



EQUITY RESEARCH

December 1, 2022

Industry Update

Crypto Winter - Bits & Bytes Weekly

2022 Institutional Investor Digital Asset Outlook Survey Results

Our Conclusion

The crypto market turmoil that started earlier this year with the Terra Luna crash and most recently with the public implosion of FTX, has caused a contagion effect among crypto funds. This ripple has resulted in a rush of liquidation requests by customers and led many exchanges to implement a pause on withdrawals, including Gemini which recently told its customers that it cannot meet its redemptions within its service-level agreements. Despite these events, according to Coinbase's 2022 Institutional investor survey, crypto investors remain bullish on the future of digital assets although expect recent events to dampen short-term sentiment.

Key Points

The failure of FTX has set off a domino effect in the crypto space as customers liquidate their assets, resulting in a cascade of closures for other firms. Since FTX filed for bankruptcy, BlockFi is also reportedly considering bankruptcy options, and Voyager, whose assets FTX agreed to purchase, is now looking for a replacement bidder. Crypto hedge fund Galois Capital has said that FTX holds roughly half its capital.

These redemptions and closures have impacted the price of the underlying tokens, with both Bitcoin and Ethereum down ~65% YTD. The founder of Ethereum blockchain believes the collapse of FTX has illustrated once again that the problem lies in the people, not the technology. However, it also illustrates that the previously held viewpoint that crypto would serve as a hedge against inflation with a low correlation to other asset classes can be impacted by factors outside crypto's control. Investor attitude has now changed to focus on long-term appreciation and the opportunity to invest in innovative technology instead. From the standpoint of expected returns, crypto continues to be regarded as a high-return investment according to the Institutional Investors 2022 survey conducted by Coinbase. Of the different asset classes covered in the survey, 56% of the respondents pointed to U.S. investment-grade corporates as offering the highest alpha opportunities in the next three years, followed by digital assets (35%) and real estate (35%). Within strategies to generate alpha, investors noted crypto hedge funds as offering better alpha opportunities over venture and long-only funds.

Fifty eight percent of respondents currently holding crypto are planning to increase their allocation in the next 12 months vs. 6% that plan a decrease. Seventy one percent of respondents believe that crypto valuations will increase over the long term, whereas the other 30% were neutral on the future of digital assets. Institutional investors flagged regulation and better risk management as the primary concerns with digital asset markets and consider events like FTX a call to action for policy makers to enact much needed regulation.

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Sector:

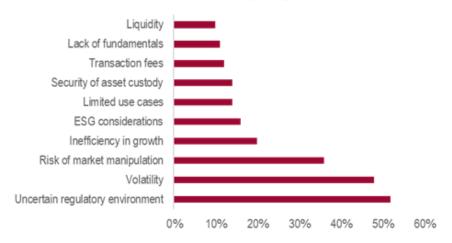
Information Technology

Investor Concerns About Investing In Digital Assets

Investors cited the uncertain regulatory environment as the biggest concern surrounding investments in digital assets. Thirty percent of respondents see recent events dampening the short-term sentiment of digital asset markets but remain bullish long term.

Exhibit 1: Coinbase Survey - Institutional Sentiment On Crypto Investment, 2022

Concerns About Investing In Digital Assets



Source: Coinbase and CIBC World Markets Inc.



News Impacting Our Coverage

OpenText Completes Notes Offering And Term Loan Amendment As Part Of Micro Focus Acquisition Financing

OTEX announced that the company has closed its offering of US\$1 billion principal amount of 6.90% senior secured fixed-rate notes due 2027. As a result, the entire previously announced US\$4.585 billion aggregate debt financing package for the acquisition is now finalized, and, as such, all commitments under the bridge loan agreement related to the acquisition have been terminated undrawn. After giving effect to the notes offering and the above noted borrowings, following closing of the acquisition, the company's long-term debt would be approximately US\$9.3 billion (consisting of approximately 46% fixed and 54% floating rate debt), with a weighted average interest rate of approximately 5.88% and a weighted average maturity of approximately six years. The company now has Micro Focus shareholder approval and a completed capital structure in place and remains on track to close the acquisition next quarter.

CGI Approved To Provide Services On The U.S. Department of The Treasury's New Shared Services Marketplace

CGI announced that it became the first commercial vendor approved to provide financial management services/solutions under the U.S. Department of The Treasury's new shared services marketplace. The Financial Management Quality Service Management Office (FM QSMO) is a centralized broker of commercial and federal solutions for government agencies for technology support for financial systems, financial management services and other Treasury Bureau of the Fiscal Service products/services. CGI Federal will offer service packages accelerated by FM QSMO for grant accounting services, core FS agency solution operations and support, and financial management organizational change management.

CGI Wins VIA Rail Canada In Long-term Agreement To Launch New Reservation System

CGI announced it has entered into a long-term agreement to provide managed services for VIA Rail Canada's new online reservation system in 2023. This is a continuation from the partnership which began in 2020 as CGI was selected to help build the cloud-based reservation system for VIA Rail Canada.

Dye & Durham Adds WSIB To Its National Billing & Tax Payment Infrastructure

DND announced the Workplace Safety and Insurance Board (WSIB) has joined its national bill and tax payment infrastructure. WSIB covers more than five million people across 300,000 workplaces in Ontario. DND's payment infrastructure supports more than one million Canadians daily and processes over \$1.3 trillion in transactions annually.



Exhibit 2: CIBC Software/Services - Coverage Performance, 11/30/2021 - 11/30/2022

Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,124.19	1.7	5.2	4.1	5.8	(2.3)	(9.5)	2385.80	1783.98
Descartes Systems	68.37	(4.8)	(0.2)	(1.4)	12.9	(14.9)	(17.3)	83.81	56.19
Enghouse Systems Limited	30.72	3.8	1.9	(4.4)	(10.3)	(42.0)	(36.6)	55.36	23.96
Open Text Corp	29.11	0.1	(2.8)	(5.7)	(26.6)	(38.6)	(38.7)	48.80	24.91
Kinaxis	146.73	(3.1)	(1.8)	(4.2)	5.8	(24.9)	(17.3)	205.66	119.48
Docebo, Inc.	42.62	0.9	5.6	6.9	(5.5)	(53.4)	(49.8)	95.50	31.66
Magnet Forensics	37.02	7.1	36.9	43.5	115.6	7.8	12.6	36.70	14.89
Q4 Inc.	2.65	(9.1)	(15.2)	(40.0)	(43.9)	NA	(68.8)	10.00	2.59
Average		(0.4)	3.7	(0.2)	6.7	(24.0)	(28.2)		

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
CGI Group Inc	116.60	2.4	4.2	12.4	7.0	9.3	4.2	116.12	95.45
Converge Technologies	4.75	(3.0)	(17.0)	(15.9)	(41.1)	(56.3)	(56.3)	12.04	3.60
Softchoice Corporation	15.29	3.6	(14.6)	(16.3)	(34.7)	(35.6)	(28.4)	28.66	14.25
Telus International	27.41	2.3	(20.2)	(26.9)	(15.0)	(38.7)	(34.4)	45.48	25.21
Average		1.3	(11.9)	(11.7)	(20.9)	(30.4)	(28.7)		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	20,208.93	(0.4)	3.8	3.6	(2.6)	(2.2)	(4.8)
S&P 500 Index	3,946.13	(2.0)	1.2	(1.0)	(5.1)	(13.6)	(17.2)
S&P/TSX Software Index	140.05	2.6	3.5	7.3	(0.7)	(36.4)	(34.0)
S&P500 Software Index	4,158.22	(2.0)	1.1	(6.6)	(10.0)	(29.2)	(28.9)



Exhibit 3: Software Stocks - Return Performance (%), 11/30/2021 - 11/30/2022

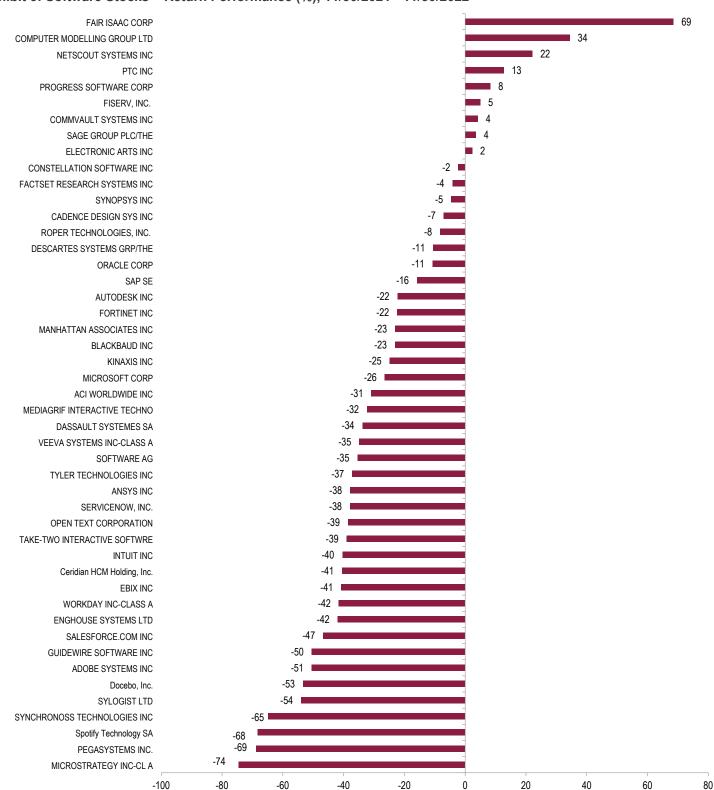




Exhibit 4: Business Services Stocks - Return Performance (%), 11/30/2021 - 11/30/2022

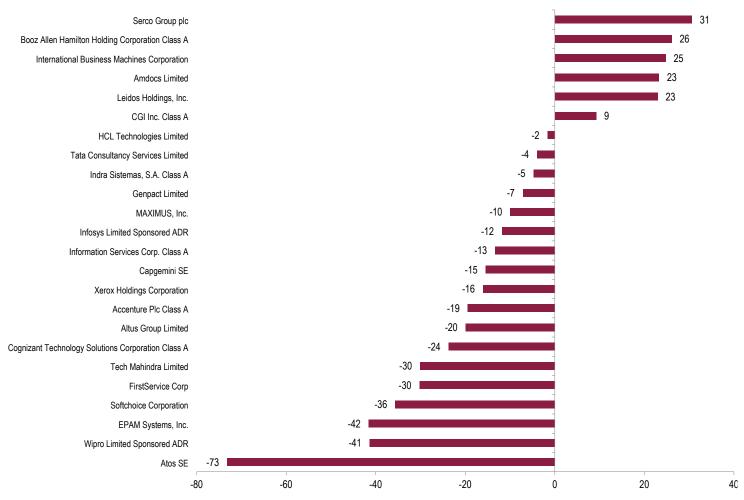




Exhibit 5: Software Stocks - Comp Table, 2021 - 2023E

	Enterprise		EV/S			EV/EBITD	A	P/E		
	Value (\$mlns.)	C21	C22E	C23E	C21	C22E	C23E	C21	C22E	C23E
Enterprise Application Software	· ·									
Constellation Software Inc.*	34,522	6.8x	5.3x	4.7x	22.8x	21.0x	18.2x	>50	28.4x	26.8x
BlackBerry Limited*	2,662	3.0x	3.9x	2.7x	>50	NEG	NEG	NEG	NEG	NEG
Sage Group plc	8,880	4.8x	4.4x	4.0x	21.4x	19.5x	17.1x	30.6x	30.0x	25.6x
Tyler Technologies, Inc.	14,601	9.2x	7.9x	7.3x	41.5x	30.7x	29.2x	>50	42.9x	42.0x
Roper Technologies, Inc.	52,969	9.2x	9.9x	8.9x	23.9x	24.1x	21.9x	41.4x	30.2x	26.7x
Enghouse Systems Limited	1,489	3.2x	3.6x	3.59x	9.2x	11.0x	10.9x	18.3x	23.3x	23.1x
Oracle Corporation	275,866	6.8x	5.9x	5.4x	14.8x	11.9x	10.8x	17.8x	16.4x	15.2x
SAP SE	131,625	4.7x	4.3x	4.0x	18.4x	15.3x	13.7x	23.4x	23.2x	19.2x
Enterprise Application Software Av	verage	6.0x	5.6x	5.1x	21.7x	19.1x	17.4x	26.3x	27.8x	25.5x
Extended ERP										
	150 004	0.7v	0 6v	7.07	22.05	17 Gv	16 1v	22.0	24.0%	24.25
Adobe Incorporated	152,824	9.7x 3.1x	8.6x 3.0x	7.8x 2.9x	22.9x 8.3x	17.6x 8.8x	16.1x 7.8x	33.0x 9.2x	24.0x 9.6x	21.3x 8.5x
Open Text Corporation	10,637									
Manhattan Associates, Inc.	7,266	10.9x 2.7x	9.7x 2.6x	8.9x 2.3x	>50 NEG	36.9x >50	33.7x 41.1x	>50 NEG	49.1x >50	46.1x >50
Pegasystems Inc. Software AG	3,272				_	>50 7.4x		21.3x	>50 16.0x	>50 13.4x
_	1,492	1.8x	1.6x 5.1x	1.5x 4.8x	9.6x	7.4x 11.8x	6.6x 10.9x	>50	16.0x 15.6x	13.4x 13.9x
Fiserv, Inc. Extended ERP Average	85,505	5.3x 5.6 x	5.1x 5.1x	4.0X 4.7x	15.4x 14.1x	16.5x	10.9x	21.2x	22.9x	20.6x
Exteriued ERF Average		5.0X	5. IX	4./X	14.13	10.5%	13.48	21.2X	22.3X	20.0X
Software As A Service										
Descartes Systems Group Inc.	5,617	13.2x	11.5x	10.3x	30.3x	26.1x	23.1x	>50	>50	>50
Kinaxis, Inc.*	2,836	11.3x	7.7x	6.9x	>50	38.4x	37.7x	>50	>50	>50
Docebo, Inc.*	822	7.9x	5.7x	4.3x	NEG	NEG	>50	NEG	>50	>50
Lightspeed Commerce Inc*	1,502	3.2x	2.2x	1.7x	NEG	NEG	NEG	NEG	NEG	NEG
Veeva Systems Inc Class A	26,260	17.9x	12.4x	10.8x	>50	31.3x	27.3x	>50	44.7x	40.5x
Shopify, Inc. Class A	38,439	8.3x	7.0x	5.8x	>50	NEG	>50	17.0x	NEG	>50
Q4 Inc*	42	0.8x	0.8x	0.7x	NEG	NEG	NEG	NEG	NEG	NEG
Magnet Forensics, Inc.*	998	14.2x	10.3x	7.7x	>50	>50	34.0x	>50	>50	>50
Ceridian HCM Holding, Inc.	10,796	10.5x	8.7x	7.5x	>50	46.0x	36.7x	NEG	>50	>50
ServiceNow, Inc.	80,321	13.6x	11.1x	9.1x	>50	35.7x	28.9x	>50	>50	44.1x
Workday, Inc. Class A	39,412	9.2x	6.4x	5.5x	>50	25.2x	20.8x	NEG	45.3x	35.7x
Software As A Service Average	33,2	10.0x	7.6x	6.4x	30.3x	33.8x	29.8x	17.0x	45.0x	40.1x
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Infrastructure Vendors	4 705 000	40.0	0.7	7.0	00.4	477	40.4	00.0	00.0	00.5
Microsoft Corporation	1,785,229	10.6x	8.7x	7.9x	22.1x	17.7x	16.1x	30.2x	26.0x	23.5x
Infrastructure Vendors Average		10.6x	8.7x	7.9x	22.1x	17.7x	16.1x	30.2x	26.0x	23.5x
Software Average		7.8x	6.5x	5.6x	20.1x	23.0x	22.0x	24.2x	28.3x	26.6x
*Share Price Converted to USD										

*Share Price Converted to USD



Exhibit 6: Business Services Stocks - Comp Table, 2021 - 2023E

	Enterprise		EV/EBITD/	4		P/E			EV/S	
	Value (\$mlns.)	C21	C22E	C23E	C21	C22E	C23E	C21	C22E	C23E
Business & IT Services	· ·									
CGI Inc. Class A	30,840	12.5x	12.0x	11.4x	20.8x	19.0x	17.8x	2.5x	2.4x	2.3x
TELUS International (CDA), Inc.	6,212	11.5x	10.3x	9.0x	20.0x	17.0x	14.3x	2.8x	2.5x	2.2x
Accenture Plc Class A	186,763	19.4x	16.2x	15.3x	31.4x	26.3x	24.4x	3.7x	3.0x	2.8x
Booz Allen Hamilton	16,401	18.4x	16.6x	15.6x	24.3x	24.0x	22.0x	2.1x	1.8x	1.7x
CACI International Inc Class A	9,188	12.4x	13.7x	12.7x	16.7x	17.0x	16.1x	1.5x	1.4x	1.4x
DXC Technology Co.	10,083	5.0x	4.1x	4.1x	NEG	8.2x	6.6x	0.6x	0.7x	0.7x
Genpact Limited	9,315	14.4x	12.0x	10.8x	23.4x	16.4x	14.9x	2.3x	2.1x	2.0x
International Business Machines	179,798	13.4x	11.6x	11.6x	23.0x	16.1x	15.2x	3.1x	3.0x	3.0x
Atos SE	2,895	2.8x	3.0x	2.7x	NEG	>50	6.9x	0.3x	0.3x	0.3x
Capgemini SE	35,082	12.1x	9.9x	9.3x	25.9x	15.9x	14.8x	1.9x	1.6x	1.5x
Sopra Steria Group SA	4,215	8.0x	7.0x	6.5x	15.7x	10.5x	9.7x	0.9x	0.8x	0.8x
Converge Technology Solutions Corp	1,216	12.9x	9.0x	6.7x	>50	32.6x	25.9x	0.8x	0.5x	0.4x
Business & IT Services Average		11.8x	10.6x	9.9x	22.4x	17.0x	14.8x	2.0x	1.8x	1.7x
UP Outsourcing			EV/EBITD/	^		P/E			EV/S	
HR Outsourcing Ceridian HCM Holding, Inc.	10,796	>50	46.0x	36.7x	NEG	>50	>50	10.5x	8.7x	7.5x
Willis Towers Watson	26,460	>50 11.9x	46.0X 11.4x	36.7x 10.6x	7.3x	>50 17.7x	>50 15.7x	10.5x 2.9x	8.7x 3.0x	7.5x 2.9x
Aon Plc Class A	72,263	11.9x 18.9x	11.4x 18.2x	10.6x 17.0x	7.3x >50	23.1x	20.9x	2.9x 5.9x	5.8x	2.9x 5.5x
Automatic Data Processing, Inc.	108.646	28.3x	23.6x	17.0x 21.1x	42.3x	23.1x 34.0x	20.9x 30.1x	5.9x 7.2x	5.6x 6.3x	5.5x 5.9x
Paychex, Inc.	43,102	26.1x	20.0x	18.7x	39.8x	30.0x	27.8x	10.6x	8.9x	8.4x
HR Outsourcing Average	40,102	21.3x	23.8x	20.8x	29.8x	26.2x	23.6x	7.5x	6.6x	6.0x
				_0.0%					O.O.A	O.O.A.
				_						
Information Services			EV/EBITD			P/E			EV/S	
Broadridge Financial Solutions, Inc.	20,774	17.9x	15.9x	14.8x	31.0x	21.4x	19.9x	4.1x	3.5x	3.3x
Dye & Durham Ltd.	1,884	11.9x	11.9x	8.3x	>50	>50	22.0x	5.0x	3.3x	2.8x
Deluxe Corporation	2,264	6.1x	5.5x	5.6x	12.9x	4.6x	4.7x	1.1x	1.0x	1.0x
Information Services Corp	409	6.0x	6.3x	6.5x	11.0x	10.7x	11.2x	2.4x	2.1x	2.0x
Information Services Average		10.5x	9.9x	8.8x	18.3x	12.2x	14.4x	3.2x	2.5x	2.3x
Financial Services Technology			EV/EBITD	A	1	P/E			EV/S	
Fidelity National Information Services	59,555	9.7x	9.5x	9.0x	>50	10.3x	10.1x	4.3x	4.1x	3.9x
Fisery, Inc.	85,505	15.4x	11.8x	10.9x	>50	15.6x	13.9x	5.3x	5.1x	4.8x
Jack Henry & Associates, Inc.	13,785	19.8x	21.7x	19.7x	45.3x	37.8x	35.6x	7.8x	6.8x	6.4x
ACI Worldwide, Inc.	3,273	8.9x	8.8x	8.2x	18.7x	14.9x	15.7x	2.4x	2.3x	2.3x
Temenos AG	5,095	9.3x	14.0x	12.8x	23.8x	20.3x	18.5x	5.3x	5.3x	5.0x
Global Payments Inc.	37,387	10.2x	9.6x	8.9x	30.2x	10.7x	9.5x	4.4x	4.6x	4.4x
Financial Services Technology Average	je	12.2x	12.6x	11.6x	29.5x	18.3x	17.2x	4.9x	4.7x	4.5x
Diversified Real Estate Services			EV/EBITD	Δ	1	P/E			EV/S	
Colliers International Group Inc.	4,814	8.8x	7.6x	7.1x	-10.1x	12.9x	12.6x	1.2x	1.1x	1.0x
Altus Group Limited	2,504	24.2x	22.8x	19.0x	27.5x	27.5x	30.1x	4.0x	4.0x	3.4x
CBRE Group, Inc. Class A	25,858	12.1x	8.9x	9.2x	14.1x	13.7x	14.1x	0.9x	0.8x	0.8x
Jones Lang LaSalle Incorporated	9,519	6.5x	7.2x	7.7x	8.7x	9.8x	9.9x	0.5x	0.5x	0.6x 0.4x
Diversified Real Estate Services Avera		12.9x	11.6x	10.7x	10.1x	16.0x	16.7x	1.7x	1.6x	1.4x
Divorcinica Real Estate Convices Avend	.90	12.0%	11.00	10.7 X	10.17	10.0%	10.17	1117	1.01	11-77
Software Focused IT Solutions/VARs			EV/EBITD	4		P/E			EV/S*	
Softchoice Corporation* USD	748	30.6x	9.1x	8.0x	NEG	18.3x	13.9x	2.8x	2.4x	2.2x
Softcat Plc*	2,485	14.8x	15.0x	14.0x	19.8x	20.2x	19.6x	6.6x	6.3x	5.6x
Crayon Group Holding ASA*	10,308	>50	>50	>50	>50	>50	>50	>50	24.2x	20.7x
Bytes Technology Group Plc*	919	18.9x	14.1x	12.5x	37.6x	19.3x	18.1x	NA	NA	NA
SoftwareONE Holding Ltd.*	1,657	10.0x	6.8x	5.9x	16.2x	15.3x	13.4x	7.9x	1.6x	1.5x
Bytes Technology Group Pic* Average		18.6x	11.3x	10.1x	24.5x	18.3x	16.3x	5.8x	8.6x	7.5x
Business Services Average		13.8x	13.0x	11.8x	22.2x	18.0x	16.7x	3.8x	3.9x	3.5x
*Software Focused IT Solutions/VARs us	ses FV/GP metric		13.08	- 1 T.OX	- 22.28	10.08	10.7 %	- J.0X		J.3X

Software Focused IT Solutions/VARs uses EV/GP metric.



Source: Company reports, FactSet and CIBC World Markets Inc.

Exhibit 7: SaaS Stocks - Comp Table, 2021 - 2023E

	LTM Revenue	LTM FCF	NTM Revenue	NTM FCF	LTM Rule	NTM Rule	Enterprise		EV/S	
	Growth	Margin	Growth	Margin	Of 40	Of 40	Value (\$MM)	C21	C22E	C23E
Tier 1 SaaS (Rule of 40 > 60)										
Zoom Video Communications	18%	31%	5%	27%	49%	31%	15,305	5.8x	3.5x	3.5x
CrowdStrike Holdings, Inc.	61%	30%	44%	29%	91%	73%	30,985	35.4x	14.3x	14.3x
Shopify, Inc.	25%	-4%	21%	-9%	21%	12%	33,529	7.3x	6.1x	6.1x
Zscaler, Inc.	62%	24%	38%	22%	86%	60%	18,605	27.6x	14.7x	14.7x
Lightspeed POS, Inc.	101%	-19%	33%	-5%	82%	28%	1,394	6.3x	2.0x	2.0x
DocuSign, Inc.	30%	20%	11%	15%	51%	27%	9,026	6.2x	3.7x	3.7x
Veeva Systems Inc	20%	38%	15%	37%	58%	52%	26,009	17.8x	12.3x	12.3x
Atlassian Corp. Plc	34%	27%	29%	22%	61%	50%	31,032	14.9x	9.9x	9.9x
Twilio, Inc.	51%	-6%	28%	-2%	45%	26%	4,361	1.5x	1.1x	1.1x
ServiceNow, Inc.	25%	27%	21%	29%	53%	50%	79,228	13.4x	10.9x	10.9x
HubSpot, Inc.	42%	16%	22%	12%	58%	34%	13,247	10.2x	7.8x	7.8x
Tier 1 SaaS (Rule of 40 > 60)	Average							13.3x	7.8x	7.8x
	LTM Revenue	LTM FCF	NTM Revenue	NTM FCF	LTM Rule	NTM Rule	Enterprise		EV/S	
	Growth	Margin	Growth	Margin	Of 40	Of 40	Value (\$MM)	C21E	C22E	C23E
Tier 2 SaaS (Rule of 40 b/w 40			2.70/			2.12/				
Docebo, Inc.	50%	-2%	35%	-4%	48%	31%	793	7.6x	5.5x	4.1x
Qualys, Inc.	17%	40%	18%	37%	56%	55%	4,242	10.3x	8.7x	8.7x
Descartes Systems	20%	37%	10%	37%	57%	47%	5,357	12.6x	10.9x	9.8x
Five9, Inc.	34%	-4%	23%	7%	30%	30%	4,602	7.5x	5.9x	5.9x
Dropbox, Inc.	11%	33%	6%	34%	44%	40%	8,827	4.1x	3.8x	3.8x
Wix.com Ltd.	16%	-1%	8%	3%	15%	11%	4,548	3.6x	3.3x	3.3x
Workday, Inc.	22%	21%	19%	19%	43%	38%	35,137	8.2x	5.7x	5.7x
VMware, Inc.	7%	24%	6%	29%	31%	35%	60,216	5.1x	4.5x	4.5x
Tier 2 SaaS (Rule of 40 b/w 40	0-60) Average							7.4x	6.1x	5.7x
	LTM Revenue	LTM FCF	NTM Revenue	NTM FCF	LTM Rule	NTM Rule	Enterprise		EV/S	
	Growth	Margin	Growth	Margin	Of 40	Of 40	Value (\$MM)	C21E	C22E	C23E
Tier 3 SaaS (Rule of 40 b/w 2		mar giii	oroman	margin.	G1 40	0140	varao (viiiii)	OZIL	OZZE.	OZUL
BlackLine, Inc.	22%	8%	21%	6%	30%	27%	3.752	8.8x	7.2x	7.2x
MongoDB, Inc.	54%	-2%	25%	2%	52%	27%	9,188	15.6x	7.8x	7.8x
LivePerson, Inc.	19%	-27%	5%	-4%	-8%	1%	868	1.8x	1.7x	1.7x
Rapid7 Inc.	33%	-27 % 5%	23%	11%	38%	34%	2,319	4.3x	3.4x	3.4x
Paylocity Holding Corp.	34%	16%	28%	15%	50%	43%	11,395	17.9x	11.5x	11.5x
Q2 Holdings, Inc.	18%	0%	18%	3%	18%	21%	1.678	3.4x	2.9x	2.9x
Akamai Technologies, Inc.	7%	24%	2%	21%	31%	24%	16,095	4.6x	4.5x	4.5x
Tier 3 SaaS (Rule of 40 b/w 2		2		2.75	\$170	2.75	. 5,500	8.1x	5.6x	5.6x
	LTM Revenue	LTM FCF	NTM Revenue	NTM FCF	LTM Rule	NTM Rule	Enterprise		EV/S	
	Growth	Margin	Growth	Margin	Of 40	Of 40	Value (\$MM)	C21F	C22E	C23E

	LTM Revenue	LTM FCF	NTM Revenue	NTM FCF	LTM Rule	NTM Rule	Enterprise		EV/S	
	Growth	Margin	Growth	Margin	Of 40	Of 40	Value (\$MM)	C21E	C22E	C23E
Tier 4 SaaS (Rule of 40 <28)										
RingCentral, Inc.	33%	8%	21%	9%	40%	30%	4,546	2.9x	2.3x	2.3x
Teradata Corporation	-3%	19%	-3%	23%	16%	20%	3,334	1.7x	1.9x	1.9x
Zuora, Inc.	15%	4%	14%	0%	19%	14%	820	2.7x	2.1x	2.1x
New Relic, Inc.	20%	3%	17%	1%	23%	18%	3,312	5.0x	3.8x	3.8x
Kinaxis, Inc.	35%	7%	22%	9%	42%	31%	2,775	11.1x	7.5x	6.8x
Yext, Inc.	8%	3%	3%	-1%	11%	2%	521	1.5x	1.3x	1.3x
Splunk Inc.	26%	7%	21%	14%	33%	35%	14,040	6.3x	4.2x	4.2x
Tier 4 SaaS (Rule of 40 <28) A	Average							4.4x	3.3x	3.2x

SaaS Average 8.9x 6.0x 5.9x



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Neutral	NT	Stock is expected to perform in line with similar stocks in the coverage universe during the next 12-18 months.
Underperformer	UN	Stock is expected to underperform similar stocks in the coverage universe during the next 12-18 months.
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