

EQUITY RESEARCH

February 3, 2022

Industry Update

2021 A Banner Year For M&A – Bits & Bytes Weekly

Will It Continue In 2022?

Our Conclusion

Even as global stock markets ended the year in a period of elevated volatility, 2021 was finishing up as a banner year for M&A. Dealmakers and bankers made up for COVID-19 induced slowdowns, with M&A spending hitting all-time highs. Despite the hurdles investors and corporates are likely to face in 2022, namely inflation and rising rates, we expect that 2022 could be another strong year for M&A as companies look to navigate key themes such as digital transformation, tight labour markets and inflationary pressure. We believe both strategic acquirers and private equity will continue to be active on the dealmaking front given high levels of dry powder and continuing private equity fundraising.

Key Points

Global M&A reached a record US\$4.99T across 38,231 deals in 2021. Europe and North America were the strongest contributors to global M&A figures, according to Pitchbook. As the U.K. avoided a no-deal Brexit, investors shopped for undervalued companies in the region. In Germany, a focus on digital transformation and sustainability shaped M&A priorities. In North America, a favourable economic backdrop paved the way for megadeals even in face of antitrust scrutiny.

Financial services, healthcare, and technology were the most active M&A sectors in 2021. Financial services companies focused on acquiring digital and fintech assets to add technological capabilities and market share. Technology M&A continued to grow as a percentage of the total global M&A volume, up from 14% in 2007 to 20% in 2021. Growth continued despite heightened regulatory focus on the tech sector.

In 2021, sponsor-backed deals grew as a percentage of total deal count. Thirty-eight percent of M&A was sponsor backed, the highest concentration in a decade and up from only 23% in 2020. Mega-deals are no longer limited to corporate combinations as sophisticated PE firms partnered on \$10B+ deals (i.e., Athenahealth, Medline). As buyout funds amass capital in various US\$5B+ mega funds, we expect their growing stature to shape 2022's M&A landscape.

Looking forward to 2022, we see several headwinds to continued M&A growth. Higher central bank rates will lead to elevated funding costs, potential corporate tax hikes pose challenges to corporate valuations and increased regulatory scrutiny could all impact the M&A narrative in 2022. That said, private equity remains well capitalized and corporations that have amassed cash through the pandemic are incented to spend on strategic M&A.

CIBC CAPITAL MARKETS

Stephanie Price, CFA +1 416-594-7047 Stephanie.Price@cibc.com Scott Fletcher, CPA, CA +1 416-956-3229 Scott.Fletcher@cibc.com

> Natalie Zhang, CFA +1 416-581-2120 Natalie.Zhang@cibc.com

Sector: Information Technology

All figures in Canadian dollars unless otherwise stated.

2021 Saw Strong M&A Volumes

Deal volume has grown steadily at a CAGR of roughly 5% since 2011. Pitchbook tallied 38,231 deals in 2021 compared to 23,043 in 2011. In addition, deal sizes have grown throughout the years and larger-sized deals are on the rise over the past decade. Transactions exceeding US\$500M now account for 8% of total deal volume, compared to 5% in 2008. Given private equities' dry powder and the accumulating cash pile among industry giants, large-sized deals seem poised to continue to grow.





Business products & services, tech, consumer products & services account for the top three industries in global M&A this past year. As a percentage of total deal value, tech makes up 20% of the total global M&A deal value, trailing behind business products & services which has the highest weight at 28%. In North America, tech deals made up 19% of total deal value (relatively unchanged Y/Y), across 3,007 deals accounting for US\$536B in value.



Exhibit 2: Software & Services – Global M&A By Sector (As % Of US\$B) – 2011-2021

Source: Pitchbook and CIBC World Markets Inc.

Source: Pitchbook and CIBC World Markets Inc.

News Impacting Our Coverage

Magnet Forensics - Investigating A High Growth Market – Initiating At Outperformer

As of February 2, we are initiating coverage on Magnet Forensics, Inc. with an Outperformer rating and C\$33 price target based on a 2023E EV/Sales multiple of 8.0x. Magnet is a leading provider of digital investigation tools for public safety and corporate clients. We see multiple avenues for potential future growth, including user and product extension within the existing customer base, continued expansion into the enterprise market, and M&A. (Link to note)

CGI Inc. - Accelerating Growth In A Solid Environment

CGI saw constant currency growth accelerate both year over year and quarter over quarter to 6.8%. We expect revenue growth to continue, with CGI posting a book to bill of 1.17x in the quarter amid broad-based strength, with six of eight geographies posting a TTM book to bill of +1x. While wage inflation had been a concern, CGI continues to manage a tight labour market well, with margins up 50 bps Y/Y. We view CGI as a defensive name in a volatile technology market, with strong margins and accelerating growth. We see M&A as upside as CGI becomes more active on its metro market acquisition strategy. (Link to note)

Q4/21 Software & Services Preview

We expect Q4 will be a typical seasonally strong quarter, with consensus calling for average revenue for our coverage universe to be up 20% Y/Y as demand remains robust. We expect adjusted EBITDA to be up 10% Y/Y given reinvestment initiatives, M&A integration and potentially some cost inflation. In a volatile tech market, we expect that we could see outsized stock moves from firms that report unexpected Q4 results or 2022 guidance. In this type of market, we prefer our more defensive software names, including CGI and Constellation Software. (Link to note)

Dye & Durham - FQ2 Results Roughly In Line, No Change To Guidance

Dye & Durham reported roughly in-line FQ2 results, with revenue ~3% below consensus but adjusted EBITDA 3% above. We believe that the near-term focus will be on execution, after DND deployed \$3.7 billion on M&A in December. We see significant upside if DND is able to close the Link Group transaction and execute on its proven synergy model. That said, we see a number of near-term uncertainties including the regulatory and shareholder approvals required for the Link Group transaction, the outcome of the ongoing U.K. competition review, and potential churn from Unity price increases. (Link to note)

ISC Provides Leadership Update

Information Services Corp. announced the creation of a new leadership position at its whollyowned Dublin-based subsidiary Enterprise Registry Solutions Limited (ERS). The search for the position is commenced immediately. The new leadership role will enhance the subsidiary's business development and growth related to new registry and registry-related products. Loren Cisyk, the current EVP, Technology Solutions, will focus on ISC's enterprise technology infrastructure. Laurel Garven is now appointed the VP, Corporate Development & Business strategy, expanding her role from corporate strategy and product innovation to include M&A. Dennis White, VP, Marketing and Business Development has left the organization and the role is no longer required.

CGI Secures \$134M Task Order Under New \$250M BPA From The Department Of Justice

CGI won a single-award Blanket Purchase Agreement (BPA) with a \$250M ceiling value. It has won an initial Task Order with potential value of \$133.9M over five years as it is selected to operate and maintain systems to support DOJ's Unified Financial Management System (UFMS) and Unified Asset Management System (UAMS) programs. This award follows CGI's implementation of UFMS, which was enabled by CGI's Momentum.

Exhibit 3: CIBC Software/Services – Coverage Performance, 1/27/2022 - 2/3/2022

Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,106.13	3.9	(10.3)	(3.1)	5.3	30.6	(10.3)	2385.80	1573.51
Descartes Systems	69.93	5.8	(13.6)	(15.6)	(4.0)	10.9	(15.4)	91.39	56.78
Dye & Durham	29.46	(11.3)	(34.4)	(22.5)	(37.5)	NA	(34.4)	53.13	28.87
Enghouse Systems Limited	42.26	2.4	(12.7)	(20.0)	(25.4)	(30.5)	(12.7)	64.42	41.86
Open Text Corp	46.77	4.8	(1.2)	(7.8)	(9.8)	(0.6)	(1.5)	55.25	44.03
Kinaxis	159.80	8.6	(9.9)	(18.9)	(3.3)	(14.4)	(9.9)	229.98	124.05
Docebo, Inc.	65.45	1.6	(22.9)	(30.6)	(25.1)	(2.5)	(22.9)	117.55	47.22
Magnet Forensics	25.58	2.9	(22.2)	(33.7)	(19.0)	NA	(22.2)	65.80	20.92
Q4 Inc.	5.13	(15.6)	(39.6)	NA	NA	NA	NA	12.05	4.93
Average		0.3	(18.5)	(19.0)	(14.8)	(1.1)	(16.2)		

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Altus Group Ltd	57.68	(2.9)	(18.7)	(10.0)	(3.1)	15.0	(18.7)	72.33	48.95
CGI Group Inc	109.93	7.1	(1.7)	(1.8)	(3.6)	6.7	(1.7)	116.88	93.88
Converge Technologies	9.80	10.6	(9.8)	(18.5)	(8.8)	62.0	(9.8)	13.09	4.58
Information Services Corp	23.35	(9.1)	(11.0)	(13.5)	(13.7)	12.2	(11.0)	33.87	20.81
LifeWorks Inc	27.18	0.3	6.5	(13.5)	(23.1)	(14.0)	6.5	37.56	24.20
Softchoice Corporation	23.10	4.0	8.2	(19.8)	NA	NA	NA	45.74	18.63
Telus International	34.55	3.2	(17.3)	(27.1)	(9.8)	NA	NA	49.43	33.16
Average		1.9	(6.3)	(14.9)	(10.3)	16.4	(7.0)		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	21,161.32	3.0	(0.3)	(0.5)	3.9	18.1	(0.3)
S&P 500 Index	4,511.45	4.3	(5.9)	(3.2)	2.0	17.8	(5.3)
S&P/TSX Software Index	176.74	3.8	(16.7)	(23.7)	(20.2)	(8.7)	(16.7)
S&P500 Software Index	5,243.64	2.9	(9.8)	(12.5)	0.2	18.1	(10.3)

Exhibit 4: Software Stocks – Return Performance (%), 2/3/2021 - 2/3/2022



Exhibit 5: Business Services Stocks – Return Performance (%), 2/3/2021 - 2/3/2022



Exhibit 6: Software Stocks – Comp Table, 2020 - 2022E

	Enterprise					V/EBITD	A	P/E		
	Value	C20	C21E	C22E	C20	C21E	C22E	C20	C21E	C22E
Enterprise Application Software					-					
Constellation Software Inc.*	35,142	8.9x	6.9x	5.9x	28.6x	23.6x	20.1x	42.1x	>50	30.0x
BlackBerry Limited*	4,337	4.5x	4.5x	4.4x	21.7x	>50	NEG	30.7x	>50	NEG
Sage Group plc	7,488	4.0x	4.0x	3.8x	16.0x	17.6x	16.3x	27.2x	30.1x	26.6x
Tyler Technologies, Inc.	18,260	16.3x	11.5x	9.8x	>50	42.3x	36.3x	>50	>50	>50
Roper Technologies, Inc.	56,216	10.1x	9.7x	9.2x	28.2x	24.7x	23.6x	36.2x	32.5x	29.9x
Enghouse Systems Limited	2,174	4.3x	4.7x	4.4x	11.6x	13.2x	12.7x	21.1x	25.2x	25.3x
Oracle Corporation	260,179	6.5x	6.3x	6.0x	13.2x	12.7x	12.3x	19.0x	17.3x	16.2x
SAP SE	137,944	5.0x	5.0x	4.7x	14.7x	16.3x	15.5x	20.2x	16.2x	20.4x
Enterprise Application Software A	verage	7.5x	6.6x	6.0x	19.1x	21.5x	19.5x	28.1x	24.3x	24.7x

Extended ERP										
Adobe Inc.	241,343	18.4x	15.1x	13.3x	37.6x	30.3x	27.3x	49.9x	40.8x	36.7x
Open Text Corporation	15,021	4.6x	4.4x	4.2x	11.7x	11.8x	11.2x	14.4x	14.9x	13.6x
Manhattan Associates, Inc.	7,855	13.4x	11.8x	11.1x	>50	42.7x	45.2x	>50	>50	>50
Pegasystems Inc.	8,094	8.0x	6.5x	5.4x	>50	>50	>50	NEG	>50	>50
Software AG	2,249	2.7x	2.7x	2.5x	11.7x	13.6x	11.1x	20.1x	22.2x	20.3x
Fiserv, Inc.	90,986	6.5x	5.9x	5.5x	16.7x	14.1x	12.8x	24.2x	19.2x	16.6x
Extended ERP Average		8.9x	7.7x	7.0x	19.4x	22.5x	21.5x	27.1x	24.3x	21.8x

Software As A Service										
Descartes Systems Group Inc.	5,800	16.6x	13.7x	12.3x	40.9x	31.4x	28.5x	>50	>50	>50
Kinaxis, Inc.*	3,246	14.5x	13.1x	10.5x	>50	>50	>50	>50	>50	>50
Docebo, Inc.*	1,479	23.5x	14.2x	9.7x	NEG	NEG	NEG	NEG	NEG	NEG
Lightspeed Commerce Inc*	3,943	20.0x	8.6x	5.9x	NEG	NEG	NEG	NEG	NEG	NEG
Veeva Systems Inc Class A	33,632	23.4x	18.6x	15.7x	>50	44.2x	39.9x	>50	>50	>50
Shopify, Inc. Class A	97,917	33.4x	21.4x	16.0x	>50	>50	>50	>50	>50	>50
Q4 Inc*	105	2.6x	1.9x	1.5x	NEG	NEG	NEG	NEG	NEG	NEG
Magnet Forensics, Inc.*	696	10.3x	7.9x	6.0x	43.8x	49.2x	39.1x	>50	>50	>50
Ceridian HCM Holding, Inc.	11,823	14.0x	11.6x	9.9x	>50	>50	>50	>50	>50	>50
ServiceNow, Inc.	111,659	24.7x	18.9x	15.1x	>50	>50	47.2x	>50	>50	>50
Workday, Inc. Class A	57,081	13.4x	11.3x	9.5x	>50	39.2x	38.9x	>50	>50	>50
Software As A Service Average		17.9x	12.8x	10.2x	42.4x	41.0x	38.7x	>50	>50	>50
Infrastructure Vendors										
Citrix Systems, Inc.	15,743	4.9x	4.9x	4.8x	13.8x	13.4x	14.9x	16.8x	19.2x	19.5x

Citrix Systems, Inc.	15,743	4.9x	4.9x	4.8x	13.8x	13.4x	14.9x	16.8x	19.2x	19.5x
Microsoft Corporation	2,250,184	14.4x	12.3x	10.6x	30.2x	24.7x	21.0x	44.5x	35.3x	30.4x
Infrastructure Vendors Average		9.7x	8.6x	7.7x	22.0x	19.0x	17.9x	30.7x	27.3x	24.9x
Software Average		12.2x	9.5x	8.1x	22.7x	25.8x	24.9x	28.2x	24.8x	23.8x

*Share Price Converted to USD

Exhibit 7: Business Services Stocks – Comp Table, 2020 - 2022E

	Enterprise	E	V/EBITDA			P/E			EV/S	
	Value	C20	C21E	C22E	C20	C21E	C22E	C20	C21E	C22E
Business & IT Services										
CGI Inc. Class A	28,473	11.6x	11.5x	11.2x	22.0x	19.6x	17.9x	2.3x	2.3x	2.2x
TELUS International (CDA), Inc.	8,211	20.8x	15.1x	13.0x	38.4x	27.8x	22.6x	5.0x	3.7x	3.3x
Accenture Plc Class A	224,799	25.9x	22.2x	19.4x	44.0x	37.2x	31.8x	4.8x	4.2x	3.6x
Booz Allen Hamilton	11,966	14.6x	13.3x	12.4x	20.7x	18.7x	17.2x	1.5x	1.5x	1.4x
CACI International Inc Class A	7,978	12.8x	11.8x	11.4x	16.3x	13.8x	13.2x	1.4x	1.3x	1.2x
DXC Technology Co.	12,770	4.7x	4.8x	4.6x	10.8x	10.3x	8.3x	0.7x	0.8x	0.8x
Genpact Limited	10,589	15.6x	14.2x	13.0x	23.3x	20.3x	18.4x	2.9x	2.7x	2.4x
International Business Machines	170,723	11.2x	9.7x	10.3x	16.6x	17.3x	13.8x	2.3x	3.0x	2.8x
Atos SE	5,359	3.7x	5.4x	4.6x	4.9x	11.2x	10.2x	0.5x	0.5x	0.5x
Capgemini SE	39,833	16.0x	13.4x	12.2x	27.2x	23.5x	20.2x	2.5x	2.2x	2.0x
Sopra Steria Group SA	4,530	9.9x	8.6x	7.7x	20.7x	14.5x	12.2x	1.1x	1.0x	0.9x
Business & IT Services Average		13.3x	11.8x	10.9x	22.3x	19.5x	16.9x	2.3x	2.1x	1.9x

HR Outsourcing		EV/EBITDA			P/E			EV/S		
LifeWorks Inc	2,428	12.1x	11.9x	11.0x	34.1x	NEG	32.2x	2.5x	2.3x	2.2x
Ceridian HCM Holding, Inc.	11,823	>50	>50	>50	>50	>50	>50	14.0x	11.6x	9.9x
Willis Towers Watson	34,083	13.8x	13.3x	14.0x	20.2x	18.5x	17.2x	3.6x	3.6x	3.6x
Aon Plc Class A	68,883	21.0x	18.9x	16.8x	28.3x	23.9x	21.3x	6.2x	5.6x	5.3x
Automatic Data Processing, Inc.	87,978	24.1x	22.1x	20.1x	34.7x	32.3x	28.8x	5.9x	5.6x	5.2x
Paychex, Inc.	43,116	25.6x	23.2x	21.1x	39.6x	35.4x	31.7x	10.6x	10.0x	9.2x
HR Outsourcing Average		19.3x	17.9x	16.6x	31.4x	27.5x	26.2x	7.2x	6.5x	5.9x

Information Services		EV/EBITDA				P/E		EV/S		
Broadridge Financial Solutions, Inc.	21,534	20.3x	18.4x	16.3x	28.2x	25.0x	22.4x	4.5x	4.0x	3.7x
Dye & Durham Ltd.	2,193	NEG	13.8x	10.3x	NEG	>50	47.2x	25.2x	5.8x	3.8x
Deluxe Corporation	1,975	5.4x	4.8x	4.4x	6.2x	6.4x	6.3x	1.1x	1.0x	0.9x
Information Services Corp	460	9.6x	7.0x	6.9x	16.1x	12.3x	11.7x	3.4x	2.8x	2.7x
Information Services Average		11.8x	11.0x	9.5x	16.8x	14.6x	21.9x	8.5x	3.4x	2.8x

Financial Services Technology		E	V/EBITDA			P/E		EV/S		
Fidelity National Information Services	89,888	17.1x	14.6x	13.4x	21.4x	17.9x	16.1x	7.2x	6.5x	6.0x
Fiserv, Inc.	90,986	16.7x	14.1x	12.8x	24.2x	19.2x	16.6x	6.5x	5.9x	5.5x
Jack Henry & Associates, Inc.	12,490	22.4x	21.0x	19.3x	41.8x	37.8x	33.8x	7.2x	6.8x	6.3x
ACI Worldwide, Inc.	4,988	13.9x	13.0x	12.3x	>50	29.7x	25.8x	3.9x	3.7x	3.5x
Temenos AG	8,985	22.2x	20.6x	18.4x	31.7x	28.0x	24.9x	10.0x	9.1x	8.3x
Global Payments Inc.	50,620	16.9x	14.0x	12.6x	22.8x	17.9x	15.3x	7.5x	6.6x	6.0x
Bottomline Technologies	2,558	26.2x	24.9x	22.7x	48.4x	49.5x	46.3x	5.6x	5.2x	4.6x
Financial Services Technology Average	e	19.3x	17.4x	15.9x	31.7x	28.6x	25.5x	6.8x	6.2x	5.8x

Diversified Real Estate Services		EV/EBITDA				P/E		EV/S		
Colliers International Group Inc.	7,632	21.1x	14.6x	13.1x	35.7x	25.8x	24.1x	2.7x	2.0x	1.8x
Altus Group Limited	2,702	27.3x	25.5x	21.4x	34.8x	35.1x	41.3x	4.8x	4.3x	3.8x
CBRE Group, Inc. Class A	36,596	19.7x	13.1x	12.2x	31.5x	19.0x	17.7x	1.5x	1.3x	1.2x
Jones Lang LaSalle Incorporated	15,295	17.8x	11.1x	10.6x	26.9x	14.4x	13.7x	1.7x	1.4x	1.3x
Diversified Real Estate Services Average	e	21.5x	16.1x	14.3x	32.2x	23.6x	24.2x	2.7x	2.3x	2.0x

Software Focused IT Solutions/VARs		E	V/EBITDA			P/E			EV/GP	
Softchoice Corporation*	1,603	24.5x	24.1x	16.1x	36.0x	41.0x	28.3x	6.7x	5.8x	5.1x
Softcat Plc*	3,096	24.8x	17.9x	17.5x	33.4x	24.1x	23.7x	10.4x	8.1x	7.4x
Crayon Group Holding ASA*	14,219	>50	>50	>50	>50	>50	>50	>50	41.7x	31.8x
Bytes Technology Group Plc*	1,089	26.3x	18.0x	16.6x	35.8x	23.8x	22.4x	11.1x	7.8x	7.1x
SoftwareONE Holding Ltd.*	2,331	12.1x	9.1x	7.7x	14.8x	19.5x	16.1x	10.5x	2.5x	2.2x
Bytes Technology Group Plc* Average		21.9x	17.3x	14.5x	30.0x	27.1x	22.6x	9.7x	13.2x	10.7x
Business Services Average		17.3x	14.8x	13.4x	27.0x	23.4x	22.0x	5.5x	5.2x	4.6x

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

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

Г

Exhibit 8: SaaS Stocks - Comp Table, 2020 - 2022E

	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)	C20	C21E	C22E
Tier 1 SaaS (Rule of 40 > 60)										
Zoom Video Communications	100%	43%	15%	33%	143%	48%	39,947	16.1x	10.1x	8.5x
CrowdStrike Holdings, Inc.	69%	33%	44%	27%	102%	70%	39,470	46.9x	28.5x	20.2x
Shopify, Inc.	71%	11%	33%	15%	82%	47%	106,030	36.2x	23.2x	17.3x
Zscaler, Inc.	58%	27%	43%	22%	86%	65%	35,533	66.6x	43.7x	30.9x
Lightspeed POS, Inc.	142%	-29%	59%	-5%	113%	54%	4,000	20.3x	8.7x	5.9x
DocuSign, Inc.	51%	23%	27%	20%	74%	47%	24,198	17.1x	11.9x	9.4x
Veeva Systems Inc	28%	44%	18%	38%	72%	56%	34,646	24.1x	19.1x	16.2x
Atlassian Corp. Plc	35%	35%	21%	25%	70%	46%	78,810	42.5x	33.0x	26.1x
Twilio, Inc.	65%	-2%	34%	-2%	63%	32%	32,776	18.6x	11.8x	9.0x
ServiceNow, Inc.	30%	31%	26%	31%	61%	57%	114,559	25.3x	19.4x	15.5x
HubSpot, Inc.	45%	18%	32%	12%	63%	45%	22,265	25.2x	17.3x	13.4x
Tier 1 SaaS (Rule of 40 > 60)	Average							30.8x	20.6x	15.7x

	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)	C20	C21E	C22E
Tier 2 SaaS (Rule of 40 b	/w 40-60)									
Docebo, Inc.	55%	4%	46%	-3%	58%	44%	1,532	24.4x	14.7x	10.1x
Qualys, Inc.	13%	43%	13%	37%	56%	50%	4,650	12.8x	11.3x	10.0x
Descartes Systems	20%	41%	14%	38%	60%	52%	5,938	18.2x	17.0x	14.0x
Avalara Inc	40%	7%	24%	1%	47%	24%	8,507	17.0x	12.4x	10.0x
Five9, Inc.	41%	0%	25%	4%	41%	29%	8,537	19.6x	14.2x	11.4x
Dropbox, Inc.	13%	34%	10%	32%	47%	42%	9,822	5.1x	4.6x	4.2x
Mimecast Limited	20%	28%	14%	22%	47%	36%	5,297	10.9x	9.3x	8.0x
Wix.com Ltd.	34%	6%	18%	4%	40%	22%	6,815	6.9x	5.4x	4.5x
Workday, Inc.	18%	28%	19%	23%	46%	42%	59,411	13.9x	11.7x	9.8x
VMware, Inc.	9%	33%	7%	27%	43%	35%	56,255	4.8x	4.4x	4.1x
Tier 2 SaaS (Rule of 40 b	/w 40-60) Average							13.4x	10.5x	8.6x

	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)	C20	C21E	C22E
Tier 3 SaaS (Rule of 40 b/w :	28-40)									
BlackLine, Inc.	21%	17%	20%	11%	38%	31%	5,091	14.5x	12.0x	9.9x
Zendesk, Inc.	28%	12%	28%	9%	40%	37%	12,293	11.9x	9.2x	7.3x
MongoDB, Inc.	43%	-4%	37%	-2%	39%	35%	26,647	46.2x	32.1x	23.8x
LivePerson, Inc.	30%	-3%	24%	-15%	27%	9%	1,875	5.1x	4.0x	3.1x
Rapid7 Inc.	27%	8%	24%	2%	35%	27%	5,658	13.7x	10.7x	8.7x
Paylocity Holding Corp.	19%	16%	26%	14%	36%	40%	10,967	18.3x	15.1x	12.1x
Q2 Holdings, Inc.	25%	-3%	17%	2%	22%	20%	3,696	9.1x	7.4x	6.4x
Akamai Technologies, Inc.	9%	21%	8%	23%	30%	31%	20,497	6.4x	5.9x	5.5x
Tier 3 SaaS (Rule of 40 b/w :	28-40) Average							15.7x	12.1x	9.6x

	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)	C20	C21E	C22E
Tier 4 SaaS (Rule of 40 <28)										
RingCentral, Inc.	34%	3%	26%	5%	38%	32%	16,327	13.8x	10.3x	8.3x
Teradata Corporation	5%	20%	0%	20%	26%	20%	4,663	2.5x	2.4x	2.4x
Anaplan, Inc.	30%	0%	24%	1%	30%	25%	6,503	14.8x	11.4x	9.1x
Zuora, Inc.	13%	5%	15%	0%	18%	15%	1,891	6.2x	5.5x	4.8x
New Relic, Inc.	12%	-3%	18%	5%	8%	22%	6,369	9.8x	8.5x	7.3x
Kinaxis, Inc.	-1%	10%	25%	13%	9%	38%	3,323	14.8x	13.4x	10.7x
Yext, Inc.	11%	-2%	12%	-1%	9%	11%	977	2.8x	2.5x	2.2x
Splunk Inc.	11%	-2%	13%	5%	9%	19%	20,023	8.9x	7.9x	6.8x
Tier 4 SaaS (Rule of 40 <28)	Average							9.2x	7.7x	6.4x
SaaS Average								18.2x	13.2x	10.5x

Important Disclosures

Analyst Certification: Each CIBC World Markets Inc. research analyst named on the front page of this research report, or at the beginning of any subsection hereof, hereby certifies that (i) the recommendations and opinions expressed herein accurately reflect such research analyst's personal views about the company and securities that are the subject of this report and all other companies and securities mentioned in this report that are covered by such research analyst and (ii) no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by such research analyst in this report.

Potential Conflicts of Interest: Equity research analysts employed by CIBC World Markets Inc. are compensated from revenues generated by various CIBC World Markets Inc. businesses, including the CIBC World Markets Investment Banking Department. Research analysts do not receive compensation based upon revenues from specific investment banking transactions. CIBC World Markets Inc. generally prohibits any research analyst and any member of his or her household from executing trades in the securities of a company that such research analyst covers. Additionally, CIBC World Markets Inc. generally prohibits any research analyst from serving as an officer, director or advisory board member of a company that such analyst covers.

In addition to 1% ownership positions in covered companies that are required to be specifically disclosed in this report, CIBC World Markets Inc. may have a long position of less than 1% or a short position or deal as principal in the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon.

Recipients of this report are advised that any or all of the foregoing arrangements, as well as more specific disclosures set forth below, may at times give rise to potential conflicts of interest.

CIBC World Markets Inc. does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that CIBC World Markets Inc. may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Analysts employed outside the U.S. are not registered as research analysts with FINRA. These analysts may not be associated persons of CIBC World Markets Corp. and therefore may not be subject to FINRA Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

CIBC World Markets Inc. Stock Rating System

Stock Ratings	Abbreviation	Description
Outperformer	OP	Stock is expected to outperform similar stocks in the coverage universe during the next 12-18 months.
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.
Tender	TR	Shareholders are advised to tender shares to a specific offer as we do not believe a superior offer will materialize.
Not Rated	NR	CIBC World Markets does not maintain an investment recommendation on the stock.
Restricted	R	CIBC World Markets is restricted (due to potential conflict of interest) from rating the stock.
Sector Ratings	Abbreviation	Description
Overweight	0	Sector is expected to outperform the broader market averages.

Sector is expected to equal the performance of the broader market averages.

Sector is expected to underperform the broader market averages.

None NA Sector rating is not applicable.

Note: Broader market averages refer to S&P 500 in the U.S. and S&P/TSX Composite in Canada.

Marketweight

Underweight

Μ

U

CIBC World Markets Inc. Price Chart

For price and performance charts, please visit CIBC on the web at <u>https://researchcentral.cibccm.com/#/disclaimer-central-new</u> or write to CIBC World Markets Inc., 161 Bay Street, 4th Floor, Toronto, ON M5H 2S8, Attn: Research Disclosure Chart Request.

Important Disclosure Footnotes

For important disclosure footnotes for companies mentioned in this report that are covered by CIBC World Markets Inc., click here: <u>CIBC Disclaimers & Disclosures</u>

Companies mentioned in the report but not listed are not covered by fundamental research at CIBC.

Ratings Distribution*: CIBC World Markets Inc. Coverage Universe

(as of 03 Feb 2022)	Count	Percent	Inv. Banking Relationships	Count	Percent
Outperformer	177	58.6%	Outperformer	177	100.0%
Neutral	116	38.4%	Neutral	115	99.1%
Underperformer	9	3.0%	Underperformer	9	100.0%
Tender	0	0.0%	Tender	0	0.0%
Restricted	7	2.3%	Restricted	7	100.0%

Important disclosures for each issuer can be found by visiting the Research Central website at https://researchcentral.cibccm.com/#/disclaimer-central-new and then entering the issuer name. Access to our research dissemination policy can be found on the same website at https://researchcentral.cibccm.com/#/disclaimer-central.cibccm.com/#/dissemination-policy. These important disclosures can also be obtained by writing to CIBC World Markets Inc., 161 Bay Street, 4th Floor, Toronto, ON M5H 2S8, Attention: Research Disclosures Request.

Access to CIBC Equity Research

Clients may access CIBC Equity Research online at Research Central at <u>https://researchcentral.cibccm.com/</u>, or at the following research aggregators: Bloomberg, Refinitiv, Capital IQ, and FactSet.

Legal Disclaimer

This report is issued and approved for distribution by (a) in Canada, CIBC World Markets Inc., a member of the Investment Industry Regulatory Organization of Canada ("IIROC"), the Toronto Stock Exchange, the TSX Venture Exchange and a Member of the Canadian Investor Protection Fund, (b) in the United Kingdom, CIBC World Markets plc, is Authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, (c) in Australia to wholesale clients only, CIBC Australia Ltd, a company regulated by the ASIC with AFSL license number 240603 and ACN 000 067 256, and (d) in Japan, CIBC World Markets (Japan) Inc., a registered Type 1 Financial product provider with the registration number Director General of Kanto Finance Bureau #218 (collectively, "CIBC World Markets") and (e) in the United States either by (i) CIBC World Markets Inc. for distribution only to U.S. Major Institutional Investors ("MII") (as such term is defined in SEC Rule 15a-6) or (ii) CIBC World Markets Corp., a member of the Financial Industry Regulatory Authority ("FINRA"). U.S. MIIs receiving this report from CIBC World Markets Inc. (the Canadian broker-dealer) are required to effect transactions (other than negotiating their terms) in securities discussed in the report through CIBC World Markets Corp. (the U.S. broker-dealer). CIBC World Markets Corp. accepts responsibility for the content of this research report.

This report is provided, for informational purposes only, to institutional investor and retail clients of CIBC World Markets in Canada, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such offer or solicitation would be prohibited. This document and any of the products and information contained herein are not intended for the use of Retail investors in the United Kingdom. Such investors will not be able to enter into agreements or purchase products mentioned herein from CIBC World Markets plc. The comments and views expressed in this document are meant for the general interests of wholesale clients of CIBC Australia Ltd.

This report has been prepared by the CIBC group and is issued in Hong Kong by Canadian Imperial Bank of Commerce, Hong Kong Branch, a registered institution under the Securities and Futures Ordinance, Cap 571 (the "SFO"). This report is intended for "professional investors" only (within the meaning of the SFO) and has been prepared for general circulation and does not take into account the objectives, financial situation or needs of any recipient. Any recipient in Hong Kong who has any questions or requires further information on any matter arising from or relating to this report should contact Canadian Imperial Bank of Commerce, Hong Kong Branch at Suite 3602, Cheung Kong Centre, 2 Queen's Road Central, Hong Kong (telephone number: +852 2841 6111). Orders for Hong Kong listed securities will be executed by Canadian Imperial Bank of Commerce, Hong Kong Branch. Canadian Imperial Bank of Commerce, Hong Kong Branch has entered into an arrangement with its broker-dealer affiliates worldwide to execute orders for securities listed outside of Hong Kong for Hong Kong clients.

This report is intended for distribution in Singapore solely to "institutional investors" (within the meanings of the Financial Advisers Act (Chapter 110 of Singapore)).

The securities mentioned in this report may not be suitable for all types of investors. This report does not take into account the investment objectives, financial situation or specific needs of any particular client of CIBC World Markets. Recipients should consider this report as only a single factor in making an investment decision and should not rely solely on investment recommendations contained herein, if any, as a substitution for the exercise of independent judgment of the merits and risks of investments. The analyst writing the report is not a person or company with actual, implied or apparent authority to act on behalf of any issuer mentioned in the report. Before making an investment decision with respect to any security recommended in this report, the recipient should consider whether such recommendation is appropriate given the recipient's particular investment needs, objectives and financial circumstances. CIBC World Markets suggests that, prior to acting on any of the recommendations herein, Canadian retail clients of CIBC World Markets contact one of our client advisers in your jurisdiction to discuss your particular circumstances. Non-client recipients of this report who are not institutional investor clients of CIBC World Markets should consult with an independent financial advisor prior to making any investment decision based on this report or for any necessary explanation of its contents. CIBC World Markets will not treat non-client recipients as its clients solely by virtue of their receiving this report.

Legal Disclaimer (Continued)

Past performance is not a guarantee of future results, and no representation or warranty, express or implied, is made regarding future performance of any security mentioned in this report. The price of the securities mentioned in this report and the income they produce may fluctuate and / or be adversely affected by exchange rates, and investors may realize losses on investments in such securities, including the loss of investment principal. CIBC World Markets accepts no liability for any loss arising from the use of information contained in this report, except to the extent that liability may arise under specific statutes or regulations applicable to CIBC World Markets.

Information, opinions and statistical data contained in this report were obtained or derived from sources believed to be reliable, but CIBC World Markets does not represent that any such information, opinion or statistical data is accurate or complete (with the exception of information contained in the Important Disclosures section of this report provided by CIBC World Markets or individual research analysts), and they should not be relied upon as such. All estimates, opinions and recommendations expressed herein constitute judgments as of the date of this report and are subject to change without notice.

Nothing in this report constitutes legal, accounting or tax advice. Since the levels and bases of taxation can change, any reference in this report to the impact of taxation should not be construed as offering tax advice on the tax consequences of investments. As with any investment having potential tax implications, clients should consult with their own independent tax adviser.

This report may provide addresses of, or contain hyperlinks to, Internet web sites. CIBC World Markets has not reviewed the linked Internet web site of any third party and takes no responsibility for the contents thereof. Each such address or hyperlink is provided solely for the recipient's convenience and information, and the content of linked third party web sites is not in any way incorporated into this document. Recipients who choose to access such third-party web sites or follow such hyperlinks do so at their own risk.

Although each company issuing this report is a wholly owned subsidiary of Canadian Imperial Bank of Commerce ("CIBC"), each is solely responsible for its contractual obligations and commitments, and any securities products offered or recommended to or purchased or sold in any client accounts (i) will not be insured by the Federal Deposit Insurance Corporation ("FDIC"), the Canada Deposit Insurance Corporation or other similar deposit insurance, (ii) will not be deposits or other obligations of CIBC, (iii) will not be endorsed or guaranteed by CIBC, and (iv) will be subject to investment risks, including possible loss of the principal invested. The CIBC trademark is used under license.

© 2022 CIBC World Markets Inc. and CIBC World Markets Corp. All rights reserved. Unauthorized use, distribution, duplication or disclosure without the prior written permission of CIBC World Markets is prohibited by law and may result in prosecution.