



EQUITY RESEARCH

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Information Technology

Sector:

March 30, 2023

Industry Update

Taking Stock - Bits & Bytes Weekly

Federal Budget Institutes A 2% Tax on Buybacks

Our Conclusion

The Federal budget announcement this week formalized a 2% tax on share buybacks, which was first announced in November 2022. The buyback tax follows the lead of the US, which passed a 1% share buyback tax with its Inflation Reduction Act (IRA) in August 2022. The Canadian tax will come into effect in January 2024 and is expected to increase federal revenue by \$2.5B over five years. In addition to a government revenue generator, the budget document suggests that the tax will provide an incentive for companies to prioritize other spending, including re-investments into the business. We see the tax as possibly too low to make much of a difference in capital allocation decisions, although we could see more buyback activity in 2023 as corporates buy back shares ahead of the implementation of the 2% tax.

Key Points

Buybacks Have Been On The Rise: Companies flush with cash have been driving up buyback activity, with a record US\$882B spent on buybacks by S&P 500 companies in 2021, which was then exceeded by the US\$1.26T spent on share repurchases in 2022. Interestingly, the largest share repurchasers have been tech companies, with Apple spending US\$95.6B LTM Q3/22, up 3% Y/Y, closely followed by Alphabet (US\$57.4B, up 28%), Meta (US\$45.6B, up 45%) and Microsoft (\$30.6B, up 8% Y/Y). To date, buybacks within the Canadian tech sector have been more muted, with CGI our most active repurchaser, spending \$670M in calendar 2022.

Is There A Better Use of Capital? Buybacks can be attractive if the management team does not see a better use of capital. However, governments have become concerned as the use of buybacks has soared. The US Institute on Taxation and Economic Policy noted that S&P 500 companies have spent more on share buybacks than on capital spending since 2018 and buybacks have exceeded dividends in every quarter but two since 2021. A similar buyback trend has been seen in Canada, with an 83% increase in total dollar spend on share repurchases for S&P/TSX Info Tech constituents from 2018 through 2021.

Will A 2% Tax Change Behavior? The Canadian 2% buyback tax follows the 1% US buyback tax that was signed into law in August 2022. Since then, the US tax has been criticized for doing too little to alter share buyback behavior, with \$132B in new buyback plans announced by S&P 500 companies in January 2023. President Biden used his State of the Union address in February 2022 to propose quadrupling the tax to 4%. With the S&P 500 sitting on US\$8 trillion in cash and nearly half of our coverage in net cash positions we expect the government focus on buybacks will continue.

All figures in Canadian dollars unless otherwise stated.

Share Buybacks On The Rise

Flush with cash, technology companies have been a leading source of buybacks, with US technology companies continuing to raise buybacks through Q3, despite the implementation of a 1% share buyback tax (see table in Exhibit 1).

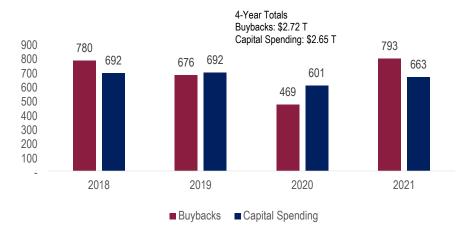
Exhibit 1: Largest US Stock Buybacks (LTM through Q3/22; US\$B)

Company	12 Months Ending Q3 2022	12 Months Ending Q3 2021	% Change
Apple	95.6	92.5	3%
Alphabet	57.4	44.7	28%
Meta Platforms	45.6	31.5	45%
Microsoft	30.6	28.3	8%
Lowe's	16.1	12.4	30%
Procter & Gamble	11.3	11.8	-4%
ExxonMobil	10.6	0.101	10,395%
NVIDIA	10.6	1.5	607%
Marathon Petroleum	9.5	1.9	400%
Chevron	5.4	0.618	774%

Source: S&P Global and CIBC World Markets Inc.

According to the US Institute on Taxation and Economic Policy, S&P 500 companies have spent more on buybacks than on capital spending since 2018. Over the 4-year period, S&P 500 companies spent US\$2.72 trillion on buybacks, versus US\$2.65 trillion on capital spending (see bar chart, Exhibit 2).

Exhibit 2: S&P 500 Buyback Vs. Capital Spending - 2018-2021 (US\$B)



Source: Institute on Taxation and Economic Policy and CIBC World Markets Inc.



News Impacting Our Coverage

Research Highlight: Constellation - A Solid End To The Year

Constellation reported a solid Q4 with revenue 3% above consensus and EBITDA margins 90 bps above expectations. Constant-currency organic growth was 4% Y/Y, up sequentially from 2%. Free cash flow available to shareholders was up 19% Y/Y, a sequential improvement from 1% Y/Y. Constellation continues to restructure Altera and we calculate ~11% Altera EBITDA margins in the quarter and a 2% Altera-related headwind to constant-currency organic growth. Overall, we see Constellation as well positioned to execute on M&A in the current environment and see opportunities for further carve-outs (similar to Altera) and spinouts (similar to the recently spun out Lumine Group). Constellation spent \$1.6B on M&A in 2022, above its \$1.3B in free cash flow as the company explores new financing and structuring arrangements as it continues to focus on larger deals. We retain our Outperformer rating. Link to note

Research Highlight: CGI Read-throughs From Accenture's FQ2/23 Results

CGI peer Accenture reported FQ2/23 results, with EBIT roughly in line with the Street and a strong book-to-bill of 1.40x. The company posted outsourcing revenue that was ~5.5% above expectations, while the consulting division missed consensus by ~2.5%. The company also provided an FQ3 revenue guide that was slightly below the consensus range at the midpoint, reflecting the slower pace of Consulting projects. We see a generally positive read-through for CGI from Accenture's results, which highlight slower spending on lower-priority Consulting projects but robust demand for IP and Managed Services, as clients prioritize cost optimization. Link to note

Q4 Announces TSX Acceptance Of Normal Course Issuer Bid Renewal

Q4 announced that the TSX has accepted its notice of intention to renew its normal course issuer bid (NCIB). Under the NCIB program, Q4 can purchase up to 2.1MM of its common shares, which represent 10% of the public float as of March 17, 2023. Previous purchases under the prior NCIB were 379,400 common shares with a weighted average price paid per security of \$2.52.

Kinaxis Brings Concurrent Supply Chain Planning To Microsoft Azure Marketplace

Kinaxis announced the availability of its RapidResponse platform in the Microsoft Azure Marketplace, an online store providing applications and services for use on Azure. Kinaxis customers can now take advantage of the productive and trusted Azure cloud platform, with streamlined deployment and management. Adding RapidResponse to the Microsoft Azure Marketplace is the latest step in the collaboration between Kinaxis and Microsoft, with the potential for future innovation around a shared vision to bring concurrent supply chain planning to more companies worldwide.

LiveVox Partners With CGI To Transform Agent Productivity

LiveVox announced a partnership with CGI to integrate LiveVox's contact center platform with CGI's CACS X for collections. CACS X is CGI's net generation, cloud-native debt management offering for driving customer-centric default management across the collections lifecycle. With the integration, CACS X customers can leverage LiveVox's CCaaS platform to create a turnkey collections, compliance and omnichannel communications platform.



Exhibit 3: CIBC Coverage – Price Returns, For The Period Ending Mar 30, 2023

								52 Week	
Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	High	52 Week Low
Constellation Software Inc	2,380.00	3.0	0.4	14.2	24.9	12.3	3.2	2504.74	1752.90
Descartes Systems	78.44	4.7	4.4	14.7	19.1	1.5	(5.1)	79.95	56.19
Enghouse Systems Limited	36.46	2.3	(14.1)	5.4	22.0	(8.9)	(24.7)	44.59	23.96
Open Text Corp	37.66	5.8	7.0	31.6	31.5	(13.2)	(20.7)	43.61	24.91
Kinaxis	178.76	6.7	12.4	21.6	31.4	5.0	8.0	187.01	119.48
Docebo, Inc.	51.43	0.7	1.1	14.8	35.4	(16.8)	(39.4)	65.73	31.66
Magnet Forensics R	43.91	(0.9)	(8.0)	24.7	95.9	42.2	33.6	45.20	14.89
Q4 Inc.	3.00	(1.6)	13.2	24.5	(33.3)	(44.0)	(64.7)	5.14	1.88
Software & Systems Average		2.6	3.0	18.9	28.4	(2.7)	(14.6)		

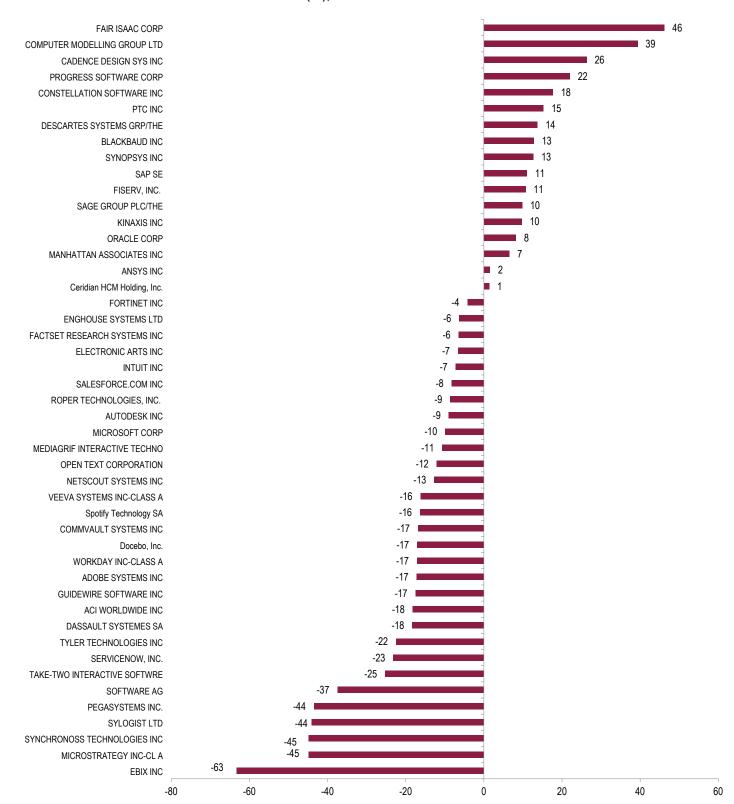
								52 Week	
Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	High	52 Week Low
CGI Group Inc	125.96	0.6	0.1	8.3	21.2	21.0	12.6	130.75	95.45
Converge Technologies	3.99	(5.9)	(19.1)	(11.5)	(32.3)	(62.3)	(63.3)	10.68	3.60
Softchoice Corporation	15.45	3.7	(12.7)	(11.2)	(21.9)	(43.8)	(27.6)	28.66	13.57
Telus International	20.46	(1.5)	(6.1)	7.4	(29.5)	(22.4)	(38.1)	31.52	17.65
Business Services Average		(8.0)	(9.4)	(1.7)	(15.6)	(26.9)	(29.1)		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	19,519.43	(0.4)	(4.9)	1.7	0.7	(10.5)	(8.0)
S&P 500 Index	3,951.57	2.5	(3.1)	3.5	2.0	(11.5)	(17.1)
S&P/TSX Software Index	159.64	3.1	1.4	16.5	25.0	(6.9)	(24.8)
S&P500 Software Index	4,640.28	6.4	4.1	13.6	11.9	(9.5)	(20.6)

Source: FactSet and CIBC World Markets Inc.



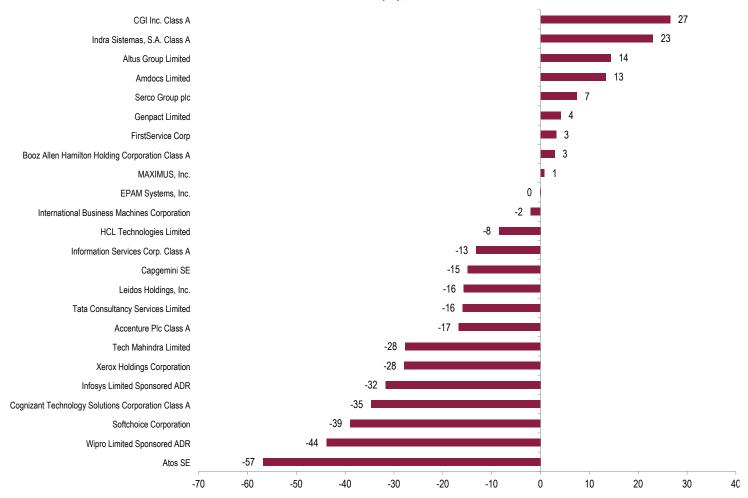
Exhibit 4: Software Stocks - Return Performance (%), 3/30/2022 - 3/30/2023



Source: FactSet and CIBC World Markets Inc.



Exhibit 5: Business Services Stocks - Return Performance (%), 3/30/2022 - 3/30/2023



Source: FactSet and CIBC World Markets Inc.



Exhibit 6: Software Stocks - Comp Table, 2022 - 2024E

	Enterprise		EV/S			V/EBITD	4		P/E	
	Value (\$mins.)	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E
Enterprise Application Software	1 1 1 (,									
Constellation Software Inc.*	40,060	6.1x	5.4x	4.6x	24.4x	21.1x	18.0x	33.0x	31.2x	26.2x
BlackBerry Limited*	2,200	3.3x	2.4x	2.2x	NEG	NEG	NEG	NEG	NEG	NEG
Sage Group plc	8,601	4.3x	3.9x	3.6x	18.9x	16.7x	15.2x	28.9x	25.0x	22.4x
Tyler Technologies, Inc.	15,227	8.2x	7.8x	7.1x	32.0x	31.8x	28.2x	45.9x	45.4x	39.9x
Roper Technologies, Inc.	52,538	9.8x	8.8x	8.3x	24.0x	21.5x	20.1x	30.6x	27.1x	25.3x
Enghouse Systems Limited	1,851	4.4x	4.27x	4.21x	13.4x	12.8x	12.71x	19.0x	26.7x	26.38x
Oracle Corporation	301,241	6.4x	5.8x	5.4x	12.8x	11.5x	10.5x	18.1x	16.9x	14.9x
SAP SE	145,106	4.3x	4.5x	4.2x	18.3x	16.1x	13.9x	28.3x	21.5x	18.6x
Enterprise Application Software A		5.9x	5.4x	5.0x	20.6x	18.8x	17.0x	29.1x	27.7x	24.8x
								•		
Extended ERP										
Adobe Incorporated	172,924	9.7x	8.9x	7.9x	19.9x	18.3x	16.5x	27.5x	24.4x	21.4x
Open Text Corporation	12,829	3.6x	2.3x	2.1x	10.3x	7.5x	5.5x	11.9x	13.5x	7.0x
Manhattan Associates, Inc.	9,251	12.1x	11.2x	10.0x	42.3x	42.0x	37.1x	>50	>50	48.5x
Pegasystems Inc.	4,155	3.2x	3.0x	2.7x	>50	23.2x	16.1x	>50	30.5x	21.5x
Software AG	1,703	1.8x	1.7x	1.6x	10.0x	9.4x	7.8x	18.6x	13.6x	11.4x
Fiserv, Inc.	92,309	5.5x	5.1x	4.8x	12.8x	11.8x	10.8x	17.4x	15.4x	13.6x
Extended ERP Average		6.0x	5.4x	4.8x	19.0x	18.7x	15.6x	18.9x	19.5x	20.6x
Software As A Service										
Descartes Systems Group Inc.	6,386	13.2x	11.9x	10.8x	29.7x	26.8x	24.3x	>50	>50	>50
Kinaxis, Inc.*	3,544	9.6x	8.7x	7.3x	48.0x	47.3x	38.6x	>50	>50	>50
Docebo, Inc.*	1,066	7.4x	5.6x	4.2x	NEG	>50	>50	>50	>50	>50
Lightspeed Commerce Inc*	1,338	2.0x	1.6x	1.2x	NEG	NEG	39.2x	NEG	>50	>50
Veeva Systems Inc Class A	24,876	11.7x	10.6x	9.0x	29.4x	29.7x	24.1x	42.4x	41.7x	35.0x
Shopify, Inc. Class A	55,514	9.9x	8.4x	6.9x	>50	>50	>50	>50	>50	>50
Q4 Inc*	97	1.8x	1.7x	1.5x	NEG	NEG	NEG	NEG	NEG	NEG
Ceridian HCM Holding, Inc.	11,640	9.3x	7.8x	6.7x	46.5x	31.7x	25.7x	>50	>50	44.5x
ServiceNow, Inc.	87,472	12.1x	9.9x	8.1x	38.3x	31.8x	25.2x	>50	47.9x	38.8x
Workday, Inc. Class A	48,982	8.0x	6.9x	5.9x	31.2x	24.5x	20.5x	>50	40.2x	32.7x
Software As A Service Average		8.8x	7.5x	6.2x	37.2x	33.2x	28.3x	42.4x	43.3x	37.7x
Infrastructure Vendors										
Microsoft Corporation	2,079,421	10.2x	9.4x	8.4x	20.9x	19.3x	16.5x	30.5x	28.2x	24.3x
Infrastructure Vendors Average		10.2x	9.4x	8.4x	20.9x	19.3x	16.5x	30.5x	28.2x	24.3x
Software Average		7.3x	6.4x	5.6x	25.4x	23.6x	20.7x	27.1x	28.1x	26.2x
*Share Price Converted to USD	-									

*Share Price Converted to USD

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



Exhibit 7: Business Services Stocks - Comp Table, 2022 - 2024E

Enterprise

Val	ue (\$mlns.)	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E
Business & IT Services										
CGI Inc. Class A	33,024	13.4x	11.8x	11.4x	20.4x	18.3x	17.4x	2.5x	2.4x	2.3x
TELUS International (CDA), Inc.	6,370	10.5x	9.0x	7.8x	16.4x	16.3x	13.5x	2.6x	2.1x	1.9x
Accenture Plc Class A	182,143	15.9x	15.3x	14.0x	25.6x	23.7x	21.6x	2.9x	2.8x	2.6x
Booz Allen Hamilton	14,569	14.7x	13.8x	12.6x	20.8x	19.3x	17.3x	1.6x	1.5x	1.4x
CACI International Inc Class A	8,924	13.3x	12.3x	11.5x	16.4x	15.5x	14.0x	1.4x	1.3x	1.3x
DXC Technology Co.	9,193	3.8x	3.9x	4.0x	7.2x	6.5x	5.6x	0.6x	0.6x	0.6x
Genpact Limited	9,472	12.0x	11.0x	10.0x	16.7x	15.4x	13.7x	2.2x	2.0x	1.9x
International Business Machines	162,678	10.4x	10.8x	10.5x	14.2x	13.7x	12.9x	2.7x	2.6x	2.5x
Atos SE	3,024	3.0x	2.7x	2.5x	>50	5.2x	3.7x	0.3x	0.3x	0.3x
Capgemini SE	34,949	10.0x	9.5x	8.8x	14.8x	15.1x	13.7x	1.6x	1.5x	1.4x
Sopra Steria Group SA	5,267	8.9x	7.7x	7.1x	14.3x	11.8x	10.4x	1.0x	1.0x	0.9x
Converge Technology Solutions Corp	1,086	7.8x	5.9x	5.2x	24.8x	19.8x	16.6x	0.4x	0.4x	0.3x
Business & IT Services Average		10.5x	9.8x	9.1x	16.7x	14.6x	13.1x	1.8x	1.6x	1.5x
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HR Outsourcing			EV/EBITD/	4		P/E			EV/S	
Ceridian HCM Holding, Inc.	11,640	46.5x	31.7x	25.7x	>50	>50	44.5x	9.3x	7.8x	6.7x
Willis Towers Watson	28,590	12.0x	11.7x	10.6x	17.1x	15.9x	13.3x	3.2x	3.1x	2.9x
Aon Pic Class A	74,324	18.7x	17.3x	16.2x	23.2x	21.2x	19.1x	6.0x	5.6x	5.3x
Automatic Data Processing, Inc.	93,130	20.2x	18.1x	16.6x	29.0x	25.8x	23.2x	5.4x	5.0x	4.7x
Paychex, Inc.	40,859	19.0x	17.7x	16.5x	28.2x	25.8x	24.0x	8.5x	7.9x	7.4x
HR Outsourcing Average	.0,000	23.3x	19.3x	17.1x	24.4x	22.2x	24.8x	6.5x	5.9x	5.4x
								0.0.0		¥1
Information Services			EV/EBITD/	4		P/E			EV/S	
Broadridge Financial Solutions, Inc.	20,901	15.8x	14.6x	13.9x	21.7x	20.1x	18.4x	3.5x	3.3x	3.2x
Dye & Durham Ltd.	2,186	13.8x	12.5x	9.9x	0.1x	0.1x	0.1x	4.6x	4.6x	4.3x
Deluxe Corporation	2,040	4.9x	5.2x	5.0x	3.8x	5.2x	4.7x	0.9x	0.9x	0.9x
Information Services Corp	422	6.5x	6.2x	6.8x	10.2x	10.3x	10.6x	2.2x	2.1x	2.0x
Information Services Average		10.3x	9.6x	8.9x	8.9x	8.9x	8.4x	2.8x	2.7x	2.6x
		10101	0.00	0.07.	Olox	O.O.A.	V			
Financial Services Technology			EV/EBITD/	4		P/E			EV/S	
Fidelity National Information Services	49,179	7.9x	8.1x	7.6x	7.8x	8.9x	8.1x	3.4x	3.4x	3.3x
Fisery, Inc.	92,309	12.8x	11.8x	10.8x	17.4x	15.4x	13.6x	5.5x	5.1x	4.8x
Jack Henry & Associates, Inc.	10,962	17.4x	16.1x	14.9x	30.3x	29.1x	26.3x	5.5x	5.2x	4.8x
ACI Worldwide, Inc.	3,889	10.4x	10.1x	9.3x	21.3x	24.3x	19.7x	2.7x	2.7x	2.5x
Temenos AG	5,540	15.3x	14.8x	12.9x	22.7x	21.5x	18.3x	5.8x	5.6x	5.1x
Global Payments Inc.	40,072	10.2x	9.4x	8.7x	11.2x	10.2x	8.9x	5.0x	4.7x	4.3x
Financial Services Technology Average	, ,	12.3x	11.7x	10.7x	18.5x	18.2x	15.8x	4.6x	4.4x	4.1x
Diversified Real Estate Services			EV/EBITD/	<u> </u>		P/E			EV/S	
Diversified Real Estate Services Colliers International Group Inc.	6.252	9.9x		A 8.0x	15.0x		12.6x	1.4x	EV/S 1.3x	1.2x
Colliers International Group Inc.	6,252 2,712	9.9x	8.6x	8.0x		13.7x			1.3x	1.2x 3.2x
Colliers International Group Inc. Altus Group Limited	2,712	9.9x 20.0x	8.6x 18.5x	8.0x 18.0x	29.2x	13.7x 27.4x	25.0x	3.7x	1.3x 3.4x	3.2x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A	2,712 24,091	9.9x 20.0x 8.2x	8.6x 18.5x 9.1x	8.0x 18.0x 8.0x	29.2x 12.4x	13.7x 27.4x 14.0x	25.0 x 11.8x	3.7x 0.8x	1.3x 3.4x 0.8x	3.2x 0.7x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated	2,712	9.9x 20.0x 8.2x 7.4x	8.6x 18.5x 9.1x 7.9x	8.0x 18.0x 8.0x 6.9x	29.2x 12.4x 9.1x	13.7x 27.4x 14.0x 9.7x	25.0x 11.8x 8.1x	3.7x 0.8x 0.4x	1.3x 3.4x 0.8x 0.4x	3.2x 0.7x 0.4x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A	2,712 24,091	9.9x 20.0x 8.2x	8.6x 18.5x 9.1x	8.0x 18.0x 8.0x	29.2x 12.4x	13.7x 27.4x 14.0x	25.0 x 11.8x	3.7x 0.8x	1.3x 3.4x 0.8x	3.2x 0.7x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average	2,712 24,091	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x	8.0x 18.0x 8.0x 6.9x 10.2x	29.2x 12.4x 9.1x	13.7x 27.4x 14.0x 9.7x 16.2x	25.0x 11.8x 8.1x	3.7x 0.8x 0.4x	1.3x 3.4x 0.8x 0.4x 1.5x	3.2x 0.7x 0.4x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs	2,712 24,091 9,254	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x	8.0x 18.0x 8.0x 6.9x 10.2x	29.2x 12.4x 9.1x 16.4x	13.7x 27.4x 14.0x 9.7x 16.2x	25.0x 11.8x 8.1x 14.4x	3.7x 0.8x 0.4x 1.6x	1.3x 3.4x 0.8x 0.4x 1.5x	3.2x 0.7x 0.4x 1.4x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD	2,712 24,091 9,254 838	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x	8.0x 18.0x 8.0x 6.9x 10.2x	29.2x 12.4x 9.1x 16.4x	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x	25.0x 11.8x 8.1x 14.4x	3.7x 0.8x 0.4x 1.6x	1.3x 3.4x 0.8x 0.4x 1.5x EV/S**	3.2x 0.7x 0.4x 1.4x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc*	2,712 24,091 9,254 838 2,509	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x 13.6x	8.0x 18.0x 8.0x 6.9x 10.2x 4 8.7x 12.5x	29.2x 12.4x 9.1x 16.4x 15.6x 20.0x	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x 19.0x	25.0x 11.8x 8.1x 14.4x 13.8x 18.0x	3.7x 0.8x 0.4x 1.6x 2.7x 6.2x	1.3x 3.4x 0.8x 0.4x 1.5x EV/S** 2.5x 5.3x	3.2x 0.7x 0.4x 1.4x 2.4x 4.8x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA*	2,712 24,091 9,254 838 2,509 9,446	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x 13.6x >50	8.0x 18.0x 8.0x 6.9x 10.2x 8.7x 12.5x >50	29.2x 12.4x 9.1x 16.4x 15.6x 20.0x >50	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x 19.0x >50	25.0x 11.8x 8.1x 14.4x 13.8x 18.0x >50	3.7x 0.8x 0.4x 1.6x 2.7x 6.2x 21.3x	1.3x 3.4x 0.8x 0.4x 1.5x EV/S** 2.5x 5.3x 18.6x	3.2x 0.7x 0.4x 1.4x 2.4x 4.8x 15.9x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA* Bytes Technology Group Plc*	2,712 24,091 9,254 838 2,509	9.9x 20.0x 8.2x 7.4x 11.4x 10.2x 14.9x >50 12.9x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x 13.6x >50 11.5x	8.0x 18.0x 8.0x 6.9x 10.2x 8.7x 12.5x >50 10.3x	29.2x 12.4x 9.1x 16.4x 15.6x 20.0x >50 17.5x	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x 19.0x >50 16.4x	25.0x 11.8x 8.1x 14.4x 13.8x 18.0x >50 14.7x	3.7x 0.8x 0.4x 1.6x 2.7x 6.2x 21.3x NA	1.3x 3.4x 0.8x 0.4x 1.5x EV/S** 2.5x 5.3x 18.6x NA	3.2x 0.7x 0.4x 1.4x 2.4x 4.8x 15.9x NA
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA*	2,712 24,091 9,254 838 2,509 9,446	9.9x 20.0x 8.2x 7.4x 11.4x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x 13.6x >50	8.0x 18.0x 8.0x 6.9x 10.2x 8.7x 12.5x >50	29.2x 12.4x 9.1x 16.4x 15.6x 20.0x >50	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x 19.0x >50	25.0x 11.8x 8.1x 14.4x 13.8x 18.0x >50	3.7x 0.8x 0.4x 1.6x 2.7x 6.2x 21.3x	1.3x 3.4x 0.8x 0.4x 1.5x EV/S** 2.5x 5.3x 18.6x	3.2x 0.7x 0.4x 1.4x 2.4x 4.8x 15.9x
Colliers International Group Inc. Altus Group Limited CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated Diversified Real Estate Services Average Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA* Bytes Technology Group Plc*	2,712 24,091 9,254 838 2,509 9,446	9.9x 20.0x 8.2x 7.4x 11.4x 10.2x 14.9x >50 12.9x	8.6x 18.5x 9.1x 7.9x 11.0x EV/EBITD/ 9.5x 13.6x >50 11.5x	8.0x 18.0x 8.0x 6.9x 10.2x 8.7x 12.5x >50 10.3x	29.2x 12.4x 9.1x 16.4x 15.6x 20.0x >50 17.5x	13.7x 27.4x 14.0x 9.7x 16.2x P/E 15.4x 19.0x >50 16.4x	25.0x 11.8x 8.1x 14.4x 13.8x 18.0x >50 14.7x	3.7x 0.8x 0.4x 1.6x 2.7x 6.2x 21.3x NA	1.3x 3.4x 0.8x 0.4x 1.5x EV/S** 2.5x 5.3x 18.6x NA	3.2x 0.7x 0.4x 1.4x 2.4x 4.8x 15.9x NA

EV/EBITDA

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



EV/S

^{*}Share Price Converted to USD

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

Exhibit 8: SaaS Stocks - Comp Table, 2022 - 2024E

									EV/S	
	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	C22E	C23E	C24E
Tier 1 SaaS (Rule of 40 > 5	50)									
DataDog	63%	23%	25%	18%	86%	43%	20,694	12.4x	9.9x	7.7x
CrowdStrike Holdings, Inc.	54%	31%	34%	30%	85%	64%	28,584	13.1x	9.7x	7.5x
Zscaler, Inc.	57%	23%	31%	22%	80%	53%	15,618	12.1x	9.0x	7.0x
The Trade Desk Holding	32%	33%	19%	29%	64%	48%	28,231	17.9x	15.0x	12.1x
Veeva Systems Inc	16%	44%	9%	35%	60%	44%	24,872	11.7x	10.6x	9.0x
Paylocity Holding Corp.	37%	19%	28%	16%	56%	45%	10,964	10.9x	8.5x	7.1x
Qualys, Inc.	18%	38%	14%	34%	56%	48%	4,382	8.9x	7.9x	6.9x
ServiceNow, Inc.	23%	30%	22%	30%	53%	52%	87,486	12.1x	9.9x	8.1x
Kinaxis, Inc.*	52%	2%	16%	1%	54%	17%	3,160	8.6x	7.4x	6.2x
Nuvei*	21%	30%	48%	28%	51%	76%	5,664	6.7x	4.6x	3.8x
Descartes Systems	14%	37%	8%	31%	51%	38%	6,391	13.3x	12.2x	10.6x
Tier 1 SaaS (Rule of 40 > 5	60) Average							11.6x	9.5x	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)	C22E	C23E	C24E
Tier 2 SaaS (Rule of 40 b/	w 41-49)									
Splunk Inc.	37%	12%	7%	20%	49%	27%	17,348	4.9x	4.5x	4.0x
Cloudflare Inc	49%	-1%	37%	3%	48%	40%	19,304	19.8x	14.5x	10.9x
HubSpot, Inc.	33%	15%	19%	11%	48%	30%	19,933	11.5x	9.7x	7.9x
DocuSign, Inc.	19%	19%	7%	18%	38%	26%	11,315	4.6x	4.2x	3.9x
MongoDB, Inc.	47%	-1%	18%	5%	46%	23%	14,572	11.7x	9.7x	8.0x
Docebo, Inc.*	43%	2%	27%	6%	45%	33%	1,067	6.8x	5.8x	4.6x
Dropbox, Inc.	8%	37%	7%	34%	44%	40%	8,502	3.7x	3.4x	3.3x
Workday, Inc.	20%	21%	16%	23%	41%	40%	49,012	8.0x	6.9x	5.9x
Tier 2 SaaS (Rule of 40 b/	w 41-49) Average							8.9x	7.3x	6.1x

	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)	C22E	C23E	C24E
Tier 3 SaaS (Rule of 40 b/w	/ 25-40)									
Lightspeed POS, Inc.*	49%	-13%	23%	-4%	36%	19%	1,335	1.9x	1.6x	1.2x
Rapid7 Inc.	28%	8%	13%	10%	36%	23%	3,085	4.5x	4.0x	3.4x
Zoom Video Communication	7%	28%	2%	29%	35%	31%	15,730	3.6x	3.5x	3.4x
Ceridian HCM Holding, Inc.	30%	3%	20%	9%	33%	29%	11,642	9.3x	7.8x	6.7x
VMware, Inc.	4%	29%	6%	28%	33%	34%	59,506	4.5x	4.2x	3.9x
BlackLine, Inc.	23%	10%	13%	7%	33%		4,223	8.1x	7.1x	6.2x
Five9, Inc.	28%	5%	16%	7%	32%	23%	4,983	6.4x	5.5x	4.7x
RingCentral, Inc.	25%	6%	10%	11%	31%	22%	4,232	2.1x	1.9x	1.7x
Akamai Technologies, Inc.	4%	23%	3%	14%	27%		14,038	3.9x	3.8x	3.5x
Twilio, Inc.	35%	-7%	13%	4%	27%	16%	8,937	2.3x	2.1x	1.8x
Tier 3 SaaS (Rule of 40 b/w	/ 25-40) Average							4.7x	4.2x	3.7x

	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)	C22E	C23E	C24E
Tier 4 SaaS (Rule of 40	<28									
New Relic, Inc.	18%	2%	16%	7%	20%	23%	4,752	5.3x	4.6x	4.0x
Q2 Holdings Inc.	13%	4%	12%	4%	18%	16%	1,638	2.9x	2.6x	2.3x
Shopify, Inc.	21%	-3%	19%	-4%	18%	15%	55,591	9.9x	8.4x	6.9x
Teradata Corporation	-6%	23%	1%	18%	16%	20%	4,031	2.2x	2.2x	2.1x
Wix.com Ltd.	10%	1%	10%	8%	11%	17%	5,709	4.1x	3.8x	3.3x
Zuora, Inc.	14%	-5%	9%	0%	10%	9%	1,141	2.9x	2.7x	2.3x
Yext, Inc.	3%	6%	1%	-1%	8%	0%	1,065	2.6x	2.6x	2.5x
Q4 Inc.	6%	-27%	40%	-11%	-21%	29%	104	1.9x	1.7x	1.5x
LivePerson, Inc.	10%	-21%	-16%	-12%	-11%	-28%	670	1.3x	1.6x	1.5x
Tier 4 SaaS (Rule of 40	<28 Average							3.7x	3.3x	2.9x

SaaS Average
* Share Price Converted to USD

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



8.1x 6.8x 5.7x

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