

EQUITY RESEARCH

August 11, 2022

Industry Update

On High Alert – Bits & Bytes Weekly

IBM Report Highlights Security Market Growth

Our Conclusion

IBM and the Ponemon Institute released their [annual report](#) on the cost of a data breach, and how organizations are being impacted by malicious actors gaining access to their data. The average total cost of a data breach continues to rise, hitting \$4.35 million in 2022, up 3% from 2021 levels. The cost of a data breach varies widely by the country it happens in, with a breach in the United States costing organizations \$9.4 million vs. a breach in Australia costing organizations \$2.9 million. The report makes it clear that given the prevalence of the threat, focusing on prevention of a breach is not a viable strategy. The report notes that 83% of organizations that have experienced a data breach have had more than one. Organizations need a clear plan to identify and investigate potential breaches, mitigate damage once a breach has occurred and clearly communicate with key stakeholders in the event of a breach. The rise in the cost and prevalence of data breaches is unlikely to reverse course, and we see the situation as an opportunity for companies that provide security solutions, forensic services, and managed security offerings.

Key Points

Detection & Escalation Costs Rising: For the first time in the last six years lost business resulting from a breach was not the most costly cybersecurity expense, with detection and escalation costs taking the top spot at 33% of total cost. Detection and escalation costs include forensic and investigative activities, assessment and audit services, and crisis management and communication costs. As the prevalence of breaches rises and detection and escalation costs rise alongside, companies with forensic services such as Open Text and Magnet Forensics should continue to benefit from demand tailwinds.

Ransomware Update: For the second consecutive year, the report dug into ransomware attacks and found that they are an increasing risk to organizations. Ransomware attacks made up 11% of breaches in the 2022 study, up from 7% in the prior year. These attacks are also more expensive than the average data breach, at an average cost of \$4.54 million (excluding the cost of the ransom) vs. the overall average of \$4.35 million. Interestingly, companies that chose not to pay ransoms had an average breach cost that was 14% higher than those who did, although the study did not include the cost of the ransom in those calculations.

Skills Gap An Issue: IT Security staffing remains a major risk factor for organizations, as 62% of organizations noted that their security teams were understaffed from a security management perspective. The cost of a breach for organizations with fully staffed teams was over 12% lower than those with understaffed teams. The shortage of security talent is a positive tailwind for companies that provide managed security services, such as CGI, Converge, and Softchoice.

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Sector:
Information Technology

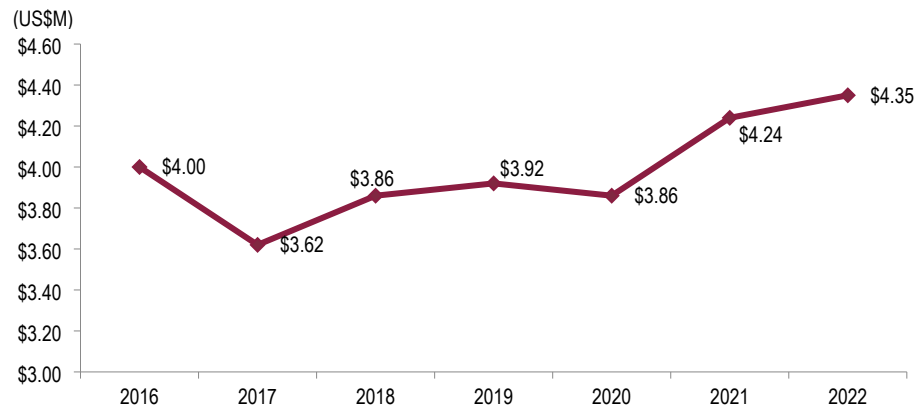
All figures in Canadian dollars unless otherwise stated.

For required regulatory disclosures please refer to "Important Disclosures" beginning on page 12.

Highlights From The Report

The global average total cost of a data breach increased by 2.6% Y/Y to US\$4.35 million in 2022. The data comprised information gathered from 17 countries across 17 industries. Of all the breaches studied, 11% were ransomware attacks, up from 7.8% observed in 2021.

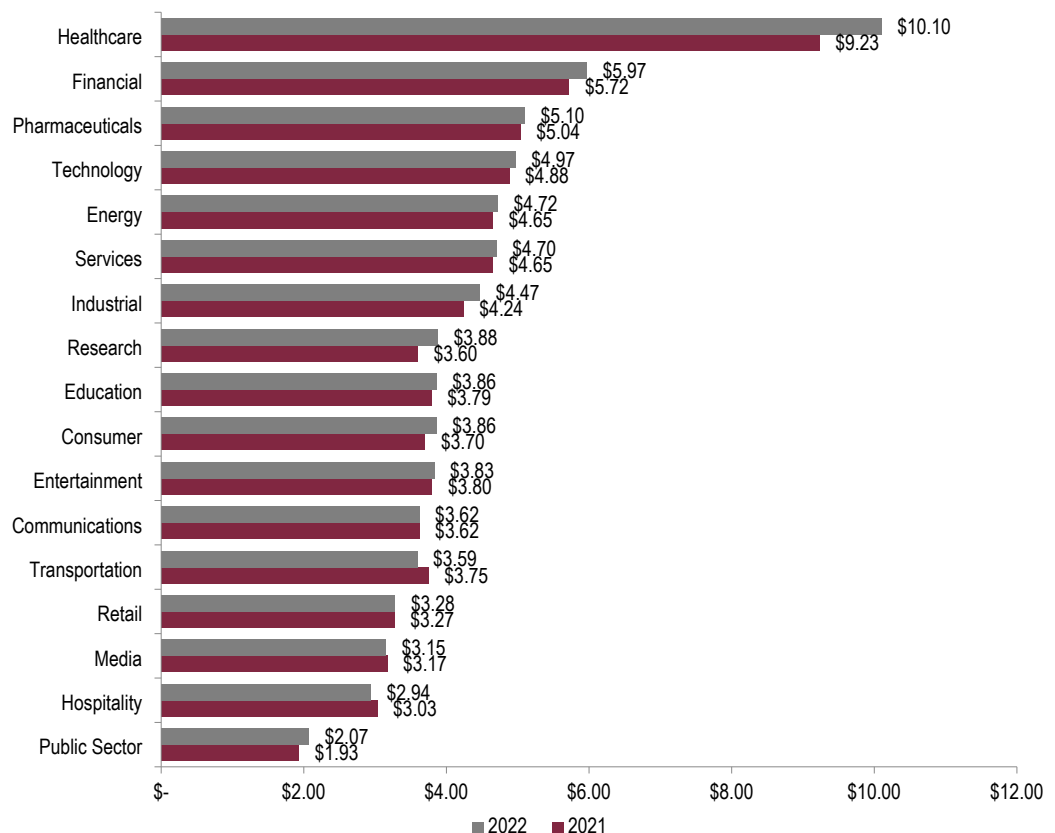
Exhibit 1: IBM Security Report – Average Total Cost Of A Data Breach – 2016 – 2022



Source: IBM. Ponemon Institute and CIBC World Markets Inc.

Healthcare remains the industry where a data breach is the most costly for 12th year in a row, with the average cost rising 9.4% Y/Y to US\$10.1 million (see Exhibit 2 bar chart). Healthcare data breaches are nearly twice as expensive as data breaches in every other sector, underscoring the importance of data security for healthcare organizations.

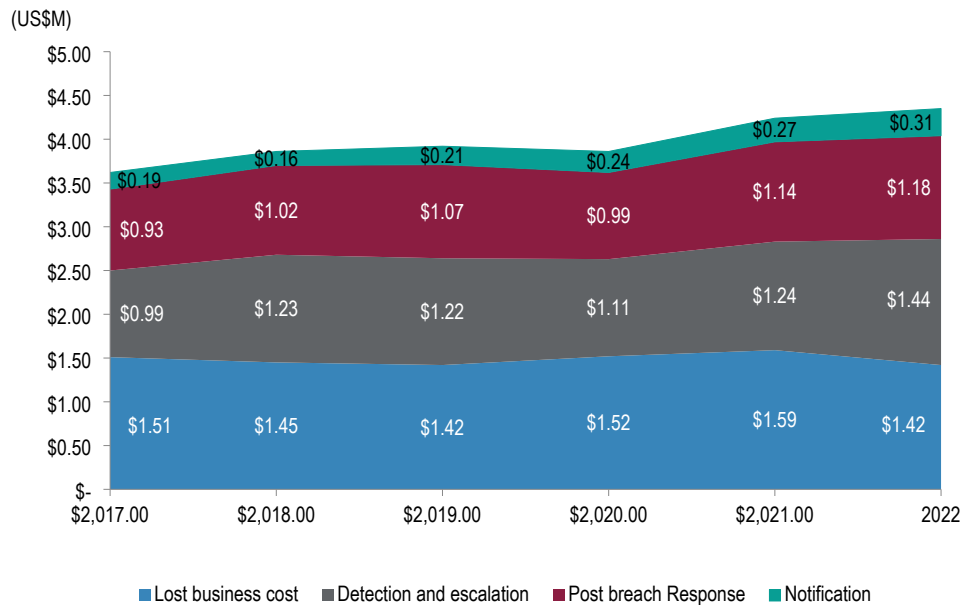
Exhibit 2: IBM Security Report – Average Data Breach Cost By Industry – 2021 Vs. 2022



Source: IBM. Ponemon Institute and CIBC World Markets Inc.

Detection and escalation costs were the largest cost component of data breaches in 2022, surpassing lost business for the first time in six years. Detection and escalation costs include forensic and investigative activities, audit services, and crisis management and are displayed in the area chart in Exhibit 3 below.

Exhibit 3: IBM Security Report – Average Data Breach Cost By Four Segments – 2017-2022



Source: IBM, Ponemon Institute and CIBC World Markets Inc.

News Impacting Our Coverage

Research Highlights – TIXT - Strong Execution In An Unsettled Environment

TELUS International (TI) continues to execute despite macro headwinds, with 21% constant currency revenue growth in Q2 and reiterated guidance that implies 20%-22% constant currency growth in 2022. TI is navigating an uncertain environment well, adding a record number of new hires to accommodate accelerating client demand. While recessionary concerns persist, TI's diversified customer base and client value proposition have offset past headwinds and we see the company as being well positioned to help customers reduce costs in the current environment. We view TI as undervalued at these levels, trading at 11.5x EV/EBITDA versus a blended average of digital services, BPO and IT Services peers at 13.5x. [\(Link\)](#)

Research Highlights – OTEX - FQ4 A Slight Beat; F23 Outlook Highlights Cloud Growth

Open Text reported FQ4 results that were a slight (2%) beat against consensus, with adjusted EBITDA margins 70 bps ahead of consensus. The company is focusing on cloud growth, with its F23 outlook including constant currency enterprise cloud bookings growth of 15% and an incremental \$75MM in cloud investments. With the investments, the F23 margin outlook is ~100 bps below Street expectations. While a short-term margin drag, we continue to see upside from cloud offerings with Open Text well positioned to migrate on-premise customers and capitalize on demand for supply chain solutions within its business network. With recent acquisitions, we see the opportunity to gain share in SMB and see upside from the Microsoft channel arrangement. [\(Link\)](#)

Research Highlights – MAGT - Solid Results As Clients Prioritize Cybersecurity

Magnet Forensics posted strong Q2 results, beating consensus expectations on both the top and bottom line and delivering 41% Y/Y revenue growth. Magnet continues to benefit from strong secular tailwinds as cybersecurity increasingly becomes a C-suite focus and public safety organizations continue to spend on digital evidence tools. We see Magnet as well positioned to outperform despite an uncertain macro-economic environment, with results this quarter demonstrating the resiliency of the business. [\(Link\)](#)

Research Highlights – CTS - SMB Demand Robust Despite Macro Headwind

Converge reported in-line Q2 results. The company continues to see supply chain disruptions in networking equipment, although expects the backlog could ease in Q3. While we regard the SMB customer base as a potential concern in a tougher macro environment, management noted a solid demand backdrop, with IT talent shortages driving demand among the SME client base. With M&A nearing management's annual target, we expect focus for the balance of the year to turn to integration and cross-selling. [\(Link\)](#)

Research Highlights – KXS - Executing Amid An Uncertain Environment

Kinaxis reported a Q2 that highlighted a solid demand environment, despite macro and FX headwinds. The company is benefitting from its move to the mid-market, with management noting a record pipeline and an increase in unsolicited leads. While the slight Q2 revenue beat was driven by nonrecurring professional services revenue, we view the implementation work as a leading indicator and supportive of the outlook for 25%-27% constant currency SaaS revenue growth. [\(Link\)](#)

Research Highlights – DCBO - Q2/F22 First Look: Profitability Ahead Of Expectations, FCF Positive

Docebo's Q2 revenue was slightly below consensus (-1%), while EBITDA was well above expectations and the company was FCF positive. The results highlight Docebo's ability to scale to profitability. Despite macro pressures, ARR growth was solid at 48% Y/Y. The company added 621 net customer in the quarter, including a contract to replace Chipotle's LMS system. Average contract value was up 18% Y/Y to \$44.5k as the company continues to expand ARR within its existing customer base. Docebo continues to scale its relationship with AWS, launching two new offerings. [\(Link\)](#)

Research Highlights – CARE - Q2/F22 First Look: Gross Margin Progression

Dialogue reported somewhat mixed Q2 results, with revenue 2% below consensus, but gross profit margins 520 bps above the Street. Annual Recurring Revenue (ARR) of \$97.1 million was up 8% Q/Q, driven by customer wins, the Tictac acquisition, and execution on the land-and-expand strategy. While profitability has improved this quarter, ARR growth was slower than anticipated as Tictac appears to have added less ARR than we were expecting. [\(Link\)](#)

Research Highlights – WELL - Q2/F22 First Look: Solid Headline Beat And a 5% Lift To The Full Year Revenue Outlook

WELL reported a strong Q2/F22, with revenue 8% above consensus and Adjusted EBITDA 14% above consensus. The strong results were driven in part by organic growth improving to over 20%, the highest organic growth results in the preceding four quarters. The company updated its 2022 outlook, with revenue now expected to exceed \$550MM (previously expected to exceed \$525MM) with Adjusted EBITDA of ~\$100 million unchanged from the prior guide. [\(Link\)](#)

Converge Places 29th On The 2022 CRN Fast Growth 150 List

Converge was ranked 29th on the 2022 Fast Growth 150 list, published annually by CRN. The CRN Fast Growth recognizes the fastest growing IT solution providers in North America. This is the third year where Converge was ranked on the list.

WELL's Wisp Announces Launch Of Telemedicine Abortion Care

Telehealth provider Wisp introduced its first medical abortion service in California. The service will roll out in New York, Illinois and Colorado later this quarter. The new medical abortion offering's pricing is 30% below the national average cost of medical abortion and does not require insurance.

Q4 Inc. Announces Appointment Of Chief Financial Officer

Q4 Inc. announces the appointment of Donna de Winter as CFO effective August 8, 2022. Ms. de Winter has been serving as interim CFO since end of May this year, in addition to her role as COO. Ms. de Winter has been the COO at Q4 since January 2019. Prior to joining Q4, Ms. de Winter served as CFO of Vision Critical and Varicent.

Converge Announces Approval Of Normal Course Issuer Bid

Converge announced that TSX has approved company's intention to make a NCIB for repurchases up to 5% of outstanding shares as at July 31, 2022. Converge also entered into an automatic share purchase plan agreement.

Docebo Announces Appointment Of Ryan Brock As Chief Marketing Officer

Docebo announced the appointment of Ryan Brock as its CMO. Mr. Brock has more than 20 years of experience developing and implementing growth strategies for SaaS companies. He will focus on scaling for global expansion, and increasing Docebo brand awareness. Mr. Brock was with Dataminr and ADP prior to joining Docebo.

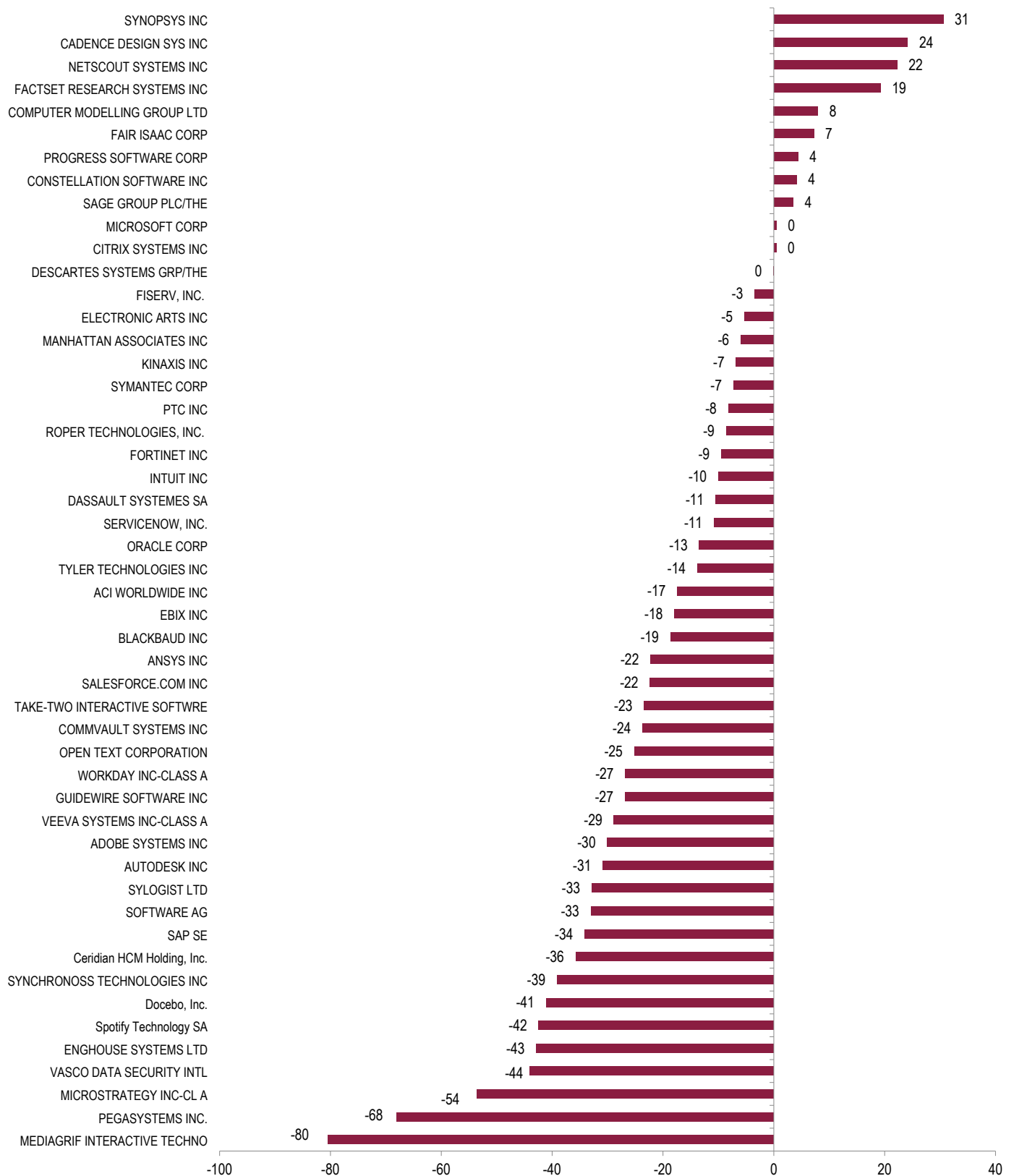
Exhibit 4: CIBC Software/Services – Coverage Performance, 8/11/2021 - 8/11/2022

Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,116.95	(2.4)	8.1	9.4	(0.6)	4.1	(9.8)	2385.80	1793.93
Descartes Systems	70.88	1.6	11.0	23.8	(1.0)	(1.8)	(14.3)	91.39	56.19
Enghouse Systems Limited	33.12	0.6	10.8	4.1	(20.2)	(42.9)	(31.6)	64.42	23.96
Open Text Corp	39.37	(4.3)	1.1	9.5	(11.0)	(25.2)	(17.1)	55.25	35.04
Kinaxis	167.42	6.4	19.4	28.6	5.0	(6.8)	(5.6)	229.98	119.48
Docebo, Inc.	48.40	3.7	32.2	8.9	(30.5)	(41.1)	(43.0)	117.55	32.35
Magnet Forensics	23.49	5.9	23.8	24.1	(13.9)	(48.1)	(28.5)	65.80	14.89
Q4 Inc.	4.50	(2.4)	1.6	2.0	(11.8)	NA	(47.1)	12.05	4.01
Average		1.2	13.5	13.8	(10.5)	(23.1)	(24.6)		

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
CGI Group Inc	109.13	(2.6)	4.6	7.9	2.0	(2.1)	(2.4)	116.88	95.45
Converge Technologies	7.09	16.0	31.8	5.7	(34.2)	(37.3)	(34.8)	13.09	4.85
Softchoice Corporation	24.31	(2.2)	3.2	11.5	6.9	(28.5)	13.8	45.74	17.91
Telus International	39.51	9.1	12.9	41.5	18.2	2.2	(5.5)	49.43	26.75
Average		5.1	13.1	16.6	(1.8)	(16.4)	(7.2)		

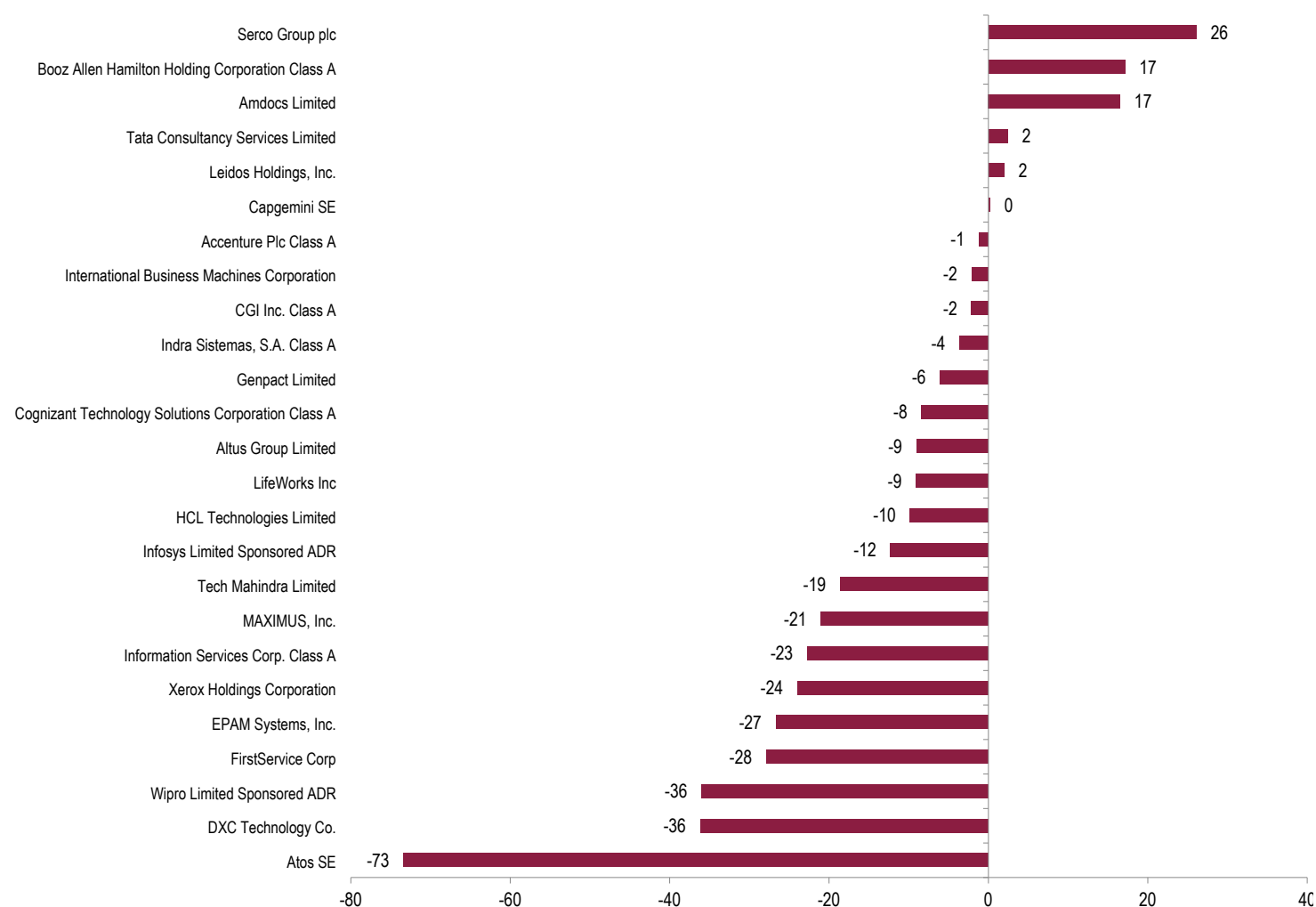
Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	19,992.44	2.1	6.2	0.8	(7.2)	(2.7)	(5.8)
S&P 500 Index	4,225.05	1.8	9.6	7.4	(4.4)	(5.0)	(11.4)
S&P/TSX Software Index	147.06	(0.9)	12.4	16.4	(17.1)	(34.3)	(30.7)
S&P500 Software Index	4,914.00	1.4	9.9	13.6	(3.3)	(6.2)	(16.0)

Source: FactSet and CIBC World Markets Inc.

Exhibit 5: Software Stocks – Return Performance (%), 8/11/2021 - 8/11/2022

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

Exhibit 6: Business Services Stocks – Return Performance (%), 8/11/2021 - 8/11/2022



Source: FactSet and CIBC World Markets Inc.

Exhibit 7: Software Stocks – Comp Table, 2021 - 2023E

	Enterprise Value (\$mlns.)	EV/S			EV/EBITDA			P/E		
		C21	C22E	C23E	C21	C22E	C23E	C21	C22E	C23E
Enterprise Application Software										
Constellation Software Inc.*	36,578	7.2x	5.6x	4.9x	24.2x	21.5x	18.4x	>50	29.9x	27.0x
BlackBerry Limited*	3,807	4.3x	5.5x	4.0x	>50	NEG	NEG	NEG	NEG	NEG
Sage Group plc	7,827	4.2x	4.0x	3.7x	18.9x	16.7x	15.3x	28.4x	27.2x	24.3x
Tyler Technologies, Inc.	18,092	11.4x	9.7x	8.9x	>50	38.1x	35.0x	>50	>50	>50
Roper Technologies, Inc.	54,313	9.4x	10.4x	9.8x	24.5x	25.4x	23.7x	42.6x	32.4x	29.8x
Enghouse Systems Limited	1,633	3.6x	3.8x	3.76x	10.0x	11.3x	10.9x	19.8x	23.9x	23.1x
Oracle Corporation	264,302	6.5x	5.7x	5.2x	14.1x	11.5x	10.7x	17.1x	15.2x	13.8x
SAP SE	117,497	4.2x	3.8x	3.6x	16.4x	13.7x	12.3x	20.8x	19.1x	16.8x
Enterprise Application Software Average		6.3x	6.1x	5.5x	18.0x	19.7x	18.0x	25.7x	24.6x	22.5x
Extended ERP										
Adobe Incorporated	203,861	12.9x	11.4x	10.0x	30.5x	23.3x	20.4x	43.7x	31.9x	27.1x
Open Text Corporation	13,428	3.9x	3.7x	3.6x	10.5x	10.7x	10.0x	12.4x	12.5x	11.6x
Manhattan Associates, Inc.	9,059	13.7x	12.3x	11.1x	>50	46.5x	40.3x	>50	>50	>50
Pegasystems Inc.	3,631	3.0x	2.8x	2.5x	NEG	>50	26.8x	NEG	>50	42.8x
Software AG	1,758	2.1x	1.9x	1.7x	11.4x	8.9x	7.7x	24.5x	17.9x	14.9x
Fiserv, Inc.	90,182	5.6x	5.4x	5.0x	16.2x	12.6x	11.5x	>50	16.6x	14.6x
Extended ERP Average		6.9x	6.2x	5.6x	17.2x	20.4x	19.5x	26.9x	19.7x	22.2x
Software As A Service										
Descartes Systems Group Inc.	5,808	13.7x	12.1x	11.4x	31.4x	27.8x	25.1x	>50	>50	>50
Kinaxis, Inc.*	3,425	13.7x	9.5x	8.4x	>50	>50	46.9x	>50	>50	>50
Docebo, Inc.*	1,036	9.9x	7.1x	5.3x	NEG	NEG	>50	NEG	NEG	NEG
Lightspeed Commerce Inc*	2,723	5.8x	3.9x	2.9x	NEG	NEG	NEG	NEG	NEG	NEG
Veeva Systems Inc Class A	32,830	22.4x	15.3x	13.1x	>50	38.6x	33.0x	>50	>50	47.9x
Shopify, Inc. Class A	47,764	10.4x	8.7x	7.0x	>50	NEG	>50	18.4x	NEG	NEG
Q4 Inc*	86	1.5x	1.5x	1.3x	NEG	NEG	NEG	NEG	NEG	NEG
Magnet Forensics, Inc.*	642	9.1x	6.8x	5.3x	34.4x	41.8x	23.5x	>50	>50	>50
Ceridian HCM Holding, Inc.	11,144	10.9x	9.1x	7.8x	>50	>50	41.3x	NEG	>50	>50
ServiceNow, Inc.	101,671	17.2x	13.9x	11.2x	>50	44.3x	35.5x	>50	>50	>50
Workday, Inc. Class A	41,477	9.6x	6.8x	5.7x	>50	27.0x	21.9x	NEG	48.7x	39.2x
Software As A Service Average		11.3x	8.6x	7.2x	32.9x	35.9x	32.4x	18.4x	48.7x	43.6x
Infrastructure Vendors										
Citrix Systems, Inc.	16,053	5.0x	4.9x	4.8x	22.8x	13.1x	13.0x	42.2x	>50	32.2x
Microsoft Corporation	2,123,976	12.6x	10.1x	9.0x	26.3x	20.4x	18.0x	35.8x	29.8x	26.1x
Infrastructure Vendors Average		8.8x	7.5x	6.9x	24.6x	16.7x	15.5x	39.0x	29.8x	29.2x
Software Average										
		8.7x	7.2x	6.3x	20.8x	23.8x	22.8x	27.8x	25.4x	26.1x

*Share Price Converted to USD

Source: FactSet and CIBC World Markets Inc.

Exhibit 8: Business Services Stocks – Comp Table, 2021 - 2023E

	Enterprise Value (\$mlns.)	EV/EBITDA			P/E			EV/S		
		C21	C22E	C23E	C21	C22E	C23E	C21	C22E	C23E
Business & IT Services										
CGI Inc. Class A	29,210	11.8x	11.3x	10.8x	19.5x	17.6x	16.6x	2.4x	2.2x	2.2x
TELUS International (CDA), Inc.	9,159	17.0x	14.7x	12.5x	30.6x	25.7x	20.4x	4.2x	3.5x	3.1x
Accenture Plc Class A	195,194	20.3x	16.5x	15.3x	34.5x	28.3x	25.3x	3.9x	3.1x	2.8x
Booz Allen Hamilton	15,072	16.9x	15.6x	14.7x	21.9x	22.1x	20.2x	1.9x	1.7x	1.6x
CACI International Inc Class A	8,310	11.2x	12.3x	11.4x	14.9x	14.6x	13.4x	1.4x	1.3x	1.2x
DXC Technology Co.	9,552	4.7x	3.9x	3.8x	NEG	7.4x	6.0x	0.5x	0.6x	0.7x
Genpact Limited	10,017	15.5x	12.8x	11.3x	25.2x	17.7x	15.8x	2.5x	2.3x	2.1x
International Business Machines	167,598	12.5x	10.7x	10.2x	20.9x	14.3x	13.2x	2.9x	2.8x	2.7x
Atos SE	3,085	2.9x	3.1x	2.8x	NEG	9.1x	5.6x	0.3x	0.3x	0.3x
Capgemini SE	38,090	13.2x	10.9x	10.0x	28.5x	18.0x	16.1x	2.1x	1.8x	1.7x
Sopra Steria Group SA	4,505	8.5x	7.3x	6.7x	17.3x	11.6x	10.4x	1.0x	0.9x	0.9x
Converge Technology Solutions Corp	1,527	16.2x	10.2x	8.2x	>50	43.1x	23.6x	1.0x	0.6x	0.5x
Business & IT Services Average		12.2x	10.8x	10.0x	23.7x	17.0x	14.8x	2.1x	1.9x	1.7x
HR Outsourcing										
		EV/EBITDA			P/E			EV/S		
Ceridian HCM Holding, Inc.	11,144	>50	>50	41.3x	NEG	>50	>50	10.9x	9.1x	7.8x
Willis Towers Watson	24,508	11.0x	10.4x	9.6x	6.6x	15.9x	14.0x	2.7x	2.7x	2.6x
Aon Plc Class A	72,344	18.9x	18.0x	16.8x	>50	22.6x	20.4x	5.9x	5.7x	5.4x
Automatic Data Processing, Inc.	106,203	27.7x	23.4x	21.1x	41.3x	33.3x	29.6x	7.1x	6.2x	5.8x
Paychex, Inc.	47,712	28.9x	22.2x	20.8x	44.1x	33.6x	31.1x	11.8x	9.9x	9.3x
HR Outsourcing Average		21.6x	18.5x	21.9x	30.6x	26.3x	23.8x	7.7x	6.7x	6.2x
Information Services										
		EV/EBITDA			P/E			EV/S		
Broadridge Financial Solutions, Inc.	23,893	20.5x	18.2x	17.2x	36.7x	25.5x	23.6x	4.7x	4.1x	4.0x
Dye & Durham Ltd.	2,351	14.8x	14.8x	10.4x	>50	>50	31.6x	6.3x	4.1x	3.5x
Deluxe Corporation	2,450	6.6x	5.9x	5.7x	15.9x	5.7x	5.4x	1.2x	1.1x	1.1x
Information Services Corp	421	6.2x	6.5x	6.4x	11.4x	11.3x	11.9x	2.5x	2.2x	2.1x
Information Services Average		12.1x	11.3x	9.9x	21.3x	14.1x	18.1x	3.7x	2.9x	2.7x
Financial Services Technology										
		EV/EBITDA			P/E			EV/S		
Fidelity National Information Services	80,522	13.2x	12.3x	11.3x	>50	14.3x	12.8x	5.8x	5.5x	5.1x
Fiserv, Inc.	90,182	16.2x	12.6x	11.5x	>50	16.6x	14.6x	5.6x	5.4x	5.0x
Jack Henry & Associates, Inc.	15,284	21.9x	24.2x	22.1x	>50	41.2x	37.5x	8.7x	7.6x	7.1x
ACI Worldwide, Inc.	4,037	11.0x	10.0x	9.2x	24.5x	19.5x	16.5x	2.9x	2.8x	2.7x
Temenos AG	7,105	13.0x	15.1x	13.6x	35.1x	20.9x	18.7x	7.3x	6.9x	6.3x
Global Payments Inc.	48,034	13.2x	12.2x	11.1x	40.5x	14.1x	12.2x	5.6x	5.9x	5.5x
Financial Services Technology Average		14.7x	14.4x	13.1x	33.4x	21.1x	18.7x	6.0x	5.7x	5.3x
Diversified Real Estate Services										
		EV/EBITDA			P/E			EV/S		
Colliers International Group Inc.	6,412	11.7x	9.8x	8.6x	-13.9x	16.6x	15.1x	1.6x	1.4x	1.3x
Altus Group Limited	2,575	24.9x	24.3x	20.4x	36.8x	36.8x	38.8x	4.1x	4.1x	3.6x
CBRE Group, Inc. Class A	29,782	13.9x	9.6x	9.1x	15.9x	13.9x	13.4x	1.1x	0.9x	0.9x
Jones Lang LaSalle Incorporated	10,590	7.3x	7.2x	6.9x	9.9x	9.3x	8.7x	0.5x	0.5x	0.5x
Diversified Real Estate Services Average		14.4x	12.7x	11.3x	12.1x	19.1x	19.0x	1.8x	1.7x	1.6x
Software Focused IT Solutions/VARs										
		EV/EBITDA			P/E			EV/S*		
Softchoice Corporation* USD	1,215	49.7x	12.8x	10.8x	NEG	21.9x	17.7x	4.6x	3.8x	3.4x
Softcat Plc*	2,765	16.4x	16.2x	15.4x	21.9x	22.0x	21.7x	7.4x	6.9x	6.2x
Crayon Group Holding ASA*	14,489	>50	>50	>50	>50	>50	>50	>50	32.9x	27.8x
Bytes Technology Group Plc*	1,006	20.7x	16.2x	14.8x	40.9x	22.2x	21.4x	NA	NA	NA
SoftwareONE Holding Ltd.*	1,653	10.0x	6.6x	5.7x	16.2x	16.2x	13.5x	7.9x	1.6x	1.4x
Bytes Technology Group Plc* Average		24.2x	13.0x	11.7x	26.3x	20.6x	18.6x	6.6x	11.3x	9.7x
Business Services Average										
		15.5x	13.0x	12.6x	23.9x	19.4x	18.0x	4.2x	4.5x	4.0x

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

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

Exhibit 9: SaaS Stocks – Comp Table, 2021 - 2023E

	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		
								C21	C22E	C23E
Tier 1 SaaS (Rule of 40 > 60)										
Zoom Video Communications	29%	36%	11%	30%	65%	40%	28,098	10.6x	6.2x	6.2x
CrowdStrike Holdings, Inc.	64%	30%	46%	29%	94%	75%	45,380	51.9x	21.2x	21.2x
Shopify, Inc.	30%	1%	21%	-8%	31%	13%	44,914	9.7x	8.2x	8.2x
Zscaler, Inc.	61%	22%	41%	21%	83%	62%	25,056	37.2x	20.2x	20.2x
Lightspeed POS, Inc.	137%	-17%	37%	-8%	120%	28%	2,708	12.2x	3.9x	3.9x
DocuSign, Inc.	37%	24%	14%	16%	61%	30%	15,153	10.4x	6.2x	6.2x
Veeva Systems Inc	23%	38%	18%	38%	61%	55%	32,997	22.5x	15.4x	15.4x
Atlassian Corp. Plc	33%	29%	26%	23%	62%	49%	72,927	34.9x	22.8x	22.8x
Twilio, Inc.	57%	-4%	31%	-1%	53%	30%	11,594	4.1x	3.0x	3.0x
ServiceNow, Inc.	28%	31%	23%	30%	58%	53%	103,178	17.5x	14.1x	14.1x
HubSpot, Inc.	47%	17%	28%	13%	64%	41%	18,960	14.6x	11.2x	11.2x
Tier 1 SaaS (Rule of 40 > 60) Average								20.5x	12.0x	12.0x
	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		
								C21E	C22E	C22E
Tier 2 SaaS (Rule of 40 b/w 40-60)										
Docebo, Inc.	54%	-3%	40%	-4%	50%	36%	969	9.3x	6.7x	5.0x
Qualys, Inc.	15%	46%	18%	31%	61%	49%	5,392	13.1x	11.0x	11.0x
Descartes Systems	22%	39%	10%	36%	61%	46%	5,882	13.9x	12.3x	11.5x
Avalara Inc	38%	6%	22%	2%	44%	24%	7,534	10.8x	8.7x	8.7x
Five9, Inc.	34%	-4%	23%	7%	30%	30%	8,629	14.2x	11.0x	11.0x
Dropbox, Inc.	12%	34%	7%	34%	47%	41%	9,924	4.6x	4.3x	4.3x
Wix.com Ltd.	22%	1%	11%	1%	23%	13%	4,113	3.2x	3.0x	3.0x
Workday, Inc.	21%	26%	20%	18%	47%	38%	41,970	9.8x	6.9x	6.9x
VMware, Inc.	8%	28%	7%	26%	36%	33%	60,701	5.2x	4.5x	4.5x
Tier 2 SaaS (Rule of 40 b/w 40-60) Average								9.3x	7.6x	7.3x
	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		
								C21E	C22E	C22E
Tier 3 SaaS (Rule of 40 b/w 28-40)										
BlackLine, Inc.	21%	11%	24%	6%	32%	30%	4,101	9.6x	7.8x	7.8x
Zendesk, Inc.	30%	12%	23%	13%	42%	36%	9,618	7.2x	5.7x	5.7x
MongoDB, Inc.	52%	1%	31%	2%	53%	32%	25,316	42.9x	21.6x	21.6x
LivePerson, Inc.	24%	-18%	17%	-4%	6%	13%	1,078	2.3x	2.1x	2.1x
Rapid7 Inc.	32%	6%	26%	9%	38%	35%	4,628	8.6x	6.7x	6.7x
Paylocity Holding Corp.	32%	16%	24%	14%	48%	39%	14,881	23.4x	15.3x	15.3x
Q2 Holdings, Inc.	21%	3%	17%	2%	24%	19%	2,839	5.7x	4.9x	4.9x
Akamai Technologies, Inc.	7%	25%	6%	23%	32%	29%	17,168	5.0x	4.8x	4.8x
Tier 3 SaaS (Rule of 40 b/w 28-40) Average								13.1x	8.6x	8.6x
	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		
								C21E	C22E	C22E
Tier 4 SaaS (Rule of 40 <28)										
RingCentral, Inc.	33%	9%	21%	8%	42%	30%	6,199	3.9x	3.1x	3.1x
Teradata Corporation	2%	25%	-7%	21%	26%	14%	3,716	1.9x	2.1x	2.1x
Zuora, Inc.	15%	5%	16%	0%	21%	16%	1,116	3.7x	2.8x	2.8x
New Relic, Inc.	18%	-1%	17%	1%	17%	18%	4,347	6.5x	4.9x	4.9x
Kinaxis, Inc.	21%	5%	19%	9%	26%	28%	3,472	13.8x	9.6x	8.5x
Yext, Inc.	10%	1%	2%	-1%	11%	1%	496	1.4x	1.2x	1.2x
Splunk Inc.	24%	7%	23%	13%	30%	36%	20,196	9.1x	6.2x	6.2x
Tier 4 SaaS (Rule of 40 <28) Average								5.8x	4.3x	4.1x
SaaS Average								13.0x	8.6x	8.5x

Source: FactSet and CIBC World Markets Inc.

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