

EQUITY RESEARCH

December 8, 2022

Industry Update

SaaS Focused – Bits & Bytes Weekly

Efficient Growth Is The Name Of The Game

Our Conclusion

SaaS names we track have had a difficult 2022, down 40% YTD. Unprofitable SaaS names have fared even worse, down 54% YTD as interest rates rose, wage inflation made hiring more costly and macro-economic uncertainty increased. Amid this backdrop, many unprofitable firms pivoted from “growth at all costs” to “efficient growth”, with tech layoffs reaching near-term highs through November. As investors assess efficient growth, they are turning towards a relic of the pandemic era: Rule of 40 (revenue growth + free cash flow margin), which allows investors to gauge the profitability of a company’s growth. Within our coverage, Magnet and Docebo are two companies that score well on Rule-of-40 metrics.

Key Points

In November 2021, software valuations were highly correlated to growth, with 57% of a company’s valuation explained by ARR growth and profitability metrics largely uncorrelated with public SaaS company valuations, according to Openview’s SaaS Benchmark report. By contrast, in June 2022, growth rates alone explained only 27% of valuation differences, while Rule of 40 explained 39%, as investors focused on the profitability side of the equation. We expect this trend to continue into 2023 and see Rule of 40 metrics becoming more relevant as the focus on profitable growth continues.

Other SaaS metrics that have seen a renewed focus are customer acquisition costs (CAC) and net dollar retention. These metrics vary widely by target customer, with SME customers typically having a lower CAC, while enterprise customers typically have a higher NDR (given higher cross-selling opportunities). Within our coverage, Docebo boasts a net dollar retention of ~113% given the company’s solid land and expand strategy and a strong CAC, with the company historically spending \$1 to acquire \$3 in revenue.

We expect that profitability metrics will remain important going forward, with SaaS names in certain verticals seeing some signs of slowing spending. Salesforce was down 6% this week after announcing weaker-than-expected growth and declining to provide 2023 guidance. Vista Equity Partners has also seen a mild slowdown in ARR growth among the 50+ SaaS companies (cumulative ARR of \$24B) in which it holds a majority stake. The PE firm noted that ARR growth at its portfolio companies is about 20% harder than last year. That said, the slowdown appears sector-specific, with some sectors, such as cybersecurity and productivity well insulated given strong secular tailwinds, while companies operating in consumer oriented businesses are at more risk as inflationary pressures impact spending patterns.

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Sector:
Information Technology

Rule Of 40 Is Back In

Rule of 40 has always been great to check the tech companies' growth and profitability profile vs. trading levels. Given this uncertain environment with rising rates, it has become increasingly important as efficient growth triumphs the growth-at-all costs mindset. SaaS metrics continue to be in focus as investors evaluate the growth and profitability profiles to understand the impact of a potential downturn on SaaS revenue.

Customer acquisition costs (CAC) and Net dollar retentions (NDR) are particularly important when evaluating SaaS businesses and can differ significantly depending on the customers targeted by SaaS companies. Smaller buyers like SMBs tend to come with lower prices and less formal buying processes, which typically results in lower CAC compared to enterprise customers. In contrast, NDR is higher for enterprise customers, given more opportunities to expand the account. The chart in Exhibit 1 presents CAC and NDR for Good (50th percentile) and great (80th percentile) SaaS companies, based on target customers.

**Exhibit 1: Customer Acquisition Costs (CAC) And Net Dollar Retention (NDR)
– By Customer Type**

CAC Payback By Target Customer - 50th and 80th Percentile			
Target Customer	Employees	Good (50th)	Great (80th)
VSMB/Prosumer	<20	9 months	2 months
SMB	20-100	7 months	4 months
Midmarket	101-1,000	14 months	7 months
Enterprise	1000+	14 months	9 months
NDR By Target Customer - 50th and 80th Percentile			
Target Customer	Employees	Good (50th)	Great (80th)
VSMB/Prosumer	<20	100%	107%
SMB	20-100	100%	116%
Midmarket	101-1,000	110%	124%
Enterprise	1000+	110%	125%

Source: Openview Partners 2022 SaaS Benchmark report and CIBC World Markets Inc.

News Impacting Our Coverage

Research Highlight: DSGX - Stability In A Turbulent Market

Descartes reported slightly mixed FQ3 results, with revenue 1% below consensus but EBITDA margins 70 bps above. While management noted a cautious customer tone and FX headwinds, organic constant currency Services growth of 11% remained solid. Descartes also raised its adj. EBITDA margin guidance to 40%-45% (prior 38%-43%), although F2024 consensus of 44% is already at the higher end of the range. With 40% of revenue related to transaction volumes, we continue to see slowing shipment volumes as a potential headwind in F2024. We expect Descartes to offset slower growth with M&A, with the company ending the quarter with \$237MM in cash and extending its undrawn \$350MM credit facility to December 2027.

Research Highlight: DND - No Longer In Discussions To Acquire Link Group Assets

Link Group announced this evening that ongoing discussions that would have seen DND acquire Link's Corporate Markets and BCM business for A\$1.27B (C\$1.17B) - 13x F2022 EBITDA - have ceased, and that no binding transaction has resulted. The press release noted an apparent lack of committed financing, delayed purchase consideration, and changes to the offer structure as contributing factors to the end of discussions. Ultimately, we see the lack of a transaction as a positive for DND as the acquisition would have moved DND into a new market segment and increased leverage to over 5.5x Net Debt : Pro Forma Adjusted EBITDA, with the additional debt required to finance the deal likely having a significantly negative impact on free cash flow. Further, Link's CM business, while including a registry model similar to DND's current business that could have acted as a platform for future M&A, generated flat Y/Y revenue growth in F2022 with a margin profile well below DND's.

CGI Opens New Space And GeoSpatial Centre Of Excellence In Finland

CGI announced the opening of a new Space and Geospatial Centre of Excellence in Finland to drive partnership with organizations focused on the space and geospatial data technologies. The aim of these partnerships is to help organizations enhance their operations and customer experience. CGI is recruiting for 70 space and geospatial data experts to join the centre during its start-up phase, with plans to increase by another 30 in the future.

EU Clears Open Text's Acquisition Of Micro Focus International

The EU regulators examined the OTEX/Micro Focus transaction under the simplified merger review procedure and has given the go-ahead.

Exhibit 2: CIBC Software/Services – Coverage Performance, 12/8/2021 - 12/8/2022

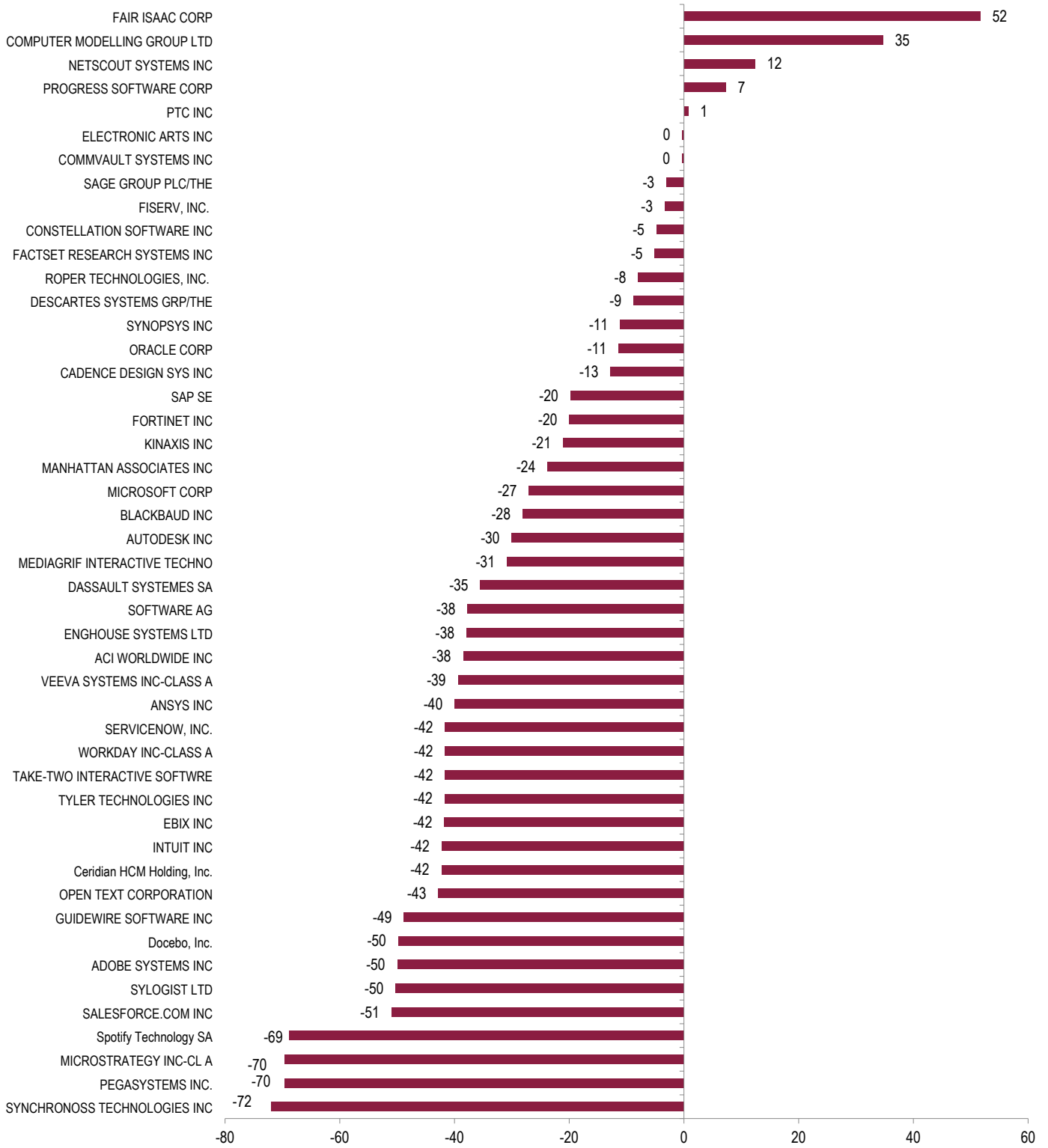
Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,089.69	(5.0)	10.0	5.1	10.7	(4.8)	(11.0)	2385.80	1783.98
Descartes Systems	67.27	(3.1)	0.7	(0.3)	5.1	(15.4)	(18.6)	83.65	56.19
Enghouse Systems Limited	31.51	1.3	5.6	(4.2)	16.1	(37.9)	(34.9)	53.84	23.96
Open Text Corp	27.67	(5.8)	1.4	(7.7)	(31.5)	(42.8)	(41.7)	48.55	24.91
Kinaxis	146.39	(3.8)	2.0	1.3	5.9	(21.1)	(17.4)	188.73	119.48
Docebo, Inc.	42.54	(1.3)	23.8	4.3	1.6	(49.8)	(49.9)	89.80	31.66
Magnet Forensics	42.38	9.2	65.9	82.1	156.8	39.5	28.9	42.41	14.89
Q4 Inc.	2.13	(19.3)	(30.8)	(53.1)	(55.9)	NA	(74.9)	9.40	2.10
Average		(3.5)	9.8	3.5	13.6	(18.9)	(27.4)		

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
CGI Group Inc	116.70	(2.1)	7.7	13.1	11.3	7.0	4.3	119.68	95.45
Converge Technologies	4.68	(7.3)	(4.9)	(20.1)	(34.0)	(60.7)	(56.9)	12.04	3.60
Softchoice Corporation	14.36	(9.4)	(19.9)	(19.8)	(32.1)	(37.8)	(32.7)	28.66	13.57
Telus International	26.49	(6.8)	(5.1)	(31.6)	(16.6)	(37.6)	(36.6)	43.78	25.21
Average		(6.4)	(5.5)	(14.6)	(17.9)	(32.3)	(30.5)		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	19,973.22	(2.7)	1.6	2.9	(3.9)	(5.2)	(5.9)
S&P 500 Index	3,933.92	(3.5)	2.8	(1.8)	(4.4)	(16.3)	(17.5)
S&P/TSX Software Index	139.13	(6.0)	9.2	7.8	1.7	(35.4)	(34.4)
S&P500 Software Index	4,136.21	(5.2)	5.2	(6.4)	(10.4)	(30.1)	(29.3)

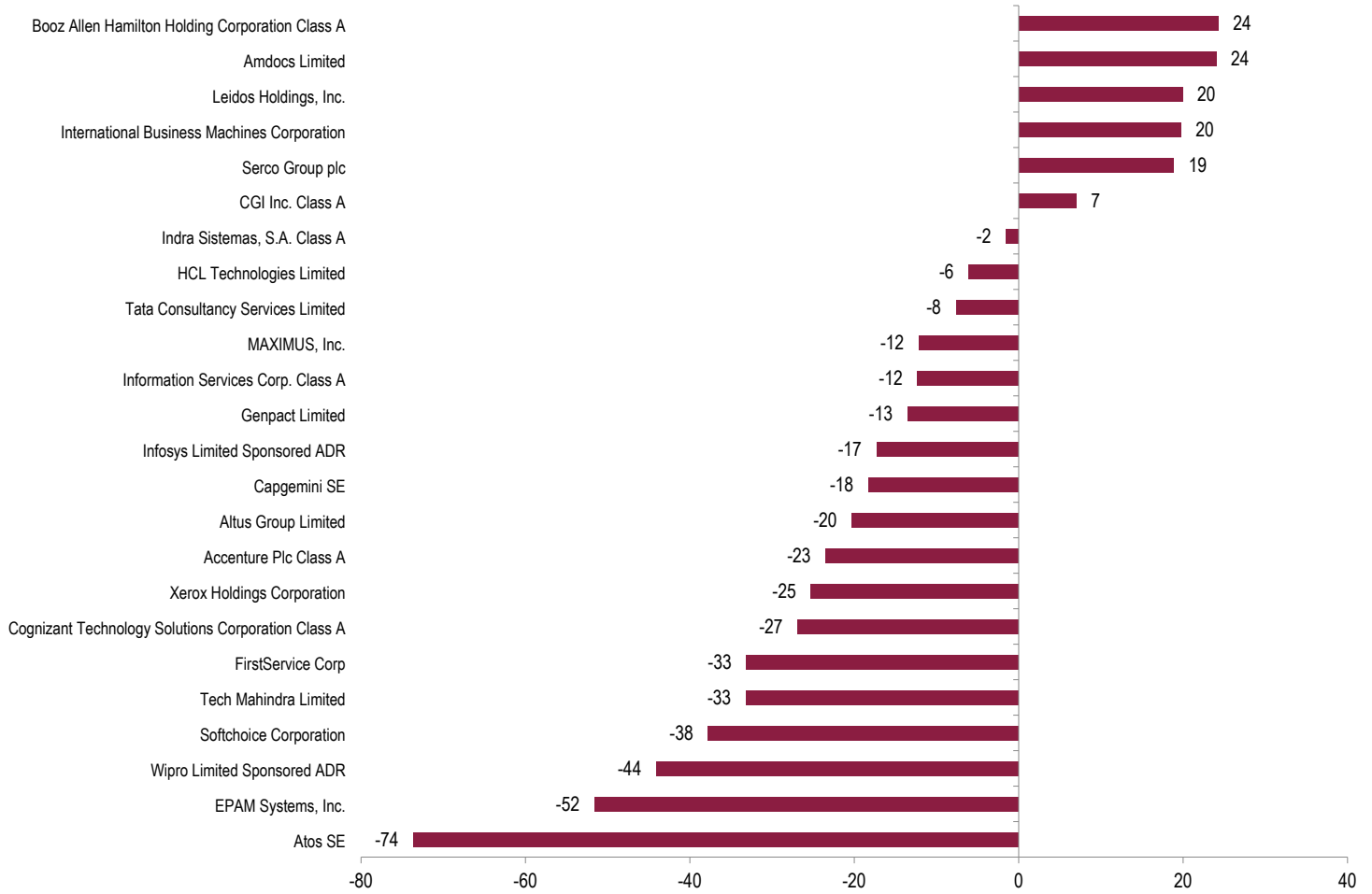
Source: FactSet and CIBC World Markets Inc.

Exhibit 3: Software Stocks – Return Performance (%),12/8/2021 - 12/8/2022



Source: FactSet and CIBC World Markets Inc.

Exhibit 4: Business Services Stocks – Return Performance (%), 12/8/2021 - 12/8/2022



Source: FactSet and CIBC World Markets Inc.

Exhibit 5: 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.*	33,899	6.6x	5.2x	4.6x	22.4x	20.6x	17.9x	49.3x	27.8x	26.3x
BlackBerry Limited*	2,426	2.7x	3.5x	2.5x	49.5x	NEG	NEG	NEG	NEG	NEG
Sage Group plc	8,736	4.7x	4.4x	4.0x	21.1x	19.1x	16.8x	30.0x	29.5x	25.2x
Tyler Technologies, Inc.	13,886	8.7x	7.5x	6.9x	39.5x	29.2x	27.8x	>50	40.7x	39.8x
Roper Technologies, Inc.	53,853	9.3x	10.0x	9.1x	24.3x	24.5x	22.2x	42.2x	30.7x	27.2x
Enghouse Systems Limited	1,532	3.3x	3.7x	3.70x	9.4x	11.3x	11.2x	18.8x	23.9x	23.7x
Oracle Corporation	269,988	6.7x	5.8x	5.3x	14.4x	11.6x	10.6x	17.3x	16.0x	14.8x
SAP SE	129,021	4.6x	4.1x	3.9x	18.0x	15.0x	13.4x	22.9x	22.7x	18.9x
Enterprise Application Software Average		5.8x	5.5x	5.0x	24.8x	18.8x	17.1x	30.1x	27.3x	25.1x
Extended ERP										
Adobe Incorporated	150,749	9.5x	8.5x	7.7x	22.6x	17.3x	15.9x	32.6x	23.7x	21.0x
Open Text Corporation	10,248	3.0x	2.9x	2.8x	8.0x	8.4x	7.6x	8.7x	9.1x	8.1x
Manhattan Associates, Inc.	7,133	10.7x	9.5x	8.8x	>50	36.2x	33.0x	>50	48.3x	45.3x
Pegasystems Inc.	3,200	2.6x	2.5x	2.3x	NEG	>50	40.2x	NEG	>50	>50
Software AG	1,511	1.8x	1.6x	1.5x	9.8x	7.5x	6.6x	21.6x	16.2x	13.6x
Fiserv, Inc.	84,953	5.2x	5.1x	4.7x	15.3x	11.7x	10.8x	>50	15.5x	13.8x
Extended ERP Average		5.5x	5.0x	4.6x	13.9x	16.2x	19.0x	21.0x	22.6x	20.3x
Software As A Service										
Descartes Systems Group Inc.	5,524	13.0x	11.4x	10.3x	29.8x	25.7x	23.2x	>50	>50	>50
Kinaxis, Inc.*	2,821	11.3x	7.6x	6.9x	>50	38.2x	37.7x	>50	>50	>50
Docebo, Inc.*	817	7.8x	5.7x	4.3x	NEG	NEG	>50	NEG	>50	>50
Lightspeed Commerce Inc*	1,443	3.1x	2.1x	1.6x	NEG	NEG	NEG	NEG	NEG	NEG
Veeva Systems Inc Class A	23,349	15.9x	11.0x	9.7x	>50	27.9x	25.2x	>50	39.9x	36.6x
Shopify, Inc. Class A	37,952	8.2x	6.9x	5.7x	>50	NEG	>50	16.8x	NEG	>50
Q4 Inc*	27	0.5x	0.5x	0.5x	NEG	NEG	NEG	NEG	NEG	NEG
Magnet Forensics, Inc.*	1,156	16.4x	11.9x	8.9x	>50	>50	39.4x	>50	>50	>50
Ceridian HCM Holding, Inc.	10,433	10.2x	8.4x	7.2x	>50	44.4x	35.5x	NEG	>50	>50
ServiceNow, Inc.	77,542	13.2x	10.7x	8.8x	>50	34.9x	27.9x	>50	>50	42.6x
Workday, Inc. Class A	40,785	9.5x	6.7x	5.7x	>50	26.1x	21.5x	NEG	46.1x	36.2x
Software As A Service Average		9.9x	7.5x	6.3x	29.8x	32.9x	30.0x	16.8x	43.0x	38.5x
Infrastructure Vendors										
Microsoft Corporation	1,795,293	10.7x	8.7x	7.9x	22.2x	17.9x	16.2x	30.3x	26.1x	23.6x
Infrastructure Vendors Average		10.7x	8.7x	7.9x	22.2x	17.9x	16.2x	30.3x	26.1x	23.6x
Software Average		7.7x	6.4x	5.6x	21.9x	22.5x	21.9x	26.4x	27.8x	26.0x

*Share Price Converted to USD

Source: FactSet and CIBC World Markets Inc.

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

	Enterprise Value (\$mlns.)	EV/S			EV/EBITDA			P/E		
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Ceridian HCM Holding, Inc.	10,433	10.2x	8.4x	7.2x	>50	44.4x	35.5x	NEG	>50	>50
ServiceNow, Inc.	77,542	13.2x	10.7x	8.8x	>50	34.9x	27.9x	>50	>50	42.6x
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Source: FactSet and CIBC World Markets Inc.

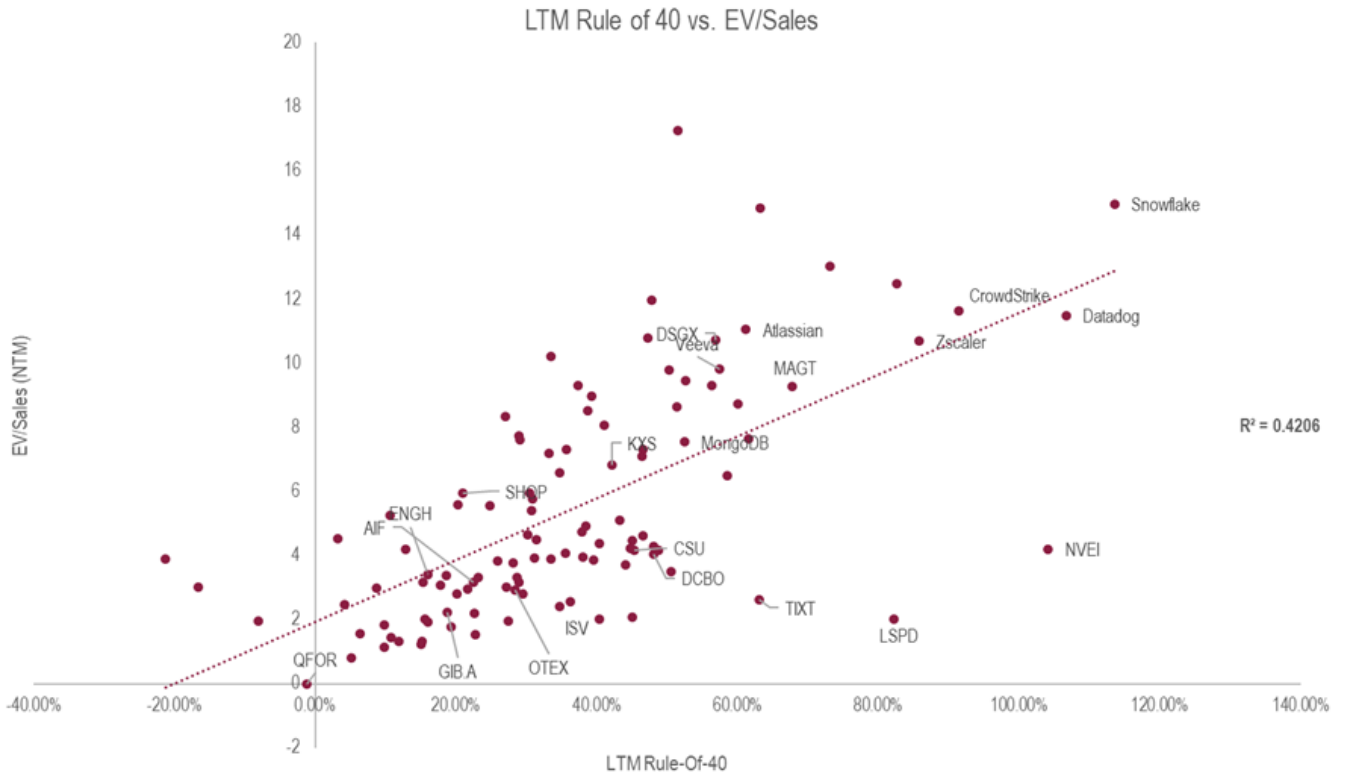
Exhibit 7: SaaS Stocks – Comp Table, 2021 - 2023E

	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		
								C21A	C22E	C23E
Tier 1 SaaS (Rule of 40 > 60)										
Lightspeed POS, Inc.*	101%	-19%	33%	-5%	82%	28%	1,432	6.5x	2.1x	1.6x
Nuvei*	70%	34%	9%	33%	104%	42%	3,626	5.0x	4.3x	3.7x
CrowdStrike Holdings, Inc.	61%	30%	44%	29%	91%	73%	25,080	28.7x	11.6x	8.6x
Zscaler, Inc.	62%	24%	38%	22%	86%	60%	16,494	24.5x	12.9x	9.6x
Magnet Forensics*	37%	31%	57%	28%	68%	85%	1,131	16.1x	11.7x	9.0x
Veeva Systems Inc	20%	44%	15%	37%	64%	52%	23,908	16.3x	11.3x	10.0x
Zoom Video Communication	18%	31%	5%	27%	49%	31%	16,078	6.1x	3.7x	3.5x
HubSpot, Inc.	42%	16%	22%	12%	58%	34%	13,669	10.5x	8.0x	6.6x
Tier 1 SaaS (Rule of 40 > 60) Average								14.2x	8.2x	6.6x
	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		
								C21A	C22E	C23E
Tier 2 SaaS (Rule of 40 b/w 41-60)										
Descartes Systems	20%	37%	10%	37%	57%	47%	5,453	15.6x	11.4x	10.3x
DocuSign, Inc.	30%	20%	11%	15%	51%	27%	8,644	5.9x	3.5x	3.2x
Qualys, Inc.	17%	40%	18%	37%	56%	55%	4,127	10.0x	8.4x	7.3x
ServiceNow, Inc.	25%	27%	21%	29%	53%	50%	78,360	13.3x	10.8x	8.9x
Twilio, Inc.	51%	-6%	28%	-2%	45%	26%	5,485	1.9x	1.4x	1.2x
MongoDB, Inc.	54%	-2%	25%	2%	52%	27%	12,756	21.6x	10.4x	8.2x
Docebo, Inc.*	50%	-2%	35%	-4%	48%	31%	841	8.1x	5.9x	4.6x
Paylocity Holding Corp.	34%	16%	28%	15%	50%	43%	11,410	18.0x	11.5x	9.1x
Workday, Inc.	22%	21%	19%	19%	43%	38%	41,275	9.6x	6.8x	5.8x
Dropbox, Inc.	11%	33%	6%	34%	44%	40%	8,992	4.2x	3.9x	3.6x
Tier 2 SaaS (Rule of 40 b/w 41-60) Average								10.8x	7.4x	6.2x
	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		
								C21A	C22E	C23E
Tier 3 SaaS (Rule of 40 b/w 25-40)										
RingCentral, Inc.	33%	8%	21%	9%	40%	30%	4,856	3.0x	2.4x	2.1x
Rapid7 Inc.	33%	5%	23%	11%	38%	34%	2,587	4.8x	3.8x	3.2x
Splunk Inc.	26%	7%	21%	14%	33%	35%	16,561	7.4x	4.9x	4.1x
Akamai Technologies, Inc.	7%	24%	2%	21%	31%	24%	16,430	4.7x	4.6x	4.4x
VMware, Inc.	7%	24%	6%	29%	31%	35%	58,477	5.0x	4.4x	4.2x
BlackLine, Inc.	22%	8%	21%	6%	30%	27%	4,409	10.4x	8.4x	7.2x
Five9, Inc.	34%	-4%	23%	7%	30%	30%	4,871	8.0x	6.3x	5.4x
Shopify, Inc.	25%	-4%	21%	-9%	21%	12%	38,114	8.3x	6.9x	5.7x
Tier 3 SaaS (Rule of 40 b/w 25-40) Average								6.5x	5.2x	4.5x
	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		
								C21A	C22E	C23E
Tier 4 SaaS (Rule of 40 <28)										
Kinaxis, Inc.*	35%	7%	22%	1%	42%	23%	2,820	11.2x	7.7x	6.8x
Ceridian HCM Holding, Inc.	30%	-1%	17%	12%	29%	29%	10,961	10.7x	8.9x	7.6x
New Relic, Inc.	20%	3%	17%	1%	23%	18%	3,688	5.5x	4.2x	3.6x
Zuora, Inc.	15%	4%	14%	0%	19%	14%	642	2.1x	1.6x	1.5x
Q2 Holdings Inc.	18%	0%	18%	3%	18%	21%	1,839	3.7x	3.2x	2.8x
Teradata Corporation	-3%	19%	-3%	23%	16%	20%	3,572	1.9x	2.0x	2.0x
Wix.com Ltd.	16%	-1%	8%	3%	15%	11%	4,707	3.7x	3.4x	3.1x
Yext, Inc.	8%	3%	3%	-1%	11%	2%	760	2.1x	1.9x	1.8x
Q4 Inc.	26%	-27%	40%	-11%	-1%	29%	(31)	-0.6x	-0.5x	-0.5x
LivePerson, Inc.	19%	-27%	5%	-12%	-8%	-7%	1,266	2.7x	2.4x	2.3x
Tier 4 SaaS (Rule of 40 <28) Average								4.3x	3.5x	3.1x
SaaS Average								8.8x	6.0x	5.1x

* Share Price Converted to USD

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

Exhibit 8: SaaS - LTM Rule Of 40, Current



Source: Company reports and CIBC World Markets Inc.

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