

EQUITY RESEARCH

February 9, 2023

Industry Update

Regulating AI – Bits & Bytes Weekly

Where Do You Start On Regulating A Fast-evolving Tech?

Our Conclusion

ChatGPT has captured the public's attention since its unveiling last November, surpassing Bitcoin to become one of the most Googled terms in 2023. The frenzy is leading to accelerated AI investments, with PE investing \$2.65B in AI in 2022, up 70% Y/Y. However, regulatory and ethical questions remain. While ChatGPT is uncanny in its ability to provide encyclopaedic answers in a conversational format, it often provides falsely confident answers to opinion-based queries. AI technologies also have the potential to promote bias and misinformation, not to mention the myriad of other ethical considerations around its usage (e.g., the use of AI to generate your child's homework).

Key Points

While AI's risks have long been recognized by the public, the speed of product development has made it very difficult for lawmakers to draft relevant regulations. Current AI regulation in the U.S. is more of a patchwork than a coherent whole, with state-level laws typically focused on transparency and discrimination while federal laws remain nascent. Congress is now playing catch-up, working to introduce regulation around facial recognition. In the fall of 2022, the White House Office of Science and Technology Policy announced the [Blueprint of an AI Bill of Rights](#), outlining five key principles including safety/transparency, algorithmic discrimination, and user control over data. The blueprint is designed to "help guide the design, development, and, deployment of artificial intelligence and other automated systems so that they protect the rights and democratic values of the American public." This week, legislation was introduced in the U.S. Senate (Senate Bill 313) that aligns with the AI Bill of Rights and is aimed at increasing consumer protection and privacy. The EU remains one step ahead of the U.S., passing the Artificial Intelligence Regulation Act in December with non-compliance fines of up to €30 million.

Technology companies likely need to begin thinking about the impact of AI regulations today. The recent introduction of non-binding AI risk management frameworks, including the one drafted by the National Institute of Standards and Technology (NIST), could serve as a framework for creating associated compliance mechanisms for AI. We expect the initial regulatory concerns will focus on consumer-facing privacy, with a consumer sentiment study by Pew Research recently noting that AI is broadly supported in a range of situations (household chores, repetitive tasks, diagnosing medical concerns).

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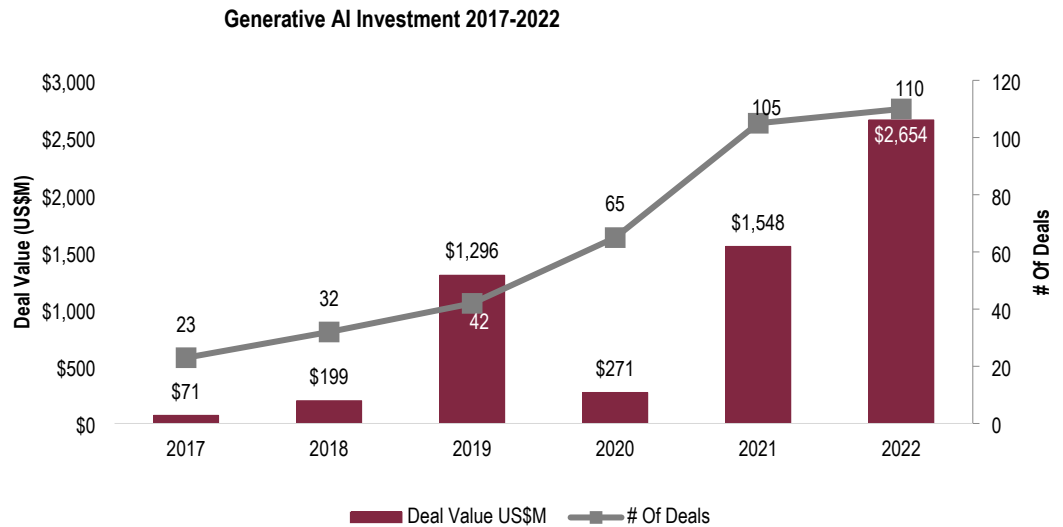
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Sector:
Information Technology

AI Investment Frenzy

While the tech industry may be experiencing a broad-based slowdown in funding given the elevated interest rate environment, investor interest in generative AI has reached a fever pitch. Investors wrote checks totaling \$2.65 billion for AI investments in 2022, up from \$71 million six years earlier. To kick off 2023, Google announced a US\$300 million investment in exchange for a 10% stake in Anthropic, implying a US\$3 billion valuation. This comes on the heels of the company raising \$580 million in 2022 from several angel investors. Character.AI is also said to be in talks to raise large rounds. Broadly, the largest focus area of generative AI remains in the realm of text and visual media generation. According to a poll conducted by CB Insight, the public seems to think that generative AI could be as big as the iPhone, suggesting momentum for investment in the area is likely to continue.

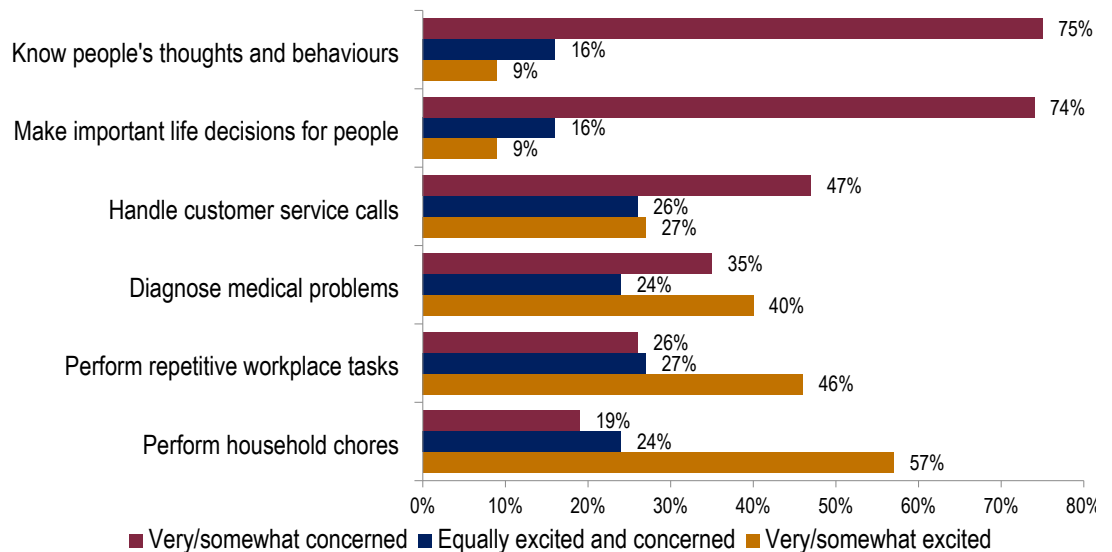
Exhibit 1: Fundings And Funding Rounds In Generative AI Startups, 2017-2022



Source: CB Insights and CIBC World Markets Inc.

The public is more receptive to the idea of AI applications to help with household chores, but has reservations about AI that helps with key life decisions.

Exhibit 2: PEW Research – American Consumer Sentiment On AI, March 2022



Source: PEW Research Center and CIBC World Markets Inc.

News Impacting Our Coverage

CGI Selected To Transition State Of Arizona HR Management System To CGI Advantage

CGI announced it has been selected through a competitive process to replace the State of Arizona's human resource information system with a single solution powered by CGI Advantage. CGI Advantage is a mobile-first SaaS platform that offers core HR, payroll, workforce management, talent management, HR planning and other services.

CGI To Partner With Poland's Energy Sector To Deliver A Central Energy Market Information System

CGI has been selected by Polski Sieci Elektroenergetyczne (PSE), Poland's electricity transmission system operator, to build and support a Central Energy Market Information System (CSIRE). The new energy IT system will store and manage data on Poland's energy consumption locations and enhance data exchange across its retail electricity market. CGI plans to leverage its Central Market Solutions IP, synchronizing data to address new energy legislation and evolving energy demands. The contract is valued at \$97 million.

Das Kostümland Selects Descartes' Ecommerce Warehouse Management Solution to Strengthen Fulfillment

Online retailer Das Kostümland announced it has deployed Descartes' ecommerce warehouse management system (WMS) to manage order volume. Das Kostümland selected Descartes' solution to increase operational efficiency, and reduce cost while streamlining its fulfillment processes.

Enghouse Announces Acquisition Of SaaS Provider Navita

Enghouse announced that it had acquired Navita, a Brazilian-based provider of SaaS-based Enterprise Mobility Management solutions (EMM device and telecom expense management). Navita's annual revenue is \$7.5 million with no deal metrics disclosed. Navita's products focused on managing critical mobile assets as well as telecom and IT expense management. The solution ensures compliant usage of mobile assets by users based on customers' internal governance policies.

Research Highlight: OTEX – Seasonally Strong FQ2; MCRO Restructuring Begins

Open Text reported strong FQ2 results, with revenue 2% and adj. EBITDA 9% above Street expectations, and OTEX continuing to see solid cloud growth. That said, the focus was on updated guidance, which included the Micro Focus acquisition. The F2024 guide was mixed versus our estimates, with adj. EBITDA margins that were 100 bps above our estimate at the midpoint, but FCF that was \$150MM below given restructuring costs and increased investments in R&D. From here, the focus turns to Open Text's ability to return Micro Focus to organic growth in F2025, with management laying out a roadmap to drive renewal rates higher, onboard Micro Focus clients to Open Text private cloud, and cross-sell a joint product suite. [Link To Note](#)

Research Highlight: CSU – Topicus Reports Q4/22 Results

Constellation and Topicus announced Q4 results for Topicus. Organic growth of 6% improved sequentially from 3% in the seasonally strong Q4; however, it remained below year-ago levels (10%). All revenue segments grew Y/Y with the exception of License revenue (down 1%), which saw its fourth quarter of Y/Y declines. Margins at Topicus were down 500 bps Y/Y, but were roughly 210 bps above our expectation for Constellation's consolidated margin of 24.9%. Topicus had a relatively low M&A spend (€10.5MM) in the quarter. [Link To Note](#)

Exhibit 3: CIBC Coverage – Price Returns, 2/9/2022 – 2/9/2023

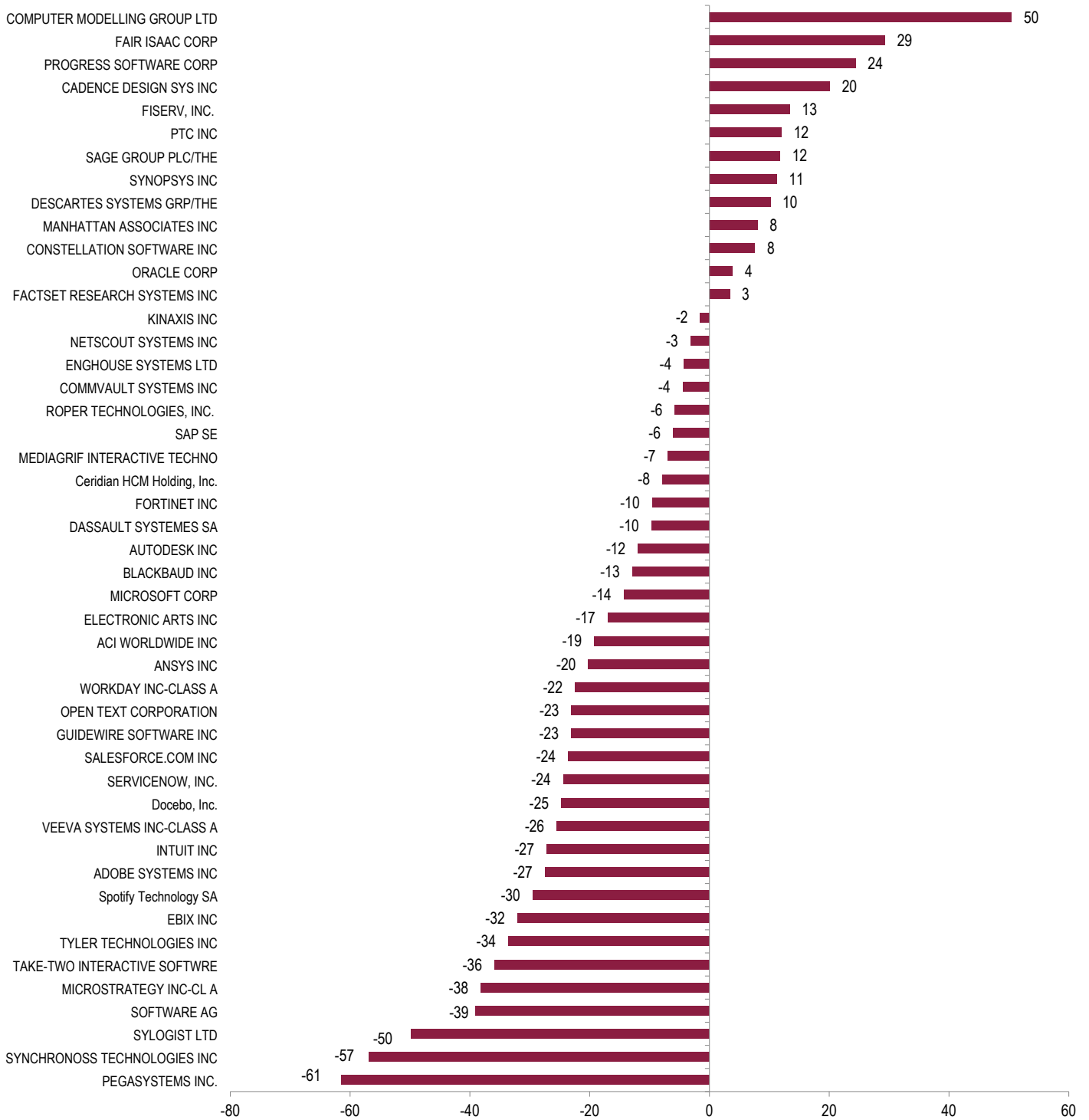
Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,376.30	0.1	7.0	24.7	12.9	7.6	12.4	2460.00	1783.98
Descartes Systems	75.49	1.1	6.7	13.8	5.8	3.8	8.4	79.08	56.19
Enghouse Systems Limited	41.91	3.8	9.2	44.0	27.7	(4.2)	16.5	44.00	23.96
Open Text Corp	35.41	7.3	14.8	28.5	(6.4)	(23.1)	19.5	46.22	24.91
Kinaxis	164.24	5.2	10.1	16.0	4.1	(1.5)	8.1	173.45	119.48
Docebo, Inc.	52.62	1.4	18.4	63.4	18.1	(24.8)	17.6	72.80	31.66
Magnet Forensics	44.48	1.1	11.8	58.0	102.3	60.9	19.7	44.59	14.89
Q4 Inc.	2.50	2.9	1.6	(16.9)	(44.7)	NA	(22.1)	6.20	1.88
Average		2.9	9.9	28.9	15.0	2.7	10.0		

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
CGI Group Inc	123.55	4.3	8.0	13.6	13.6	11.2	5.9	123.80	95.45
Converge Technologies	6.04	1.7	25.8	41.8	2.5	(47.1)	31.6	11.59	3.60
Softchoice Corporation	18.02	(1.4)	(1.3)	5.5	(25.6)	(18.0)	(1.3)	28.66	13.57
Telus International	30.19	(6.1)	11.7	15.4	(22.8)	(15.4)	12.9	40.55	24.11
Average		(0.4)	11.1	19.1	(8.1)	(17.3)	12.3		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	20,679.54	(0.3)	4.1	6.9	5.6	(4.3)	6.7
S&P 500 Index	4,117.86	(1.5)	5.8	9.9	(0.1)	(10.2)	7.2
S&P/TSX Software Index	163.36	(0.6)	16.0	30.8	15.9	(11.8)	19.8
S&P500 Software Index	4,589.52	(0.7)	14.7	19.0	(4.5)	(14.8)	12.0

Source: FactSet and CIBC World Markets Inc.

Exhibit 4: Software Stocks – Return Performance (%), 2/9/2022 – 2/9/2023



Source: FactSet and CIBC World Markets Inc.

Exhibit 5: Business Services Stocks – Return Performance (%), 2/9/2022 – 2/9/2023



Source: FactSet and CIBC World Markets Inc.

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

	Enterprise Value (\$mlns.)	EV/S			EV/EBITDA			P/E		
		C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E
Enterprise Application Software										
Constellation Software Inc.*	38,861	5.9x	5.3x	4.5x	23.7x	20.5x	17.5x	32.1x	30.3x	25.5x
BlackBerry Limited*	2,426	3.6x	2.6x	2.4x	NEG	NEG	NEG	NEG	NEG	NEG
Sage Group plc	8,736	4.4x	4.0x	3.7x	19.1x	17.0x	15.4x	29.4x	25.3x	22.5x
Tyler Technologies, Inc.	14,605	7.9x	7.3x	6.6x	30.7x	29.2x	25.4x	43.0x	42.1x	36.2x
Roper Technologies, Inc.	51,250	9.5x	8.6x	8.1x	23.3x	20.9x	19.5x	30.0x	26.5x	24.6x
Enghouse Systems Limited	2,107	5.0x	4.87x	4.79x	15.3x	14.6x	14.47x	21.2x	29.7x	29.31x
Oracle Corporation	291,322	6.2x	5.6x	5.2x	12.4x	11.1x	10.0x	17.7x	16.4x	14.3x
SAP SE	142,077	4.2x	4.3x	4.0x	17.6x	15.5x	13.5x	27.4x	20.8x	17.9x
Enterprise Application Software Average		5.8x	5.3x	4.9x	20.3x	18.4x	16.5x	28.7x	27.3x	24.3x
Extended ERP										
Adobe Incorporated	171,750	9.7x	8.8x	7.9x	19.8x	18.2x	16.4x	27.3x	24.5x	21.4x
Open Text Corporation	12,206	3.5x	2.2x	2.0x	9.8x	7.1x	5.2x	11.2x	12.7x	6.6x
Manhattan Associates, Inc.	8,804	11.5x	10.6x	9.5x	40.3x	40.0x	35.3x	>50	>50	46.1x
Pegasystems Inc.	3,551	2.8x	2.6x	2.3x	>50	38.3x	18.9x	>50	>50	26.7x
Software AG	1,751	1.8x	1.7x	1.6x	10.1x	9.3x	7.6x	17.9x	13.2x	11.0x
Fiserv, Inc.	94,116	5.6x	5.3x	4.9x	13.0x	12.0x	11.0x	17.9x	15.8x	13.9x
Extended ERP Average		5.8x	5.2x	4.7x	18.6x	20.8x	15.7x	18.6x	16.5x	21.0x
Software As A Service										
Descartes Systems Group Inc.	6,173	12.7x	11.5x	10.5x	28.7x	26.0x	23.4x	>50	>50	>50
Kinaxis, Inc.*	3,232	8.7x	7.9x	6.6x	43.8x	43.2x	35.2x	>50	>50	>50
Docebo, Inc.*	1,078	7.5x	5.6x	4.3x	NEG	>50	>50	>50	>50	>50
Lightspeed Commerce Inc*	1,888	2.8x	2.2x	1.7x	NEG	NEG	47.5x	NEG	>50	>50
Veeva Systems Inc Class A	25,122	11.9x	10.5x	9.1x	30.0x	27.4x	23.0x	42.5x	39.4x	33.8x
Shopify, Inc. Class A	50,260	9.1x	7.6x	6.1x	NEG	>50	>50	NEG	>50	>50
Q4 Inc*	38	0.7x	0.7x	0.6x	NEG	NEG	NEG	NEG	NEG	NEG
Ceridian HCM Holding, Inc.	12,285	9.9x	8.3x	7.2x	49.1x	35.7x	28.0x	>50	>50	49.1x
ServiceNow, Inc.	92,135	12.7x	10.4x	8.5x	40.3x	33.5x	26.5x	>50	>50	40.9x
Workday, Inc. Class A	46,956	7.7x	6.6x	5.6x	30.1x	24.7x	20.1x	>50	41.6x	33.3x
Software As A Service Average		8.8x	7.4x	6.1x	37.0x	33.2x	29.2x	42.5x	40.5x	39.3x
Infrastructure Vendors										
Microsoft Corporation	1,959,129	9.6x	8.9x	7.9x	19.7x	18.2x	15.6x	28.7x	26.5x	22.8x
Infrastructure Vendors Average		9.6x	8.9x	7.9x	19.7x	18.2x	15.6x	28.7x	26.5x	22.8x
Software Average		7.2x	6.3x	5.5x	25.1x	24.0x	20.9x	26.6x	26.0x	26.4x

*Share Price Converted to USD

Source: FactSet and CIBC World Markets Inc.

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

	Enterprise Value (\$mlns.)	EV/EBITD	EV/EBITDA				P/E			EV/S		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Business & IT Services												
CGI Inc. Class A	31,976	12.9x	12.9x	11.4x	11.1x	19.7x	17.7x	16.8x	2.4x	2.3x	2.2x	
TELUS International (CDA), Inc.	6,805	12.6x	11.3x	9.9x	9.2x	18.9x	15.8x	14.7x	2.8x	2.4x	2.3x	
Accenture Plc Class A	182,882	19.0x	15.8x	15.0x	13.9x	25.9x	24.0x	21.7x	2.9x	2.8x	2.6x	
Booz Allen Hamilton	15,089	16.9x	15.2x	14.2x	13.2x	21.7x	20.0x	18.0x	1.7x	1.6x	1.4x	
CACI International Inc Class A	9,049	12.2x	13.5x	12.5x	11.7x	16.7x	15.8x	14.2x	1.4x	1.3x	1.3x	
DXC Technology Co.	9,923	4.9x	4.2x	4.3x	4.3x	8.1x	7.3x	6.4x	0.7x	0.7x	0.7x	
Genpact Limited	9,754	15.1x	12.6x	11.3x	10.2x	17.3x	15.7x	14.2x	2.2x	2.1x	1.9x	
International Business Machines	166,623	12.4x	10.8x	11.1x	10.7x	14.7x	14.2x	13.3x	2.8x	2.7x	2.6x	
Atos SE	3,153	3.0x	3.2x	2.9x	2.6x	14.0x	6.6x	4.0x	0.3x	0.3x	0.3x	
Capgemini SE	38,082	13.2x	10.8x	10.2x	9.4x	17.4x	16.4x	14.9x	1.7x	1.6x	1.5x	
Sopra Steria Group SA	4,603	8.7x	7.6x	6.9x	6.4x	11.9x	10.8x	9.8x	0.9x	0.9x	0.8x	
Converge Technology Solutions Corp	1,465	15.6x	10.6x	7.9x	7.1x	38.0x	30.2x	25.4x	0.6x	0.5x	0.4x	
Business & IT Services Average		11.9x	10.7x	10.0x	9.3x	16.9x	14.9x	13.5x	1.8x	1.7x	1.6x	
HR Outsourcing												
		EV/EBITD	EV/EBITDA				P/E			EV/S		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Ceridian HCM Holding, Inc.	12,285	>50	49.1x	35.7x	28.0x	>50	>50	49.1x	9.9x	8.3x	7.2x	
Willis Towers Watson	28,599	12.8x	12.4x	11.5x	10.4x	19.2x	17.0x	14.6x	3.2x	3.1x	3.0x	
Aon Plc Class A	76,433	20.0x	19.2x	17.7x	16.6x	23.9x	21.8x	19.6x	6.1x	5.8x	5.5x	
Automatic Data Processing, Inc.	94,914	24.7x	20.6x	18.5x	17.0x	29.7x	26.4x	23.8x	5.5x	5.2x	4.8x	
Paychex, Inc.	41,061	24.8x	19.0x	17.7x	16.4x	28.4x	26.1x	24.3x	8.5x	8.0x	7.5x	
HR Outsourcing Average		20.6x	24.1x	20.2x	17.7x	25.3x	22.8x	26.3x	6.7x	6.1x	5.6x	
Information Services												
		EV/EBITD	EV/EBITDA				P/E			EV/S		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Broadridge Financial Solutions, Inc.	21,114	18.1x	16.0x	14.8x	14.1x	21.9x	20.4x	18.6x	3.6x	3.4x	3.2x	
Dye & Durham Ltd.	2,423	15.3x	15.3x	12.5x	10.7x	0.1x	0.1x	0.1x	5.0x	4.9x	4.3x	
Deluxe Corporation	2,518	6.8x	6.0x	6.4x	6.2x	4.9x	6.6x	5.8x	1.1x	1.2x	1.1x	
Information Services Corp	387	5.7x	6.0x	6.2x		10.0x	10.6x		2.0x	1.9x		
Information Services Average		11.5x	10.8x	10.0x	10.3x	9.3x	9.4x	8.1x	2.9x	2.8x	2.9x	
Financial Services Technology												
		EV/EBITD	EV/EBITDA				P/E			EV/S		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Fidelity National Information Services	62,397	10.2x	10.0x	9.6x	9.0x	11.0x	11.2x	10.0x	4.3x	4.2x	4.0x	
Fiserv, Inc.	94,116	16.9x	13.0x	12.0x	11.0x	17.9x	15.8x	13.9x	5.6x	5.3x	4.9x	
Jack Henry & Associates, Inc.	12,179	17.5x	19.3x	17.9x	16.3x	33.7x	32.3x	29.1x	6.1x	5.7x	5.3x	
ACI Worldwide, Inc.	4,141	11.3x	11.2x	10.5x	9.9x	20.6x	22.3x	19.8x	3.0x	2.9x	2.8x	
Temenos AG	6,180	11.3x	17.1x	16.1x	13.7x	25.6x	23.8x	19.9x	6.5x	6.1x	5.5x	
Global Payments Inc.	40,694	11.1x	10.5x	9.8x	9.0x	12.0x	10.8x	9.4x	5.0x	4.8x	4.5x	
Financial Services Technology Average		13.1x	13.5x	12.7x	11.5x	20.1x	19.4x	17.0x	5.1x	4.8x	4.5x	
Diversified Real Estate Services												
		EV/EBITD	EV/EBITDA				P/E			EV/S		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Colliers International Group Inc.	5,579	10.2x	8.9x	8.3x	7.8x	15.7x	15.5x	14.3x	1.2x	1.2x	1.1x	
CBRE Group, Inc. Class A	28,552	13.4x	10.1x	10.7x	9.4x	15.4x	16.2x	13.8x	0.9x	0.9x	0.8x	
Jones Lang LaSalle Incorporated	10,002	6.8x	7.9x	8.5x	7.5x	11.0x	11.6x	9.7x	0.5x	0.5x	0.4x	
Diversified Real Estate Services Average		13.8x	11.8x	11.5x	8.2x	17.9x	17.8x	12.6x	1.6x	1.5x	0.8x	
Software Focused IT Solutions/VARs												
		EV/EBITD	EV/EBITDA				P/E			EV/S**		
		C21	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Softchoice Corporation* USD	872	35.7x	10.7x	9.4x	8.5x	21.4x	16.3x	15.4x	2.7x	2.5x	2.3x	
Softcat Plc*	2,515	14.9x	15.2x	14.1x	12.9x	20.3x	19.6x	18.5x	6.3x	5.7x	5.1x	
Crayon Group Holding ASA*	10,043	>50	>50	>50	>50	>50	>50	>50	24.3x	20.9x	18.2x	
Bytes Technology Group Plc*	914	18.8x	14.2x	12.4x	10.5x	20.0x	19.2x	15.6x	NA	NA	NA	
SoftwareONE Holding Ltd.*	1,852	11.2x	7.0x	6.3x	5.6x	16.4x	14.6x	12.3x	1.8x	1.6x	1.4x	
Bytes Technology Group Plc* Average		20.2x	11.8x	10.5x	9.4x	19.5x	17.4x	15.5x	8.8x	7.7x	6.7x	
Business Services Average		14.4x	13.4x	12.2x	11.0x	18.0x	16.7x	15.8x	4.0x	3.7x	3.5x	

*Share Price Converted to USD

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

Source: FactSet and CIBC World Markets Inc.

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

	LTM Revenue Growth	LTM FCF Margin	NTM Revenue Growth	NTM FCF Margin	LTM Rule Of 40	NTM Rule Of 40	Enterprise Value (\$MM)	EV/S		EV/S	
								C21	C22	C23E	C24E
Tier 1 SaaS (Rule of 40 > 60)											
Zoom Video Communications	11%	28%	4%	27%	39%	31%	17,872	6.7x	4.1x	3.9x	3.7x
CrowdStrike Holdings, Inc.	58%	30%	36%	29%	88%	65%	25,612	29.3x	11.8x	8.8x	6.8x
Shopify, Inc.	25%	-4%	20%	-9%	21%	10%	47,308	10.3x	8.6x	7.1x	5.7x
Zscaler, Inc.	60%	23%	34%	22%	82%	56%	19,162	28.5x	15.0x	11.2x	8.7x
Lightspeed Commerce Inc*	72%	-18%	24%	-4%	53%	20%	1,806	8.1x	2.6x	2.1x	1.6x
DocuSign, Inc.	25%	18%	8%	18%	42%	26%	13,139	9.0x	5.3x	4.9x	4.5x
Veeva Systems Inc	18%	38%	12%	36%	56%	48%	25,122	17.1x	11.9x	10.5x	9.1x
Atlassian Corp. Plc	34%	26%	22%	21%	59%	43%	45,060	21.6x	14.3x	11.6x	9.2x
Twilio, Inc.	43%	-7%	17%	-3%	36%	14%	7,440	2.6x	2.0x	1.7x	1.4x
ServiceNow, Inc.	23%	30%	22%	30%	53%	53%	92,135	15.6x	12.7x	10.4x	8.5x
HubSpot, Inc.	38%	16%	19%	12%	53%	31%	17,108	13.2x	10.0x	8.3x	6.8x
Tier 1 SaaS (Rule of 40 > 60) Average								14.7x	8.9x	7.3x	6.0x
Tier 2 SaaS (Rule of 40 b/w 40-60)											
Docebo, Inc.*	46%	0%	29%	-4%	46%	25%	1,080	10.4x	7.5x	5.6x	4.3x
Qualys, Inc.	18%	38%	17%	35%	56%	52%	4,315	10.5x	8.8x	7.6x	6.7x
Descartes Systems	17%	37%	9%	38%	54%	47%	6,173	14.5x	12.7x	11.5x	10.5x
Five9, Inc.	32%	1%	16%	7%	33%	22%	6,218	10.2x	8.0x	6.9x	5.8x
Dropbox, Inc.	9%	34%	5%	34%	43%	39%	9,273	4.3x	4.0x	3.8x	3.6x
Wix.com Ltd.	12%	-1%	8%	8%	10%	17%	4,905	3.9x	3.5x	3.3x	2.9x
Workday, Inc.	21%	21%	17%	21%	42%	38%	46,956	10.9x	7.7x	6.6x	5.6x
VMware, Inc.	4%	25%	5%	30%	30%	35%	60,583	5.1x	4.6x	4.3x	4.0x
Tier 2 SaaS (Rule of 40 b/w 40-60) Average								8.7x	7.1x	6.2x	5.4x
Tier 3 SaaS (Rule of 40 b/w 28-40)											
BlackLine, Inc.	23%	9%	18%	4%	32%	22%	4,376	10.3x	8.4x	7.2x	6.1x
MongoDB, Inc.	53%	-1%	26%	3%	51%	29%	14,836	25.1x	12.1x	9.5x	7.5x
LivePerson, Inc.	15%	-30%	3%	-4%	-15%	-1%	1,246	2.7x	2.4x	2.3x	2.1x
Rapid7 Inc.	31%	4%	17%	10%	35%	27%	3,672	6.9x	5.4x	4.7x	4.1x
Paylocity Holding Corp.	36%	17%	28%	16%	53%	44%	12,481	19.6x	12.4x	9.7x	8.0x
Q2 Holdings, Inc.	16%	3%	13%	1%	19%	14%	2,112	4.2x	3.7x	3.3x	2.8x
Akamai Technologies, Inc.	6%	24%	2%	22%	30%	25%	15,340	4.4x	4.3x	4.1x	3.8x
Tier 3 SaaS (Rule of 40 b/w 28-40) Average								10.5x	6.9x	5.8x	4.9x
Tier 4 SaaS (Rule of 40 <28)											
RingCentral, Inc.	29%	7%	17%	10%	36%	27%	5,420	3.4x	2.7x	2.3x	2.0x
Teradata Corporation	-6%	20%	-1%	23%	14%	22%	3,552	1.9x	2.0x	2.0x	1.9x
Zuora, Inc.	14%	3%	9%	0%	17%	9%	1,011	3.3x	2.6x	2.4x	2.0x
New Relic, Inc.	19%	3%	15%	2%	22%	17%	4,958	7.4x	5.6x	4.8x	4.2x
Kinaxis, Inc.*	44%	3%	19%	10%	46%	29%	3,232	12.9x	8.7x	7.9x	6.6x
Yext, Inc.	5%	4%	3%	-1%	8%	2%	797	2.2x	2.0x	1.9x	1.8x
Splunk Inc.	31%	9%	17%	18%	40%	35%	18,989	8.5x	5.6x	4.8x	4.1x
Tier 4 SaaS (Rule of 40 <28) Average								5.7x	4.2x	3.7x	3.2x
SaaS Average								10.4x	7.1x	6.0x	5.0x

*Share Price Converted to USD

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

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