or Market Capitalization + Total Debt - Cash; LTM = Last 12 Months
PE deals include acquisitions made by PE-backed strategics.
Source: 451 Research as of December 31, 2022

SaaS Deal Multiples by Quartile and Target Revenue

Third Quartile Multiples Command Average Premiums of 46%–94% vs. Median

Deal Multiples Quartiles by Target LTM Revenue



Transactions selected are based on the following parameters: (i) target company with SaaS business model; (ii) transaction announced between December 31, 2020, and December 31, 2022; (iii) disclosed EV/LTM revenue multiple; and (iv) excluding outliers and SPAC transactions.
Source: 451 Research and Mergermarket as of December 31, 2022

Top Six Software Acquisitions over Q4 2022 by Deal Value

December 2022



acquired by



\$8.0
bn

9.8x

Coupa is a cloud-based business spend management platform that unifies processes across supply chain, procurement and finance functions. Coupa empowers organizations around the world to maximize value and operationalize purpose through their business spend.

Thoma Bravo and Coupa's shared vision in the business spend management space, combined with Thoma Bravo's strategic and operational expertise, will enable Coupa to continue driving innovation, better serve its customers and accelerate important growth initiatives during its next chapter as a private company.

October 2022



acquired by



\$4.6
bn

14.9x

KnowBe4 provides cybersecurity awareness training and simulated phishing software for businesses globally. Its solutions enable users to raise employee ransomware awareness by applying social engineering tactics and interactive training.

Under Vista's ownership, KnowBe4 will have access to additional resources and support, which will help them achieve their goals and deliver enhanced value to customers. Their partnership with Vista's team will enable them to continue empowering businesses worldwide to strengthen their human firewall and make smarter security decisions every day.

October 2022



acquired by



\$2.3
bn

12.0x

ForgeRock is a global digital identity leader helping people simply and safely access the connected world. The ForgeRock Identity Platform delivers enterprise-grade identity solutions at scale for customers, employees and connected devices.

Identity-centric cybersecurity solutions are a critical enabler for businesses to digitally transform their operations, and ForgeRock's solutions combine both the advanced security and customer usability needed in the market. Thoma Bravo's partnership will leverage their deep sector expertise and support the company to capitalize on the significant market opportunity.

December 2022



acquired by



\$2.0
bn

N/A

Transporeon provides e-logistics, transport management, supply chain insights and market intelligence, freight audit, real-time yard management, procurement and logistics management SaaS for the retail transportation and shipping industries worldwide.

Transporeon has exhibited rapidly increasing network density and an accelerating customer adoption curve. Trimble will work with Transporeon to enhance and expand the company's growth trajectory and to offer enhanced transportation management solutions to Transporeon customers in Europe and to Trimble customers in the North American market.

November 2022



acquired by



\$1.5
bn

11.2x

ServiceMax provides mobile-oriented field service execution and contract management SaaS and related mobile applications for service-oriented businesses and enterprises. The software provides features for dispatch and scheduling, warranty, parts and return management and field service metrics reporting.

ServiceMax is a recognized leader in cloud-native, product-centric field service management software. The acquisition is expected to strengthen PTC's closed-loop product life cycle management offerings by extending the digital thread of product information into downstream enterprise asset management and field service management capabilities.

October 2022



acquired by



\$1.3
bn

7.0x

UserTesting, a leader in video-based human insight, provides the Human Insight Platform, which taps into their global network of real people and generates video-based recorded experiences, so anyone in an organization can directly ask questions, hear what users say, see what they mean and understand what it is like to be a customer.

Following the closing of the transaction, Thoma Bravo and Sunstone Partners intend to combine UserTesting and UserZoom, a user experience insights company that Thoma Bravo acquired majority control of in April 2022.

Other Notable Software Deals during Q4 2022

Strategic Deals (Q4 2022)

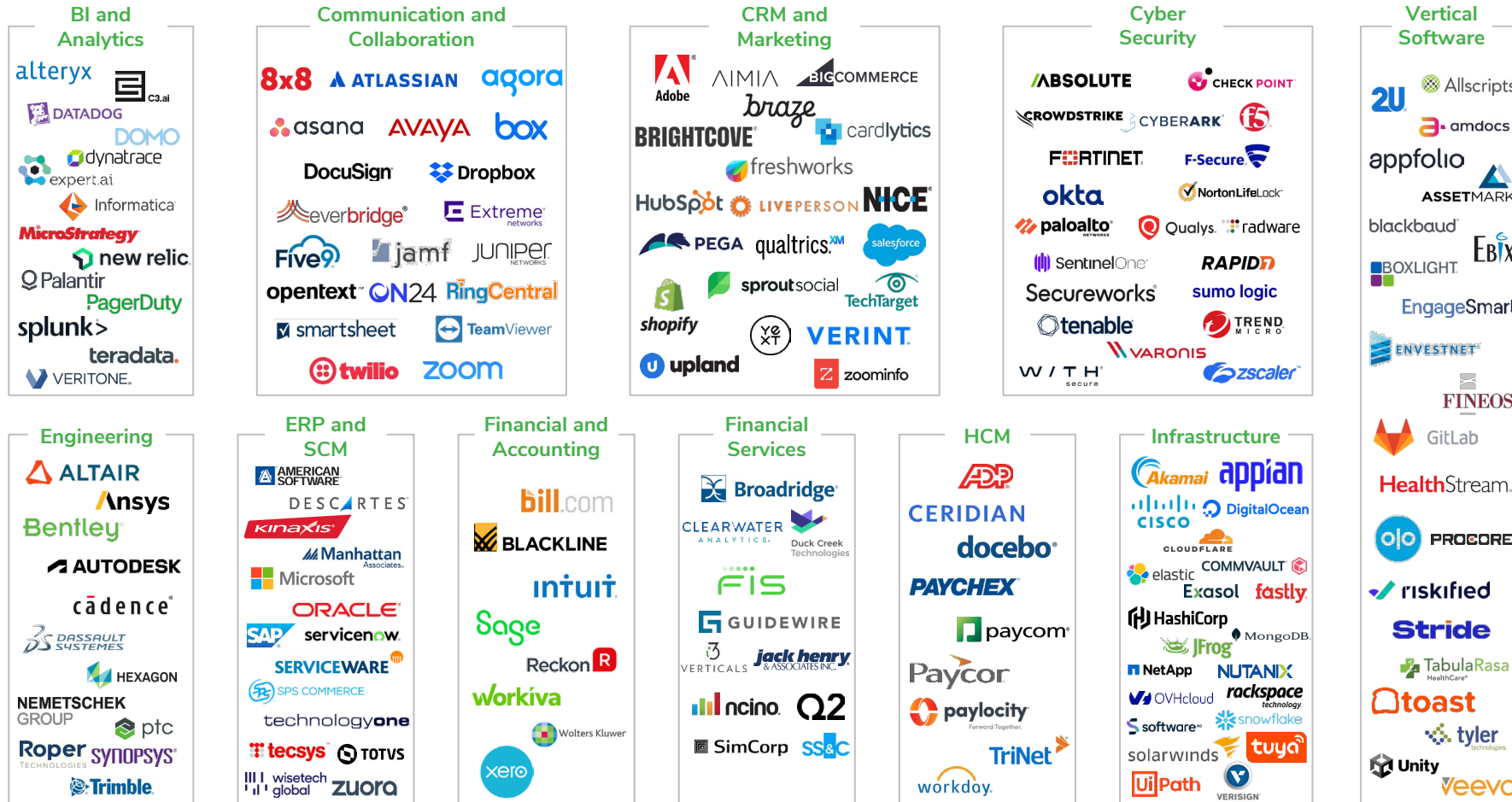
Date	Target	Acquirer	Deal Value and Multiple ¹	Target Abstract
Nov-22	Benefitfocus	VOYA FINANCIAL	\$570 mn 2.3x	Benefit management SaaS
Nov-22	SurePrep	THOMSON REUTERS	\$500 mn 8.3x	Tax workflow automation SaaS
Oct-22	INELO	EUROWAG	\$291 mn 9.6x	Vehicle location SaaS
Nov-22	Cider	paloalto NETWORKS	\$195 mn 39.0x	Application security SaaS
Oct-22	isaac	arco	\$127 mn N/A	Educational financial services SaaS
Dec-22	HYROS	banzai	\$110 mn N/A	Ad tracking & optimization SaaS
Dec-22	FormSwift	Dropbox	\$95 mn N/A	Document creation & forms mgmt. SaaS
Nov-22	tsihealthcare	nextgen HEALTHCARE	\$68 mn N/A	Practice management & EHR SaaS
Oct-22	rapid	NIC	\$68 mn N/A	Payment processing SaaS
Nov-22	APEX Crypto™	Bakkt.	\$55 mn N/A	Crypto trading software
Oct-22	InterTrade	SPS COMMERCE	\$49 mn N/A	SCM collaboration & EDI SaaS

PE Deals² (Q4 2022)

Date	Target	Acquirer ²	Deal Value and Multiple ¹	Target Abstract
Nov-22	TaxAct	Cinven	\$720 mn N/A	Tax filing assistance SaaS & services
Oct-22	ELMO	K1 INVESTMENT MANAGEMENT	\$340 mn 5.8x	Human resource management SaaS
Nov-22	nitro	Alludo	\$337 mn 5.2x	Design & productivity SaaS
Oct-22	SKILLSURVEY	icims VISTA	\$180 mn 5.1x	Talent intelligence SaaS
Dec-22	illusive	proofpoint.	\$150 mn 6.8x	Identity threat detection SaaS
Nov-22	SAAB Assets	AGILITAS	\$41 mn N/A	Maritime shipping logistics systems
Dec-22	FAST RADIUS.	SyBridge TECHNOLOGIES Crestview	\$13 mn N/A	Manufacturing & digital design SaaS

EHR = Electronic Health Record; SCM = Supply Chain Management; EDI = Electronic Data Interchange; ¹ Deal Multiple = Enterprise Value/LTM Revenue, unless otherwise specified; ² PE deals include acquisitions made by PE-backed strategics, whose owners are indicated below the gray line, and exclude deals involving SPAC vehicles
 Source: 451 Research as of December 31, 2022
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Our Technology M&A Practice Tracked Software Universe

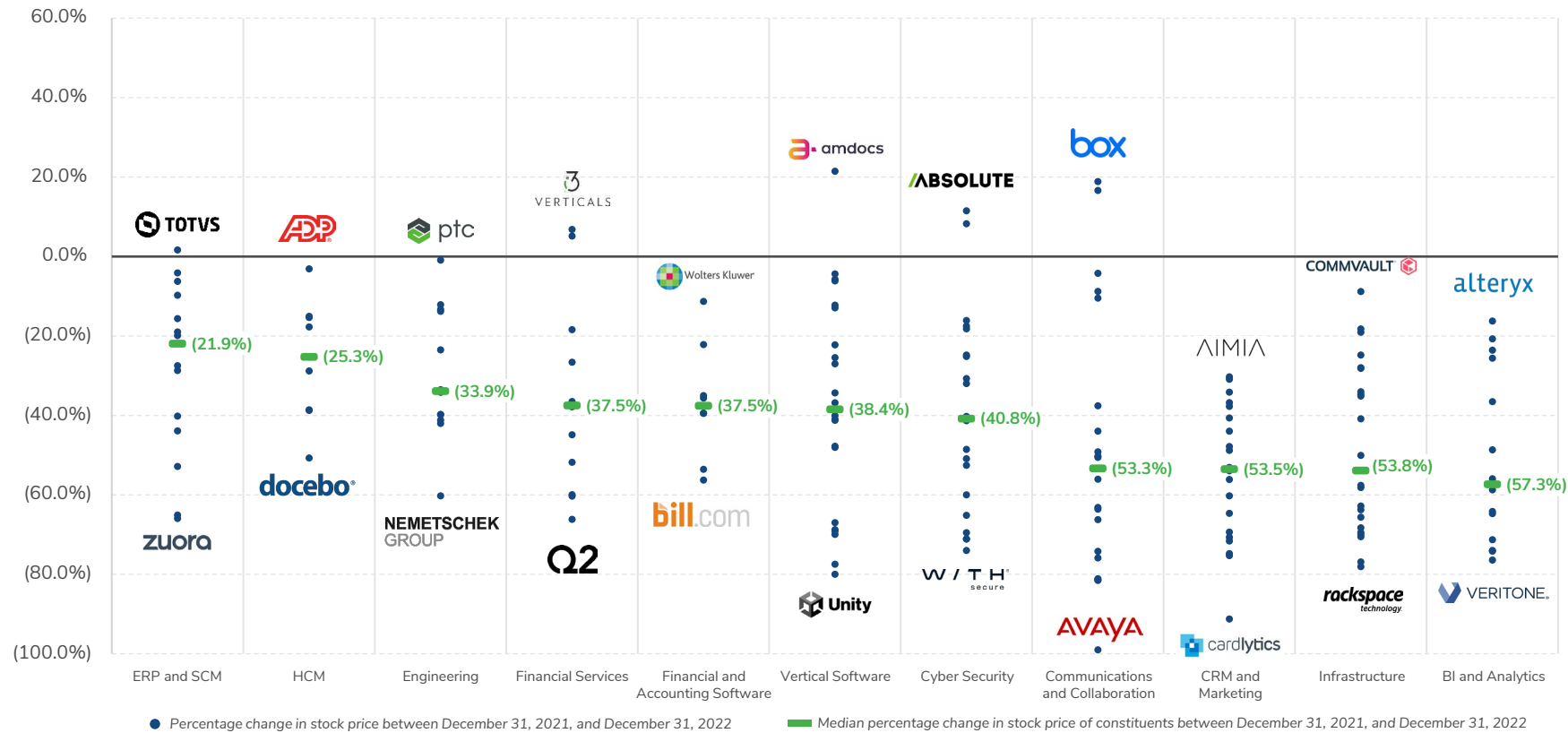


BI = Business Intelligence; CRM = Customer Relationship Management; ERP = Enterprise Resource Planning; HCM = Human Capital Management; SCM = Supply Chain Management
 Source: S&P Global Market Intelligence as of December 31, 2022, including the most actively traded software companies for respective covered sectors and excluding most microcap companies.
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LTM Performance of Stock Prices

Significant Differences between High and Low Performers within the Past 12 Months

Performance of Our Technology M&A Practice Tracked Software Universe between December 31, 2021, and December 31, 2022



BI = Business Intelligence; CRM = Customer Relationship Management; ERP = Enterprise Resource Planning; HCM = Human Capital Management; SCM = Supply Chain Management

Does not include companies listed post December 31, 2021

Buckets ordered by median percentage change in stock price between December 31, 2021, and December 31, 2022

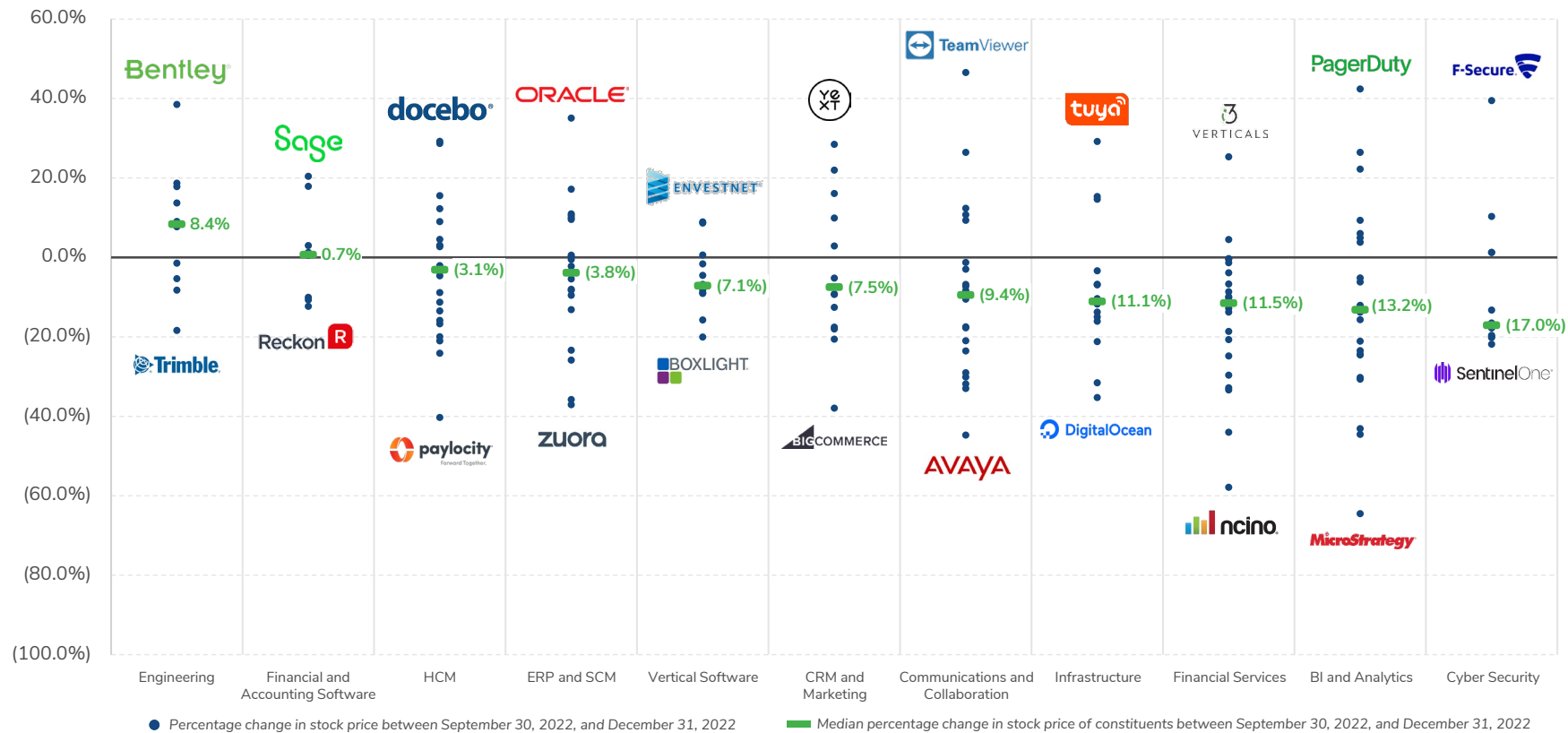
Source: Capital IQ as of December 31, 2022

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Quarterly Performance of Stock Prices

Most Software Sectors Demonstrated Significant Losses in the Quarter

Performance of Our Technology M&A Practice Tracked Software Universe between September 30, 2022, and December 31, 2022



BI = Business Intelligence; CRM = Customer Relationship Management; ERP = Enterprise Resource Planning; HCM = Human Capital Management; SCM = Supply Chain Management

Does not include companies listed post September 30, 2022

Buckets ordered by median percentage change in stock price between September 30, 2022, and December 31, 2022

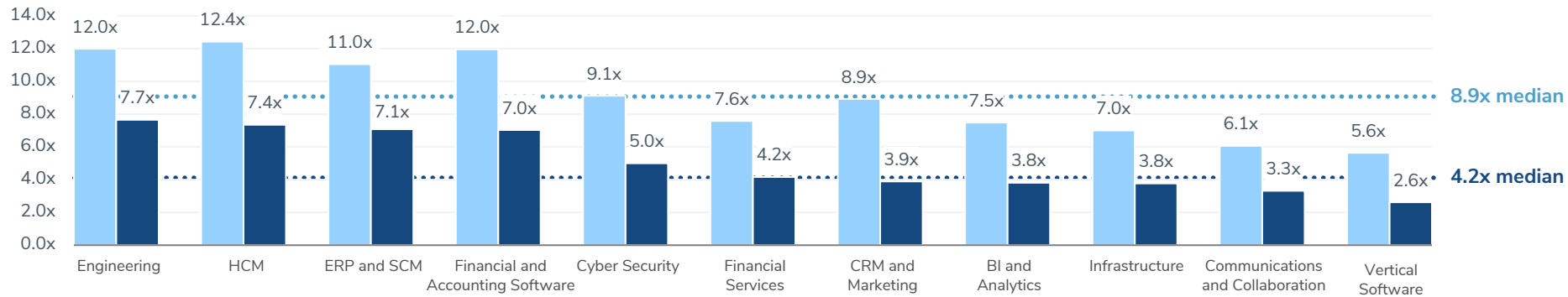
Source: Capital IQ as of December 31, 2022

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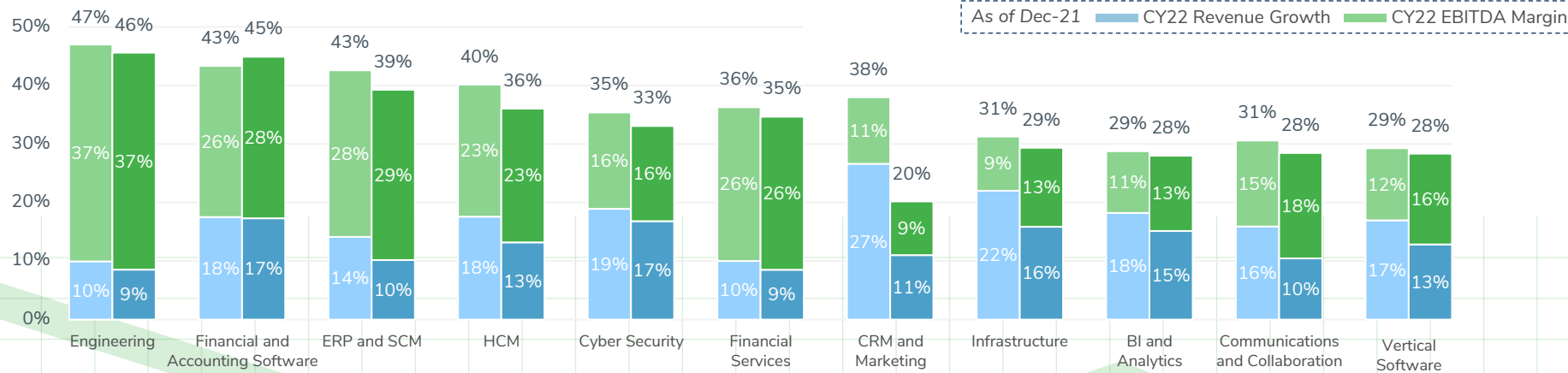
Public Software Market Multiples

Sector Multiples Declined Significantly in December 2022 vs. December 2021 Despite Stable Margin and Growth Forecast

EV/Revenue Multiples, December 2022 vs. December 2021



Revenue Growth & EBITDA Margins, December 2022 vs. December 2021



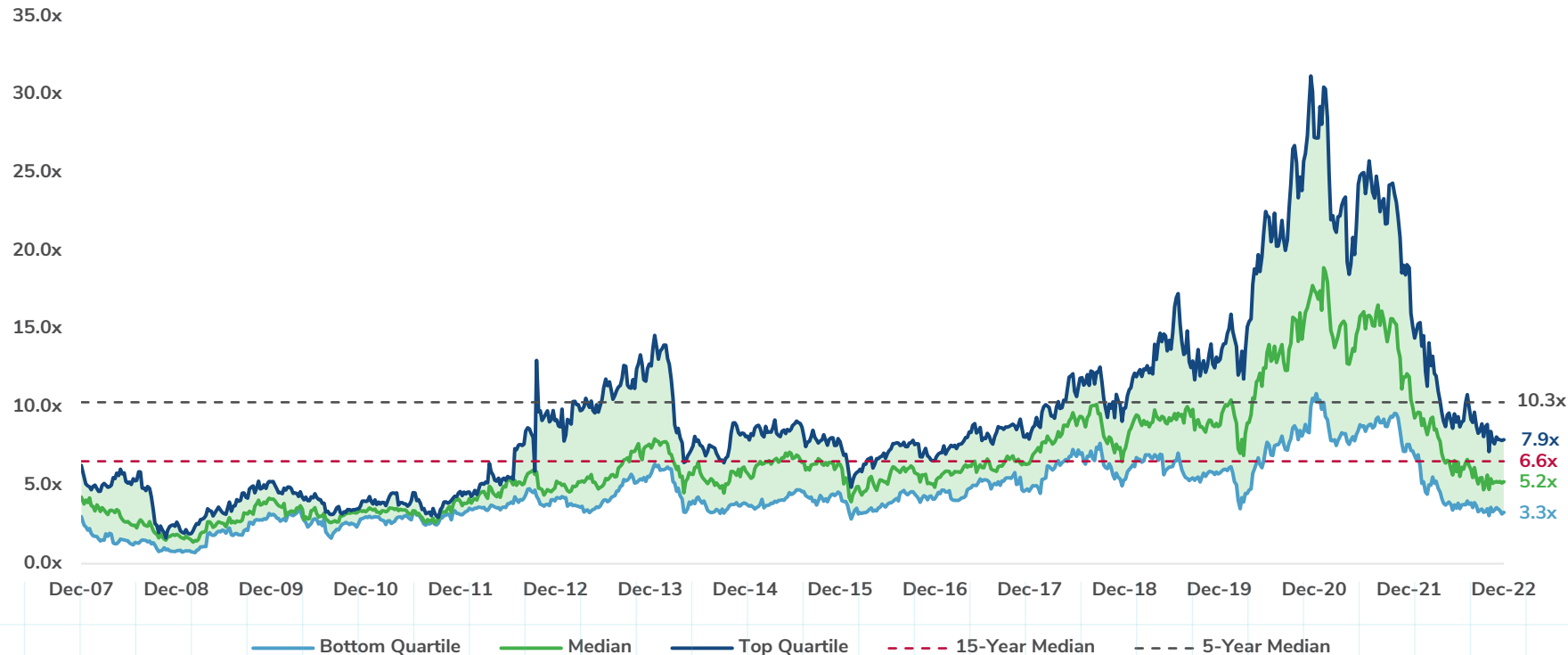
BI = Business Intelligence; CY = Calendar Year; CRM = Customer Relationship Management; ERP = Enterprise Resource Planning; HCM = Human Capital Management; SCM = Supply Chain Management
 Buckets ordered by CY23 revenue multiples
 Source: Capital IQ as of December 31, 2022

SaaS Companies Experiencing Considerable Decline from COVID-19 Highs

Recent Index Decline Most Marked for Top-Quartile Constituents

Performance of Our Technology M&A Practice SaaS Index over the Past 15 Years

EV/NTM Revenue



Our Technology M&A Practice SaaS Index includes DDOG, DOMO, DT, NEWR, PD, SPLK, TEAM, BOX, ASAN, DOCU, DBX, EVBG, FIVN, RNG, SMAR, TWLO, ZM, ADBE, BIGC, ECOM, HUBS, LPSN, MDLA, CRM, SHOP, MNTV, YEXT, ZEN, ZI, CRWD, MNDT, OKTA, PING, QLYS, SCWX, TENB, ZS, KXS, NOW, SPSC, ZUO, AVLR, BILL, BL, COUP, WK, BNFT, DCBO, PAYC, PCTY, WDAY, APPN, NET, ESTC, FSLY, FROG, MDB, NTNX, SNOW, WIX, TWOU, APPF, BLKB, HSTM, QTWO, U, VEEV, S, PCOR.

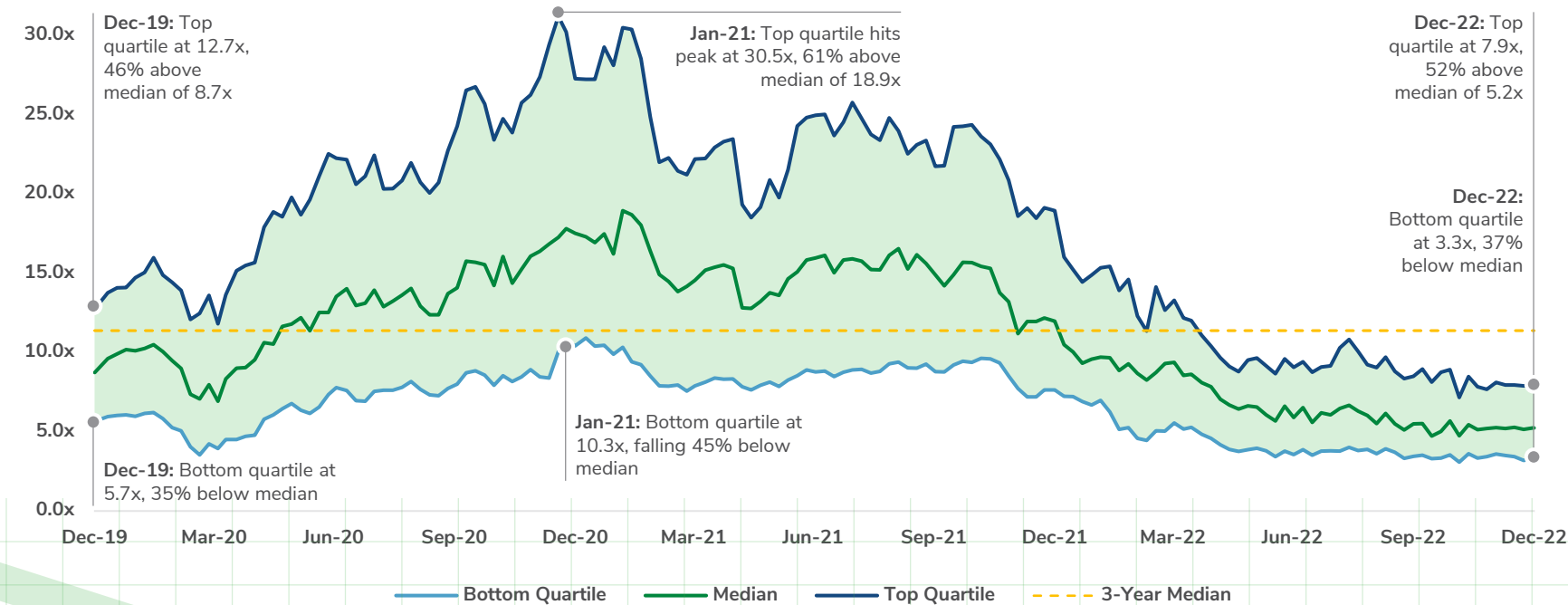
Source: Capital IQ as of December 31, 2022

Focus on Performance by Quartile over Past Three Years

Gap between Quartiles Tightening after Fall from Top Quartile's COVID-19 Highs

Performance of Our Technology M&A Practice SaaS Index over the Past Three Years


EV/NTM Revenue



Our Technology M&A Practice SaaS Index includes DDOG, DOMO, DT, NEWR, PD, SPLK, TEAM, BOX, ASAN, DOCU, DBX, EVBG, FIVN, RNG, SMAR, TWLO, ZM, ADBE, BIGC, ECOM, HUBS, LPSN, MDLA, CRM, SHOP, MNTV, YEXT, ZEN, ZI, CRWD, MNDT, OKTA, PING, QLYS, SCWX, TENB, ZS, KXS, NOW, SPSC, ZUO, AVLR, BILL, BL, COUP, WK, BNFT, DCBO, PAYC, PCTY, WDAY, APPN, NET, ESTC, FSLY, FROG, MDB, NTNX, SNOW, WIX, TWOU, APPF, BLKB, HSTM, QTWO, U, VEEV, S, PCOR.
Source: Capital IQ as of December 31, 2022

IPO Activity Has Come to a Standstill in 2022




Vast Majority of Companies Are Trading Significantly Below Listing Price

Company	IPO Date	Gross Proceeds (\$)	Offering Share Price (\$)	Market Cap at Listing ¹ (\$)	First-Day Pop ²	Latest Market Cap	Change in Share Price Since Listing
 HashiCorp	12/8/21	1,224.0	80.00	14,312	6% Median: 31%	5,428	-66% Median: -58%
 braze	11/16/21	520.0	65.00	5,867	44%	3,406	-58%
 Informatica	10/26/21	841.0	29.00	7,941	0%	5,816	-44%
 OVHcloud	10/14/21	386.3	21.43	4,041	-8%	3,442	-25%
 GitLab	10/13/21	800.8	77.00	11,012	35%	7,849	-41%
 CLEARWATER ANALYTICS	9/23/21	540.0	18.00	3,186	41%	2,234	4%
 EngageSmart	9/22/21	378.3	26.00	4,185	31%	2,615	-32%
 toast	9/21/21	869.6	40.00	19,964	56%	6,624	-55%
 freshworks	9/21/21	1,026.0	36.00	10,132	32%	3,737	-59%
 riskified	7/28/21	367.5	21.00	3,310	24%	742	-78%
 Paycor	7/20/21	425.5	23.00	3,940	13%	4,548	6%

IPO = Initial Public Offering; 1Market Capitalization at Listing = Market Capitalization on First-Day Post-IPO/First-Day Pop; 2First-Day Pop = Closing First-Day Share Price/Offering Share Price
 Source: Capital IQ as of December 31, 2022
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IPO Activity Has Come to a Standstill in 2022

Vast Majority of Companies Are Trading Significantly Below Listing Price

Company	IPO Date	Gross Proceeds (\$)	Offering Share Price (\$)	Market Cap at Listing ¹ (\$)	First-Day Pop ²	Latest Market Cap	Change in Share Price Since Listing
 SentinelOne	6/29/21	1,225.0	35.00	8,973	21% Median: 31%	6,508	-58% Median: -58%
PROCORE	5/19/21	634.5	67.00	8,585	31%	6,153	-30%
 UiPath	4/20/21	1,337.9	56.00	29,073	23%	9,909	-77%
 DigitalOcean	3/23/21	775.5	47.00	4,949	-10%	4,223	-46%
 tuya	3/17/21	915.4	21.00	11,755	19%	1,475	-91%
 ojo	3/16/21	450.0	25.00	3,550	39%	1,581	-75%
ON24	2/2/21	428.0	50.00	2,224	42%	445	-83%
qualtrics ^{XM}	1/28/21	1,550.9	30.00	15,084	52%	7,285	-65%
 CS.ai	12/8/20	651.0	42.00	4,026	120%	1,940	-73%
 McAfee	10/21/20	740.0	20.00	3,309	-7%	Taken private at \$26 per share ³	
 Palantir	9/30/20	Direct Listing ⁴	7.25	11,961	31%	18,563	-11%

IPO = Initial public offering; ¹Market Capitalization at Listing = Market Capitalization on First-Day Post-IPO/First-Day Pop; ²First-Day Pop = Closing First-Day Share Price/Offering Share Price;

³Taken private by investor group led by Advent International Corporation in March 2022; ⁴Direct listing prices as determined by listing exchange (New York Stock Exchange)

Source: Capital IQ as of December 31, 2022

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Select 2022 Kroll Technology M&A Transactions

Select Transactions from 2022

 **CARD.COM**

has been acquired by

 **ECHO** PAYMENT SYSTEMS

September 2022

 **resonate**

has received majority investment from

 **ZMC**
ZELNICK MEDIA CAPITAL

July 2022

 **NXC**  **IIMAGING**

has been acquired by

 **Canon**

July 2022

 **NGL**
Collective

has been acquired by

 **GoDIGITAL**
MEDIA GROUP


July 2022

 **techex.**

has received majority investment from

 **WestBridge**

June 2022

 **viajanet**

has been acquired by

 **despegar**

May 2022

 **TheraOffice**

has been acquired by

 **Netsmart**


April 2022

 **WinDelivery**


has been acquired by

 **Glovo**


February 2022

 **360Learning**


has acquired

 **Loop**

January 2022

 **Brightpearl**

has been acquired by

 **Sage**

January 2022

Public Trading Data for Software Companies

\$ in USD millions (except for share price)

Company Name	Share Price	52-Week		% of 52-Week High	Market Cap	Enterprise Value	Revenue		Revenue Growth ¹	EBITDA		EV/Revenue	
	12/31/22	Low	High				LTM	CY22		LTM	EBITDA Margin ²	CY22	CY23
BI and Analytics													
Alteryx, Inc.	\$50.7	\$39.6	\$76.4	(33.6%)	\$3,500.9	\$4,084.0	\$728.1	\$833.4	16.8%	(\$232.9)	(32.0%)	4.9x	4.2x
C3.ai, Inc.	11.2	10.2	32.4	(65.4%)	1,233.7	406.7	269.8	264.3	14.7%	(245.6)	(91.0%)	1.5x	1.3x
Datadog, Inc.	73.5	66.4	184.7	(60.2%)	23,340.6	22,411.1	1,531.9	1,655.2	34.0%	9.9	0.6%	13.5x	10.1x
Domo, Inc.	14.2	12.1	57.4	(75.2%)	491.9	547.6	299.0	306.4	10.1%	(103.0)	(34.4%)	1.8x	1.6x
Dynatrace, Inc.	38.3	29.4	61.2	(37.4%)	11,024.8	10,743.4	1,040.0	1,084.1	17.3%	117.7	11.3%	9.9x	8.4x
Expert.ai S.p.A.	0.7	0.5	2.5	(73.2%)	34.8	46.5	41.3	39.2	21.6%	(22.7)	(55.1%)	1.2x	1.0x
Informatica Inc.	16.3	15.4	37.8	(56.9%)	4,610.8	5,866.9	1,513.0	1,510.7	9.4%	176.6	11.7%	3.9x	3.5x
MicroStrategy Incorporated	141.6	132.6	576.3	(75.4%)	1,602.2	3,988.1	501.2	498.8	1.9%	25.4	5.1%	8.0x	7.8x
New Relic, Inc.	56.5	41.7	111.0	(49.1%)	3,857.7	3,596.0	852.7	882.1	15.7%	(177.8)	(20.9%)	4.1x	3.5x
PagerDuty, Inc.	26.6	19.5	38.8	(31.5%)	2,389.8	2,234.9	348.3	368.8	22.9%	(114.4)	(32.8%)	6.1x	4.9x
Palantir Technologies Inc.	6.4	5.9	18.8	(65.9%)	13,354.9	11,131.4	1,830.1	1,901.6	21.2%	(183.3)	(10.0%)	5.9x	4.8x
Splunk Inc.	86.1	65.0	150.8	(42.9%)	14,092.9	16,407.4	3,303.7	3,474.7	16.0%	(427.1)	(12.9%)	4.7x	4.1x
Teradata Corporation	33.7	28.7	52.5	(35.9%)	3,426.6	3,548.6	1,818.0	1,780.0	1.7%	292.0	16.1%	2.0x	2.0x
Veritone, Inc.	5.3	4.6	23.2	(77.1%)	192.3	196.3	161.0	150.6	9.1%	(25.6)	(15.9%)	1.3x	1.2x
Average												4.9x	4.2x
Median												4.4x	3.8x

EBITDA Margin; CY = Calendar Year; Market Cap = Market Capitalization; EV = Enterprise Value; EBITDA = Earnings before Interest, Tax, Depreciation and Amortization; ¹Forecasts revenue growth between CY22 and CY23; ²Last Twelve Months (LTM)
 Source: S&P Global Market Intelligence and Capital IQ as of December 31, 2022. It includes the most actively traded software companies for respective covered sectors, excluding most microcap companies.

Public Trading Data for Software Companies

\$ in USD millions (except for share price)

Company Name	Share Price	52-Week		% of 52-Week High	Market Cap	Enterprise Value	Revenue		Revenue Growth ¹	EBITDA		EV/Revenue	
	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Communications and Collaboration													
8x8, Inc.	\$4.3	\$2.9	\$17.9	(75.9%)	\$482.5	\$949.4	\$713.3	\$743.1	5.4%	(\$92.5)	(13.0%)	1.3x	1.2x
Agora, Inc.	3.9	2.5	16.5	(76.3%)	453.1	NM	160.9	161.5	15.2%	(98.6)	(61.2%)	NM	NM
Asana, Inc.	13.8	12.3	76.9	(82.1%)	2,929.9	2,642.5	508.9	542.0	20.2%	(384.0)	(75.4%)	4.9x	4.1x
Atlassian Corporation Plc	128.7	113.9	380.6	(66.2%)	32,880.3	32,648.1	2,996.3	3,158.1	22.1%	(166.9)	(5.6%)	10.3x	8.5x
Avaya Holdings Corp.	0.2	0.1	21.7	(99.1%)	17.0	2,885.0	2,766.0	2,545.7	(3.7%)	247.0	8.9%	1.1x	1.2x
Box, Inc.	31.1	22.3	33.0	(5.8%)	4,448.9	5,116.8	967.8	990.6	10.7%	87.8	9.1%	5.2x	4.7x
DocuSign, Inc.	55.4	39.6	157.4	(64.8%)	11,143.5	11,005.9	2,437.2	2,496.6	7.9%	(12.0)	(0.5%)	4.4x	4.1x
Dropbox, Inc.	22.4	19.1	25.8	(13.3%)	7,877.6	8,704.2	2,291.6	2,320.0	5.9%	517.2	22.6%	3.8x	3.5x
Everbridge, Inc.	29.6	24.1	68.2	(56.6%)	1,181.0	1,519.7	417.6	431.0	6.3%	(36.5)	(8.7%)	3.5x	3.3x
Extreme Networks, Inc.	18.3	8.5	21.0	(12.9%)	2,404.9	2,516.7	1,142.3	1,165.8	13.7%	108.7	9.5%	2.2x	1.9x
Five9, Inc.	67.9	46.6	144.2	(53.0%)	4,784.5	4,995.7	744.1	775.1	16.2%	(28.6)	(3.8%)	6.4x	5.5x
Jamf Holding Corp.	21.3	19.2	39.6	(46.2%)	2,585.6	2,752.1	452.3	477.5	20.9%	(77.3)	(17.1%)	5.8x	4.8x
Juniper Networks, Inc.	32.0	25.2	38.1	(16.2%)	10,372.8	11,127.4	5,152.3	5,327.8	7.5%	724.3	14.1%	2.1x	1.9x
ON24, Inc.	8.6	7.0	17.7	(51.2%)	414.6	83.2	196.3	190.6	0.2%	(49.4)	(25.1%)	0.4x	0.4x
Open Text Corporation	29.6	24.9	48.5	(38.8%)	7,903.5	10,673.5	3,513.6	3,513.8	3.9%	977.1	27.8%	3.0x	2.9x
RingCentral, Inc.	35.4	28.0	194.4	(81.8%)	3,399.3	4,969.7	1,912.1	1,991.5	17.4%	(162.6)	(8.5%)	2.5x	2.1x
Smartsheet Inc.	39.4	25.1	77.8	(49.4%)	5,169.1	4,804.9	712.0	760.8	26.6%	(205.0)	(28.8%)	6.3x	5.0x
TeamViewer AG	12.9	8.2	17.6	(26.9%)	2,278.2	2,861.7	537.0	603.5	10.2%	167.0	31.1%	4.7x	4.3x
Twilio Inc.	49.0	41.0	266.7	(81.6%)	9,025.3	6,069.5	3,644.5	3,801.6	16.9%	(823.6)	(22.6%)	1.6x	1.4x
Zoom Video Communications, Inc.	67.7	63.6	184.9	(63.4%)	19,801.9	14,736.8	4,346.5	4,376.2	5.8%	764.9	17.6%	3.4x	3.2x
Average												3.8x	3.4x
Median												3.5x	3.3x

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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
CRM and Marketing													
Adobe Inc.	\$336.5	\$274.7	\$575.0	(41.5%)	\$156,452.8	\$154,989.8	\$17,606.0	\$17,606.0	9.4%	\$6,952.7	39.5%	8.8x	8.0x
Aimia Inc.	2.7	2.4	4.8	(42.6%)	229.5	NM	350.9	365.1	(99.0%)	339.1	96.6%	NM	NM
BigCommerce Holdings, Inc.	8.7	7.7	37.8	(76.8%)	644.2	687.7	271.5	280.1	14.9%	(85.9)	(31.6%)	2.5x	2.1x
Braze, Inc.	27.3	22.5	79.3	(65.6%)	2,610.9	2,190.7	327.2	352.5	26.8%	(152.1)	(46.5%)	6.2x	4.9x
Brightcove Inc.	5.2	5.1	10.5	(50.3%)	220.0	213.8	214.4	211.5	(0.7%)	5.3	2.5%	1.0x	1.0x
Cardlytics, Inc.	5.8	3.5	73.4	(92.1%)	191.7	290.1	306.1	300.2	7.0%	(82.8)	(27.1%)	1.0x	0.9x
Freshworks Inc.	14.7	10.5	26.8	(45.1%)	4,235.3	3,113.7	470.3	495.2	21.3%	(216.2)	(46.0%)	6.3x	5.2x
HubSpot, Inc.	289.1	245.0	659.2	(56.1%)	14,044.8	13,497.0	1,630.6	1,706.9	20.9%	(79.1)	(4.8%)	7.9x	6.5x
LivePerson, Inc.	10.1	8.0	36.0	(71.8%)	763.8	1,114.6	516.1	519.2	6.2%	(151.0)	(29.3%)	2.1x	2.0x
NICE Ltd.	193.4	165.1	271.0	(28.6%)	12,286.1	11,604.3	2,128.2	2,185.1	11.1%	487.7	22.9%	5.3x	4.8x
Pegasystems Inc.	34.2	29.1	111.7	(69.4%)	2,814.2	3,219.9	1,237.6	1,262.1	11.0%	(158.9)	(12.8%)	2.6x	2.3x
Qualtrics International Inc.	10.4	9.3	35.9	(71.1%)	6,131.8	5,675.5	1,385.6	1,449.2	17.1%	(1,005.2)	(72.6%)	3.9x	3.3x
Salesforce, Inc.	132.6	126.3	256.9	(48.4%)	131,396.7	134,122.7	30,294.0	31,053.1	11.0%	2,561.0	8.5%	4.3x	3.9x
Shopify Inc.	34.7	23.6	139.4	(75.1%)	44,154.2	40,511.7	5,244.9	5,509.2	21.3%	(312.4)	(6.0%)	7.4x	6.1x
Sprout Social, Inc.	56.5	38.4	91.1	(38.0%)	3,096.2	2,936.8	237.4	254.0	29.4%	(44.3)	(18.7%)	11.6x	8.9x
TechTarget, Inc.	44.1	41.8	97.9	(55.0%)	1,292.0	1,387.8	301.4	296.2	3.4%	82.0	27.2%	4.7x	4.5x
Upland Software, Inc.	7.1	6.3	21.6	(67.0%)	226.6	620.8	314.2	315.3	(0.3%)	47.7	15.2%	2.0x	2.0x
Verint Systems Inc.	36.3	31.6	56.4	(35.7%)	2,389.6	3,019.9	900.2	902.2	5.2%	98.2	10.9%	3.3x	3.2x
Yext, Inc.	6.5	4.0	10.0	(35.0%)	797.3	755.5	399.9	399.3	4.2%	(65.4)	(16.4%)	1.9x	1.8x
ZoomInfo Technologies Inc.	30.1	23.3	65.2	(53.8%)	12,154.1	13,010.5	1,018.7	1,096.7	22.3%	201.8	19.8%	11.9x	9.7x
Average												5.0x	4.3x
Median												4.3x	3.9x

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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Cyber Security													
Absolute Software Corporation	\$10.4	\$6.5	\$12.7	(17.8%)	\$546.2	\$757.4	\$207.1	\$222.0	16.8%	\$7.4	3.6%	3.4x	2.9x
Check Point Software	126.2	107.5	149.6	(15.7%)	15,821.9	12,274.6	2,290.5	2,327.6	5.0%	899.9	39.3%	5.3x	5.0x
CrowdStrike Holdings, Inc.	105.3	98.7	242.0	(56.5%)	24,679.3	23,005.2	2,034.9	2,231.2	33.5%	(78.4)	(3.9%)	10.3x	7.7x
CyberArk Software Ltd.	129.7	100.4	180.0	(28.0%)	5,278.9	4,660.9	573.9	597.2	22.1%	(118.6)	(20.7%)	7.8x	6.4x
F5, Inc.	143.5	133.7	245.6	(41.6%)	8,663.5	8,443.6	2,695.8	2,707.5	11.7%	533.5	19.8%	3.1x	2.8x
Fortinet, Inc.	48.9	42.6	72.4	(32.5%)	38,194.6	37,466.0	4,098.0	4,430.3	21.3%	924.4	22.6%	8.5x	7.0x
F-Secure Oyj	3.0	2.4	3.5	(13.1%)	527.9	501.6	268.7	118.8	4.3%	23.2	8.6%	NM	4.0x
Gen Digital Inc.	21.4	20.1	30.9	(30.7%)	14,263.2	23,291.2	2,873.0	3,104.0	25.8%	1,256.0	43.7%	7.5x	6.0x
Okta, Inc.	68.3	44.1	226.5	(69.8%)	10,945.3	10,852.4	1,730.8	1,836.3	18.3%	(724.6)	(41.9%)	5.9x	5.0x
Palo Alto Networks, Inc.	139.5	136.7	213.6	(34.7%)	42,190.9	42,348.9	5,817.5	6,149.2	23.9%	131.0	2.3%	6.9x	5.6x
Qualys, Inc.	112.2	107.7	162.4	(30.9%)	4,263.4	3,847.0	468.7	489.1	16.0%	163.8	35.0%	7.9x	6.8x
Radware Ltd.	19.8	17.4	41.7	(52.6%)	885.6	564.3	296.0	292.7	2.5%	18.2	6.1%	1.9x	1.9x
Rapid7, Inc.	34.0	26.5	118.4	(71.3%)	2,012.8	2,678.5	652.2	680.4	16.8%	(98.2)	(15.1%)	3.9x	3.4x
SecureWorks Corp.	6.4	5.3	17.2	(62.8%)	540.9	415.0	476.0	457.1	(4.6%)	(71.5)	(15.0%)	0.9x	1.0x
SentinelOne, Inc.	14.6	12.8	52.3	(72.1%)	4,124.3	3,450.7	361.7	420.1	55.2%	(349.0)	(96.5%)	8.2x	5.3x
Sumo Logic, Inc.	8.1	6.4	14.0	(42.0%)	972.1	632.8	288.0	298.5	16.8%	(121.8)	(42.3%)	2.1x	1.8x
Tenable Holdings, Inc.	38.2	28.8	63.6	(40.0%)	4,292.4	4,169.1	647.6	680.0	20.2%	(42.3)	(6.5%)	6.1x	5.1x
Trend Micro Incorporated	46.6	41.9	69.4	(32.9%)	6,476.9	4,601.3	1,474.1	1,688.7	9.6%	411.8	27.9%	2.7x	2.5x
Varonis Systems, Inc.	23.9	15.6	51.6	(53.6%)	2,638.7	2,165.5	457.6	471.5	11.8%	(118.3)	(25.9%)	4.6x	4.1x
WithSecure Oyj	1.5	1.4	6.0	(75.7%)	256.1	190.4	234.4	144.4	13.6%	7.6	3.2%	NM	1.2x
Zscaler, Inc.	111.9	105.7	323.6	(65.4%)	16,137.3	15,531.8	1,216.0	1,325.7	31.2%	(292.5)	(24.1%)	11.7x	8.9x
Average												5.7x	4.5x
Median												5.9x	5.0x

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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Engineering													
Altair Engineering Inc.	\$45.5	\$43.2	\$78.4	(42.0%)	\$3,644.1	\$3,670.8	\$552.6	\$558.0	8.2%	\$21.0	3.8%	6.6x	6.1x
ANSYS, Inc.	241.6	194.2	403.2	(40.1%)	21,045.4	21,295.8	2,027.1	2,026.4	8.0%	690.1	34.0%	10.5x	9.7x
Autodesk, Inc.	186.9	163.2	285.0	(34.4%)	40,320.5	41,514.5	4,898.4	5,000.1	9.4%	1,035.1	21.1%	8.3x	7.6x
Bentley Systems, Incorporated	37.0	26.3	48.9	(24.4%)	11,455.0	13,207.6	1,079.9	1,094.5	10.2%	204.4	18.9%	12.1x	11.0x
Cadence Design Systems, Inc.	160.6	132.3	195.0	(17.6%)	44,066.1	43,837.9	3,434.9	3,545.0	9.2%	1,199.8	34.9%	12.4x	11.3x
Dassault Systèmes SE	35.8	34.4	55.9	(36.0%)	47,061.0	47,299.0	5,343.4	6,031.8	8.8%	1,454.7	27.2%	7.8x	7.2x
Hexagon AB (publ)	10.5	9.3	14.1	(26.0%)	28,138.0	31,771.1	4,872.5	5,514.4	3.7%	1,525.7	31.3%	5.8x	5.6x
Nemetschek SE	51.0	45.7	121.5	(58.1%)	5,886.7	5,852.9	771.4	856.7	7.8%	209.6	27.2%	6.8x	6.3x
PTC Inc.	120.0	96.6	133.1	(9.8%)	14,183.2	15,451.2	1,933.3	1,938.3	3.2%	560.7	29.0%	8.0x	7.7x
Roper Technologies, Inc.	432.1	356.2	492.4	(12.2%)	45,824.0	50,589.0	6,141.5	5,372.4	10.4%	2,348.6	38.2%	9.4x	8.5x
Synopsys, Inc.	319.3	255.0	391.2	(18.4%)	48,665.3	47,799.6	5,081.5	5,163.7	16.1%	1,335.4	26.3%	9.3x	8.0x
Trimble Inc.	50.6	47.5	88.1	(42.6%)	12,469.3	13,852.7	3,745.8	3,695.6	5.3%	760.0	20.3%	3.7x	3.6x
Average												8.4x	7.7x
Median												8.1x	7.7x
ERP and SCM													
American Software, Inc.	\$14.7	\$13.4	\$27.0	(45.5%)	\$495.3	\$389.2	\$129.8	\$128.5	3.0%	\$14.5	11.1%	3.0x	2.9x
Kinaxis Inc.	112.2	88.3	133.0	(15.6%)	3,127.3	2,949.3	336.9	367.8	13.2%	28.7	8.5%	8.0x	7.1x
Manhattan Associates, Inc.	121.4	106.0	155.8	(22.1%)	7,575.0	7,401.5	740.5	751.7	8.2%	142.1	19.2%	9.8x	9.1x
Microsoft Corporation	239.8	213.4	338.0	(29.0%)	1,788,218.4	1,758,110.4	203,075.0	204,534.4	10.1%	98,841.0	48.7%	8.6x	7.8x
Oracle Corporation	81.7	60.8	89.6	(8.8%)	220,391.7	304,430.7	46,073.0	46,073.0	12.5%	18,375.0	39.9%	6.6x	5.9x
SAP SE	103.0	85.0	134.0	(23.1%)	119,991.9	124,094.7	29,825.5	33,016.3	7.3%	6,241.4	20.9%	3.8x	3.5x
ServiceNow, Inc.	388.3	337.0	651.4	(40.4%)	78,280.7	74,932.7	6,919.0	7,246.7	21.9%	676.0	9.8%	10.3x	8.5x
Serviceware SE	6.9	6.5	19.2	(63.9%)	72.9	47.6	82.7	84.3	10.1%	(1.0)	(1.2%)	0.6x	0.5x
SPS Commerce, Inc.	128.4	96.4	146.8	(12.5%)	4,628.8	4,410.0	431.6	449.6	16.7%	93.7	21.7%	9.8x	8.4x
Technology One Limited	8.9	6.5	9.8	(8.9%)	2,906.3	2,810.8	237.2	244.1	19.2%	75.3	31.7%	11.5x	9.7x
Tecsys Inc.	19.6	17.9	39.7	(50.6%)	285.6	264.6	104.1	106.1	10.2%	3.8	3.7%	2.5x	2.3x
The Descartes Systems Group Inc.	69.7	53.9	75.8	(8.0%)	5,915.4	5,683.9	473.2	484.7	9.8%	196.7	41.6%	11.7x	10.7x
TOTVS S.A.	5.2	4.3	7.2	(27.5%)	3,164.7	3,060.5	720.3	783.6	18.3%	133.8	18.6%	3.9x	3.3x
WiseTech Global Limited	34.5	23.2	43.1	(19.9%)	11,187.7	10,881.3	435.6	478.3	22.1%	191.1	43.9%	22.7x	18.6x
Zuora, Inc.	6.4	5.5	18.8	(66.2%)	849.1	705.4	383.7	393.4	9.9%	(87.6)	(22.8%)	1.8x	1.6x
Average												7.7x	6.7x
Median												8.0x	7.1x

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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Financial and Accounting Software													
Bill.com Holdings, Inc.	\$109.0	\$89.9	\$262.2	(58.4%)	\$11,514.0	\$10,738.7	\$753.5	\$841.1	36.1%	(\$219.0)	(29.1%)	12.8x	9.4x
BlackLine, Inc.	67.3	48.7	104.6	(35.7%)	4,021.2	4,400.0	498.3	522.5	17.0%	(43.0)	(8.6%)	8.4x	7.2x
Intuit Inc .	389.2	339.4	645.6	(39.7%)	109,341.8	114,218.8	13,316.0	13,551.3	9.5%	3,190.0	24.0%	8.4x	7.7x
Reckon Limited	0.4	0.4	1.0	(57.9%)	46.4	58.4	49.7	34.9	4.7%	20.1	40.5%	NM	1.6x
The Sage Group plc	9.0	7.1	10.3	(13.1%)	9,160.6	10,043.8	2,169.5	2,391.3	9.9%	471.3	21.7%	4.2x	3.8x
Wolters Kluwer N.V.	104.5	90.0	119.1	(12.2%)	25,999.5	28,367.8	5,322.0	5,757.4	4.5%	1,620.3	30.4%	4.9x	4.7x
Workiva Inc.	84.0	59.4	131.9	(36.3%)	4,412.4	4,353.2	514.9	533.4	16.5%	(75.8)	(14.7%)	8.2x	7.0x
Xero Limited	47.8	42.7	99.5	(52.0%)	7,169.7	7,239.4	708.0	785.4	30.7%	55.3	7.8%	9.2x	7.0x
Average												8.0x	6.1x
Median												8.4x	7.0x
Financial Services													
Broadridge Financial Solutions, Inc.	\$134.1	\$131.4	\$183.3	(26.8%)	\$16,653.0	\$20,753.3	\$5,799.5	\$5,889.6	6.8%	\$1,196.9	20.6%	3.5x	3.3x
Clearwater Analytics Holdings, Inc.	18.8	11.2	22.7	(17.5%)	3,549.6	3,396.6	290.5	301.1	19.8%	6.7	2.3%	11.3x	9.4x
Duck Creek Technologies, Inc.	12.1	10.0	32.5	(62.9%)	1,601.3	1,350.6	302.9	306.1	11.1%	13.9	4.6%	4.4x	4.0x
Fidelity National Inf, Services	67.9	56.5	122.1	(44.4%)	40,260.8	57,431.8	14,486.0	14,530.7	4.2%	4,097.0	28.3%	4.0x	3.8x
Guidewire Software, Inc.	62.6	52.1	114.0	(45.1%)	5,122.2	4,913.5	842.0	860.3	8.8%	(182.2)	(21.6%)	5.7x	5.3x
i3 Verticals, Inc.	24.3	18.6	30.3	(19.6%)	559.8	951.2	317.9	331.6	13.7%	42.5	13.4%	2.9x	2.5x
Jack Henry & Associates, Inc.	175.6	155.4	212.6	(17.4%)	12,807.0	13,071.0	1,984.0	2,006.8	8.2%	555.8	28.0%	6.5x	6.0x
nCino, Inc.	26.4	23.0	56.4	(53.1%)	2,935.8	2,910.5	374.1	403.6	19.8%	(60.2)	(16.1%)	7.2x	6.0x
Q2 Holdings, Inc.	26.9	20.9	81.6	(67.1%)	1,545.5	1,882.5	551.0	568.8	13.7%	(52.5)	(9.5%)	3.3x	2.9x
SimCorp A/S	68.7	59.6	105.7	(35.0%)	2,698.2	2,708.8	505.1	583.8	6.5%	105.7	20.9%	4.6x	4.4x
SS&C Technologies Holdings, Inc.	52.1	45.3	84.9	(38.6%)	13,114.4	20,231.6	5,238.9	5,284.2	3.6%	1,778.3	33.9%	3.8x	3.7x
Temenos AG	54.9	53.7	140.8	(61.0%)	3,938.3	4,785.7	961.6	958.3	5.7%	229.8	23.9%	5.0x	4.7x
Average												5.2x	4.7x
Median												4.5x	4.2x

EBITDA Margin; CY = Calendar Year; Market Cap = Market Capitalization; EV = Enterprise Value; EBITDA = Earnings before Interest, Tax, Depreciation and Amortization; ¹Forecasts revenue growth between CY22 and CY23; ²Last Twelve Months (LTM)
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Public Trading Data for Software Companies

\$ in USD millions (except for share price)

Company Name	Share Price	52-Week		% of 52-Week High	Market Cap	Enterprise Value	Revenue		Revenue Growth ¹	EBITDA	EBITDA Margin ²	EV/Revenue	
	12/31/22	Low	High				LTM	CY22		LTM		CY22	CY23
HCM													
Automatic Data Processing, Inc.	\$238.9	\$192.3	\$274.9	(13.1%)	\$99,085.8	\$101,447.9	\$16,881.6	\$17,239.7	6.5%	\$4,503.7	26.7%	5.9x	5.5x
Ceridian HCM Holding Inc.	64.2	43.2	105.5	(39.2%)	9,853.1	10,704.8	1,192.2	1,235.2	17.3%	41.5	3.5%	8.7x	7.4x
Docebo Inc.	33.1	23.4	63.6	(48.0%)	1,087.8	875.1	133.8	143.0	30.1%	(9.8)	(7.3%)	6.1x	4.7x
Paychex, Inc.	115.6	105.7	141.9	(18.6%)	41,659.4	41,272.1	4,816.8	4,816.8	6.8%	2,110.5	43.8%	8.6x	8.0x
Paycom Software, Inc.	310.3	255.8	416.1	(25.4%)	17,956.5	17,668.4	1,289.6	1,371.8	22.9%	391.7	30.4%	12.9x	10.5x
Paycor HCM, Inc.	24.5	20.1	34.9	(30.0%)	4,303.2	4,234.8	455.0	479.2	20.2%	(20.1)	(4.4%)	8.8x	7.4x
Paylocity Holding Corporation	194.3	152.0	276.9	(29.8%)	10,815.2	10,825.1	924.2	987.8	25.9%	108.5	11.7%	11.0x	8.7x
TriNet Group, Inc.	67.8	60.6	103.4	(34.4%)	4,097.3	4,100.3	4,891.0	1,356.2	(3.2%)	599.0	12.2%	NM	3.1x
Workday, Inc.	167.3	128.7	272.5	(38.6%)	43,006.4	40,775.6	5,945.7	6,203.0	17.2%	128.9	2.2%	6.6x	5.6x
Average												8.6x	6.8x
Median												8.6x	7.4x

EBITDA Margin; CY = Calendar Year; Market Cap = Market Capitalization; EV = Enterprise Value; EBITDA = Earnings before Interest, Tax, Depreciation and Amortization; ¹Forecasts revenue growth between CY22 and CY23; ²Last Twelve Months (LTM)
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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Infrastructure													
Akamai Technologies, Inc.	\$84.3	\$76.3	\$123.3	(31.6%)	\$13,255.5	\$15,056.2	\$3,594.2	\$3,592.0	4.4%	\$1,175.3	32.7%	4.2x	4.0x
Appian Corporation	32.6	31.2	66.9	(51.3%)	2,362.1	2,329.6	447.2	465.1	14.9%	(123.3)	(27.6%)	5.0x	4.4x
Cisco Systems, Inc.	47.6	38.6	63.4	(24.8%)	195,710.0	185,828.0	52,289.0	52,980.2	4.7%	15,862.0	30.3%	3.5x	3.4x
Cloudflare, Inc.	45.2	37.4	132.5	(65.9%)	14,857.1	14,788.4	894.1	974.7	35.3%	(130.6)	(14.6%)	15.2x	11.2x
Commvault Systems, Inc.	62.8	50.3	70.9	(11.3%)	2,798.4	2,548.6	794.4	795.8	4.8%	53.0	6.7%	3.2x	3.1x
DigitalOcean Holdings, Inc.	25.5	23.4	81.4	(68.7%)	2,452.7	3,097.2	533.0	574.5	29.1%	65.7	12.3%	5.4x	4.2x
Elastic N.V.	51.5	48.6	124.3	(58.6%)	4,923.7	4,665.9	977.8	1,027.2	22.3%	(184.7)	(18.9%)	4.5x	3.7x
Exasol AG	3.2	2.8	8.7	(63.9%)	76.1	55.5	33.0	36.1	24.9%	(17.2)	(52.1%)	1.5x	1.2x
Fastly, Inc.	8.2	7.2	36.6	(77.6%)	989.8	1,107.4	411.1	427.6	15.4%	(197.3)	(48.0%)	2.6x	2.2x
HashiCorp, Inc.	27.3	21.5	92.7	(70.5%)	5,139.1	3,880.4	436.6	464.2	27.8%	(446.8)	(102.3%)	8.4x	6.5x
IFrog Ltd.	21.3	16.4	31.5	(32.2%)	2,139.2	1,728.1	262.7	280.6	27.8%	(64.9)	(24.7%)	6.2x	4.8x
MongoDB, Inc.	196.8	135.2	519.5	(62.1%)	13,638.2	13,086.1	1,189.2	1,260.2	25.3%	(332.8)	(28.0%)	10.4x	8.3x
NetApp, Inc.	60.1	58.1	96.8	(38.0%)	12,947.3	12,602.3	6,549.0	6,549.7	0.5%	1,382.0	21.1%	1.9x	1.9x
Nutanix, Inc.	26.1	13.4	33.7	(22.8%)	5,994.4	6,056.1	1,635.9	1,687.2	11.4%	(317.4)	(19.4%)	3.6x	3.2x
OVH Groupe S.A.	17.1	10.4	30.1	(43.3%)	3,250.7	3,857.4	793.6	807.5	25.1%	279.0	35.2%	4.8x	3.8x
Rackspace Technology, Inc.	3.0	2.5	14.0	(78.9%)	622.8	4,306.0	3,112.6	3,111.8	(2.1%)	554.2	17.8%	1.4x	1.4x
Snowflake Inc.	143.5	110.3	344.0	(58.3%)	46,162.5	41,543.3	1,860.4	2,051.0	47.6%	(705.1)	(37.9%)	20.3x	13.7x
Software Aktiengesellschaft	25.9	21.7	37.7	(31.4%)	1,914.9	2,130.3	871.7	1,001.2	7.9%	148.3	17.0%	2.1x	2.0x
SolarWinds Corporation	9.4	7.5	14.8	(36.5%)	1,513.3	2,682.0	719.0	712.8	3.2%	165.2	23.0%	3.8x	3.6x
Tuya Inc.	1.9	0.8	6.7	(71.5%)	1,053.5	117.9	237.9	206.7	3.0%	(182.3)	(76.6%)	0.6x	0.6x
UiPath Inc.	12.7	10.4	44.1	(71.2%)	7,026.5	5,408.4	1,039.7	1,028.1	18.4%	(325.0)	(31.3%)	5.3x	4.4x
VeriSign, Inc.	205.4	155.3	253.9	(19.1%)	21,780.0	22,589.2	1,396.0	1,422.1	8.4%	967.2	69.3%	15.9x	14.6x
Average												5.9x	4.8x
Median												4.4x	3.8x

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	12/31/22	Low	High				LTM	CY22		LTM	Margin ²	CY22	CY23
Vertical Software													
2U, Inc.	\$6.3	\$4.7	\$21.0	(70.1%)	\$490.3	\$1,371.4	\$970.7	\$961.4	3.0%	(\$1.7)	(0.2%)	1.4x	1.4x
Veradigm Inc.	17.6	13.6	23.3	(24.1%)	1,927.3	1,653.6	1,529.0	614.9	6.7%	115.4	7.5%	NM	2.5x
Amdocs Limited	90.9	72.6	91.2	(0.4%)	10,982.2	11,033.6	4,576.7	4,650.0	6.5%	889.3	19.4%	2.4x	2.2x
AppFolio, Inc.	105.4	79.9	127.7	(17.5%)	3,705.3	3,623.1	443.4	465.5	21.9%	(32.9)	(7.4%)	7.8x	6.4x
AssetMark Financial Holdings, Inc.	23.0	16.9	27.3	(15.7%)	1,698.5	1,701.2	597.8	452.1	12.7%	133.1	22.3%	NM	3.3x
Blackbaud, Inc.	58.9	43.5	84.0	(29.9%)	3,055.1	3,932.3	1,031.2	1,061.6	5.3%	56.0	5.4%	3.7x	3.5x
Boxlight Corporation	0.3	0.3	1.5	(79.4%)	23.0	87.2	223.0	227.0	11.4%	11.3	5.1%	0.4x	0.3x
Ebix, Inc.	20.0	12.5	44.4	(55.1%)	616.8	1,214.0	1,061.8	1,020.9	(5.2%)	140.2	13.2%	1.2x	1.3x
EngageSmart, Inc.	17.6	15.0	24.7	(28.7%)	2,912.5	2,652.0	281.6	302.0	26.1%	29.4	10.4%	8.8x	7.0x
Envestnet, Inc.	61.7	41.7	84.6	(27.1%)	3,413.6	4,146.3	1,266.5	1,243.3	5.5%	86.9	6.9%	3.3x	3.2x
FINEOS Corporation Holdings plc	1.0	0.8	3.1	(66.9%)	331.5	291.9	133.0	136.3	13.1%	(14.9)	(11.2%)	2.1x	1.9x
GitLab Inc.	45.4	30.7	88.2	(48.5%)	6,800.3	5,923.7	379.2	421.4	40.7%	(200.3)	(52.8%)	14.1x	10.0x
HealthStream, Inc.	24.8	18.5	26.8	(7.2%)	759.4	731.6	262.6	266.3	6.6%	31.2	11.9%	2.7x	2.6x
Olo Inc.	6.3	5.7	21.4	(70.8%)	1,021.3	571.9	175.6	184.1	16.4%	(34.8)	(19.8%)	3.1x	2.7x
Procore Technologies, Inc.	47.2	40.0	80.8	(41.6%)	6,511.3	6,038.9	664.3	708.4	23.0%	(236.2)	(35.6%)	8.5x	6.9x
Riskified Ltd.	4.6	3.4	8.1	(42.6%)	782.0	339.2	251.8	259.3	17.9%	(110.8)	(44.0%)	1.3x	1.1x
Stride, Inc.	31.3	25.7	47.3	(33.9%)	1,312.2	1,597.3	1,711.6	1,745.3	2.1%	184.2	10.8%	0.9x	0.9x
Tabula Rasa HealthCare, Inc.	5.0	2.1	16.4	(69.9%)	123.2	379.3	357.1	294.6	13.2%	(63.0)	(17.6%)	1.3x	1.1x
Toast, Inc.	18.0	11.9	35.6	(49.3%)	9,388.9	8,429.9	2,475.0	2,715.8	32.5%	(381.0)	(15.4%)	3.1x	2.3x
Tyler Technologies, Inc.	322.4	281.1	539.0	(40.2%)	13,425.1	14,336.4	1,831.5	1,853.4	7.9%	349.7	19.1%	7.7x	7.2x
Unity Software Inc.	28.6	21.2	144.7	(80.2%)	11,522.9	11,647.8	1,255.9	1,374.0	59.4%	(597.0)	(47.5%)	8.5x	5.3x
Veeva Systems Inc.	161.4	151.0	257.7	(37.4%)	25,125.0	22,164.3	2,077.2	2,144.3	12.9%	498.4	24.0%	10.3x	9.2x
Average												4.6x	3.7x
Median												3.1x	2.6x

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About Our Corporate Finance Practice

Industry Experts In:



We Rank:

#1

for Global Announced Fairness Opinions for Full Year 2022¹

Key Services

Buy-side and Sell-side M&A
Fairness and Solvency Opinions
Transaction Advisory Services
Restructuring
ESOP and ERISA Advisory

ACROSS
30

COUNTRIES AND
TERRITORIES

#5

for U.S. Middle-Market Transactions Over the Past 10 year²

Experience, including more than

600

M&A transactions in the past 10 years





Source:

1. Refinitiv's Global Mergers & Acquisitions Review – Full Year 2022

2. Refinitiv cumulative data 2012-2021

Key Subsectors of Focus for Our Technology M&A Practice

Verticals of Focus

 Real Estate & Construction	 a business division of  has been acquired by 	 has been acquired by 	 has been acquired by 	 has received growth equity investment from 
	 has been acquired by 	 has been acquired by 	 has been acquired by 	 has received funding from 
	 has been acquired by 	 has been acquired by 	 has been acquired by 	 has been acquired by 
	 has been acquired by  a subsidiary of 	 has been acquired by 	 has been acquired by 	 has been acquired by 

Thematic Areas of Focus

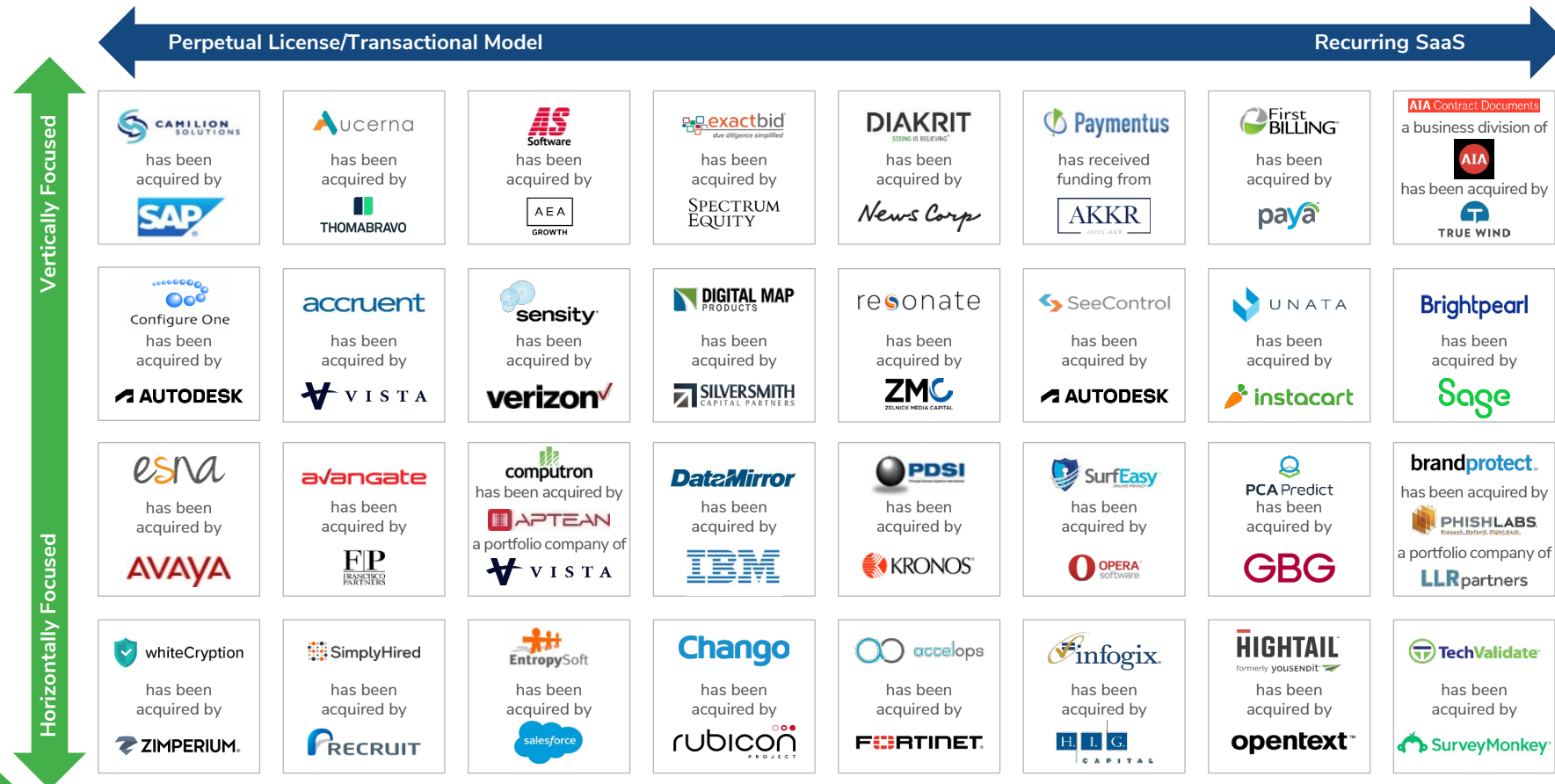
 Data & Analytics	 has received a majority investment from 	 has been acquired by 	 has been acquired by 	 has been acquired by 
	 has received a majority investment from 	 has been acquired by 	 has been acquired by 	 has been acquired by 
	 has been acquired by 	 has been acquired by 	 has been acquired by 	 has been acquired by 
	 has been acquired by 	 has been acquired by 	 has been acquired by 	 has been acquired by 

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Our Technology M&A Practice (formerly Pagemill Partners) has completed over 300 transactions, the majority of which are in enterprise software.

- Industry leaders leverage both SaaS and perpetual models, including companies with hybrid delivery models.
- Underlying technology architecture, reliance on third-party technologies and strategic partnerships, product roadmaps and vertical go-to-market strategies are all important attributes that we have demonstrated experience in articulating and positioning.



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