



EQUITY RESEARCH

Industry Update

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Sector:

Information Technology

Defrosting The IPO Market – Bits & Bytes Weekly

Tech Makes A Comeback

Our Conclusion

June 29, 2023

After a lackluster 2022, the IPO market is showing signs of life. Cava, a Mediterranean quick service restaurant, successfully listed on the NYSE earlier this month, raising \$318MM. In addition, three large U.S. IPOs are scheduled to list in the coming weeks: Kodiak Gas Services, Savers Value Village, and Fidelis, a Bermuda-based insurer. In the tech sector, Klaviyo, a marketing automation company based in Boston, confidentially filed for an IPO earlier last month, and data suggests that technology IPOs may be at the forefront of the IPO revival. According to PwC's Global IPO Watch, technology sector IPOs were the most prevalent in Q1/23, with 57 IPOs globally, raising a total of \$7.1B.

Key Points

2022 Lows: Global IPO deal proceeds dropped ~71% in 2022, according to data from S&P Global, with U.S. IPO activity declining by 93% Y/Y. U.S. IPO activity in 2022 slumped to its lowest level since 2018, with just 149 IPOs generating ~\$20.8B. Q4 saw the lowest volume, with only 20 IPOs. Q1/23 IPO volumes in the U.S. increased slightly Q/Q, to 44 IPOs generating \$3.1B, a positive sign given Q1 is seasonally the lowest quarter of the year for listings. Now halfway through 2023, we've started to see more positive sentiment around inflation and improving market volatility, both encouraging signs for companies waiting in the wings of the IPO market.

Who Could Be Next? Last month, Klaviyo, a marketing automation platform, confidentially submitted paperwork for an IPO in New York, as reported by Thomson Reuters. In 2021, the company was valued at \$9.5B. We also see potential for one of the most anticipated IPOs in 2022 to return to the table: Instacart, which filed confidentially last year before pushing back plans, citing unstable market conditions. British technology company Arm Holdings is also expected to go public in 2023, after filing confidentially for an IPO for a U.S. listing in April. Other tech companies that filed for an IPO in 2021 or 2022 include Stripe, a SaaS payment processor; Chime, a mobile banking platform; and, Klarna, an e-commerce payment solutions platform.

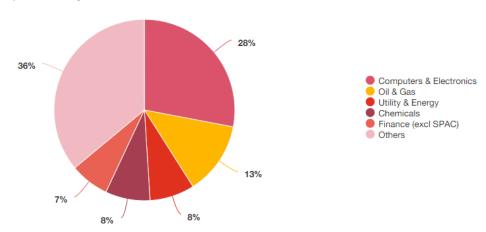
Stranded SPACs: A significant driver of the 2021 IPO boom was the dominance of special purpose acquisition companies (SPACs) taking companies public through reverse mergers. After the IPO market dried up, many SPACs were left stranded, forced to liquidate and return funds to initial investors. However, as the IPO market is revived we could see the return of the SPAC phenomenon. Case in point, BYTE Acquisition Corp. just announced a merger with Airship AI Holdings that will see Airship AI become a public company.

Tech IPO Outlook

According to data from PwC's Global IPO Watch, technology IPOs were the most prevalent in Q1/23, comprising ~28% of global IPO proceeds. More than 50% of those IPOs were in China.

Exhibit 1: PwC - IPO Overview, Q1/23

Q1 2023 IPO proceeds by sector



Source: Dealogic and Capital IQ with PwC analysis.

With market conditions stabilizing and inflation fears fading, Klaviyo's filing is a positive sign that the pace of tech IPOs may begin to pick back up. Outside of the companies that previously announced plans to IPO in 2022, there have also been a record number of AI start-ups gaining attention from venture capitalists, and as these companies continue to grow, they may represent the next round of IPO candidates in the coming years. Roughly \$1.7B was generated across 46 deals for AI start-ups in Q1/23, according to Pitchbook data, with an additional \$10.68B in deals announced but not yet closed.



News Impacting Our Coverage

CGI Sustainable Business Practices Rated In Top 1%

CGI has received a platinum rating from EcoVadis for its Sustainability Performance, placing it in the top 1% of companies in the EcoVadis network. The platinum rating represents CGI's highest rating for sustainable business practices and it is the second consecutive year that CGI has received it.

Research Highlight: Thomson Reuters - Acquiring Casetext For \$650MM

TRI announced that it has acquired Casetext, a California-based provider of technology for legal professionals, for \$650MM. Casetext is a leader in leveraging Artificial Intelligence (AI) and Machine Learning (ML) in the legal space, and the acquisition furthers TRI's committed push into generative AI. Casetext recently released CoCounsel, a generative AI-powered legal assistant that was built using Chat GPT-4 as an infrastructural backend. The acquisition appears to be a clear strategic fit, with TRI accelerating its push into Generative AI following a commitment to spend \$100MM annually on the technology while also making use of the proceeds from recent London Stock Exchange share sales. TRI is clearly looking to be a first mover when it comes to Generative AI in the legal market, and the acquisition of a competitor that has already released a Generative-AI-powered solution further emphasizes the desire to stay ahead of the market. No financial details for Casetext were provided, and we expect additional details on Casetext's financial history, the structure of the transaction, and how TRI plans to integrate Casetext with the rest of its legal professionals business.

Thomson Reuters Signs Definitive Agreement To Acquire Imagen Ltd.

Thomson Reuters announced that it has signed a definitive agreement to acquire Imagen Ltd., a cloud-based media asset management company. Imagen helps sports organizations, businesses and media companies manage digital content libraries, and owns Screenocean, a platform that provides production companies the ability to license video and photo content globally. The business will be operated as part of the Reuters News division.



Exhibit 2: CIBC Coverage – Price Returns, For The Period Ending June 29, 2023

Software & Systems	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
Constellation Software Inc	2,686.52	1.4	0.7	10.4	28.4	42.8	29.7	2817.38	1747.83
Descartes Systems	78.32	1.3	1.6	0.0	11.5	26.1	12.4	82.02	60.68
Enghouse Systems Limited	32.00	(2.6)	(15.5)	(16.6)	(11.1)	11.1	(11.0)	44.59	27.30
Open Text Corp	40.72	0.5	(2.3)	8.2	36.0	6.9	37.4	43.25	24.91
Kinaxis	181.93	1.5	(2.5)	1.4	19.8	32.1	19.8	191.80	124.90
Docebo, Inc.	51.13	5.3	14.4	(3.2)	13.8	37.6	14.3	55.72	31.66
Dye & Durham	18.00	(1.1)	10.8	(1.3)	11.7	(18.2)	9.7	23.14	11.62
Altus Group	43.43	(2.5)	0.6	(23.0)	(20.5)	(2.4)	(19.6)	61.60	40.00
Q4 Inc. Average	3.25	(3.3)	(1.8) 0.7	(21.9) (5.1)	6.6 10.7	NA 17.0	1.2 10.4	4.90	1.88

Business Services	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD	52W High	52W Low
CGI Group Inc	137.59	2.4	(2.2)	8.1	17.7	34.4	17.9	142.31	100.74
Converge Technologies	3.07	(4.7)	(14.0)	(23.3)	(30.9)	(42.1)	(33.1)	7.51	2.59
Information Services Corp	20.77	(0.4)	0.9	(3.8)	(12.0)	(3.7)	(14.1)	25.36	19.12
Softchoice Corporation	16.85	(1.5)	(5.1)	(0.5)	(3.7)	(19.9)	(7.7)	25.56	13.57
Telus International	19.68	2.3	(9.5)	(27.0)	(26.9)	(39.4)	(26.4)	40.55	18.86
Average		(0.3)	(7.7)	(10.7)	(10.9)	(16.8)	(12.3)		

Indices	Price	1 Week	1 Month	3 Month	6 Month	1 Year	YTD
S&P/TSX Composite Index	19,856.91	1.4	(0.3)	0.1	1.9	4.1	2.4
S&P 500 Index	4,396.57	0.3	4.5	9.2	14.2	15.1	14.5
S&P/TSX Software Index	187.75	2.3	0.7	14.8	36.9	44.5	37.6
S&P500 Software Index	5,662.86	(0.7)	2.6	18.2	37.6	29.4	38.2



Exhibit 3: Software Stocks - Return Performance (%), 6/29/2022 - 6/29/2023

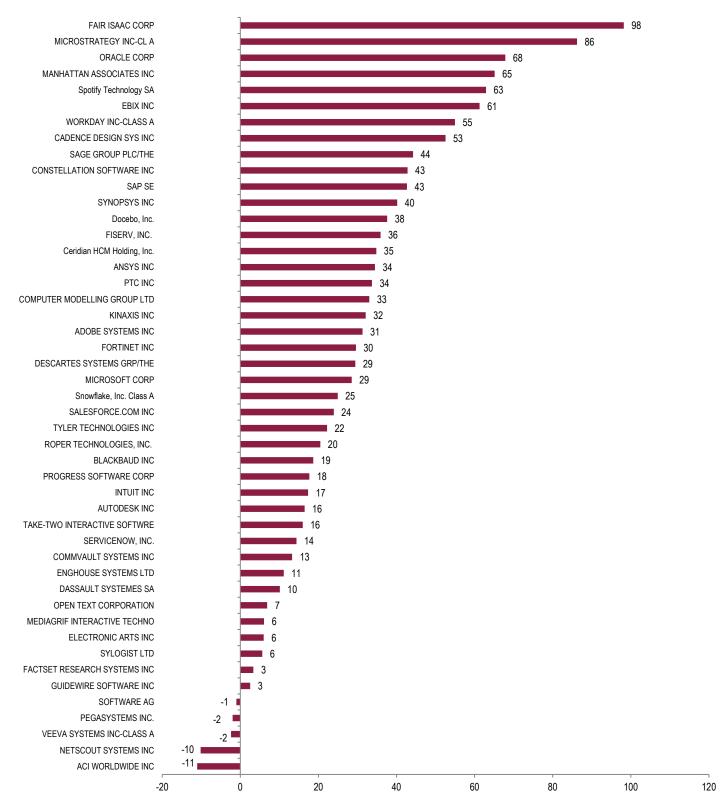




Exhibit 4: Business Services Stocks - Return Performance (%), 6/29/2022 - 6/29/2023

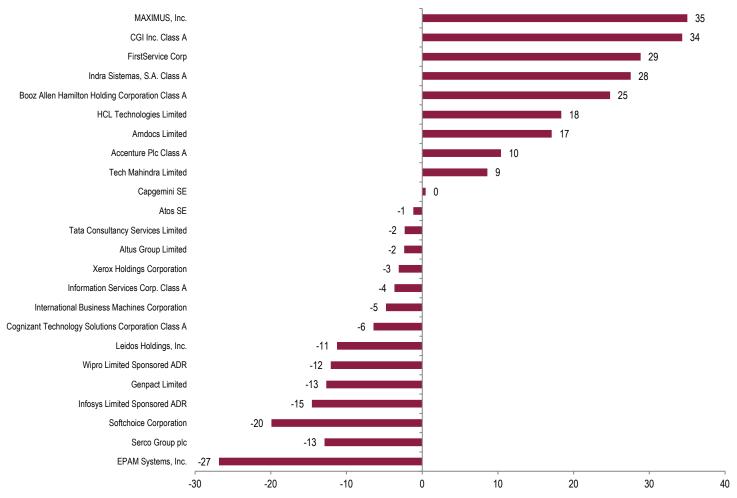




Exhibit 5: Software Stocks - Comp Table, 2022 - 2024E

	Enterprise		EV/S			EV/EBITD	A	P/E		
	Value (\$mlns.)	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E
Enterprise Application Software										
Constellation Software Inc.*	44,696	6.7x	5.7x	5.0x	26.3x	22.3x	19.7x	35.5x	32.8x	28.7x
BlackBerry Limited*	3,225	4.8x	3.1x	3.1x	NEG	NEG	>50	NEG	NEG	NEG
Sage Group plc	10,119	5.1x	4.6x	4.2x	22.2x	19.6x	17.5x	34.1x	28.7x	25.6x
Tyler Technologies, Inc.	18,016	9.7x	9.2x	8.4x	37.9x	37.6x	33.6x	>50	>50	47.1x
Roper Technologies, Inc.	56,616	10.5x	9.4x	8.8x	25.9x	23.2x	21.6x	33.2x	29.1x	27.0x
Enghouse Systems Limited	1,551	3.7x	3.58x	3.53x	11.3x	11.5x	10.65x	16.2x	25.0x	22.19x
Oracle Corporation	400,637	8.6x	7.7x	7.1x	17.3x	15.4x	13.7x	23.1x	21.5x	19.3x
SAP SE	154,959	4.6x	5.0x	4.6x	19.6x	16.6x	14.5x	30.2x	23.6x	19.9x
Enterprise Application Software Av	verage	6.7x	6.0x	5.6x	22.9x	20.9x	18.8x	28.7x	26.8x	27.1x
Extended ERP										
Adobe Incorporated	220,484	12.4x	11.2x	10.0x	25.3x	23.1x	20.9x	34.9x	30.6x	27.1x
Open Text Corporation	19,069	5.4x	3.4x	3.1x	15.3x	11.0x	8.2x	12.9x	15.8x	7.6x
Manhattan Associates, Inc.	11,783	15.4x	13.7x	12.2x	>50	>50	44.8x	>50	>50	>50
Pegasystems Inc.	4,388	3.3x	3.2x	2.9x	>50	25.4x	16.8x	>50	34.7x	22.5x
Software AG	2,574	2.7x	2.6x	2.4x	14.5x	14.9x	12.5x	34.9x	22.4x	18.8x
Fiserv, Inc.	97,529	5.8x	5.4x	5.0x	13.5x	12.3x	11.4x	19.0x	16.8x	14.7x
Extended ERP Average		7.5x	6.6x	5.9x	17.2x	17.3x	19.1x	25.4x	24.1x	18.1x
Software As A Service										
Descartes Systems Group Inc.	6,468	13.3x	11.5x	10.4x	30.1x	26.4x	23.1x	>50	>50	>50
Kinaxis, Inc.*	3,661	10.0x	8.5x	7.1x	46.1x	>50	43.6x	>50	>50	>50
Docebo, Inc.*	1,059	7.4x	5.9x	4.5x	>50	>50	34.7x	>50	>50	>50
Lightspeed Commerce Inc*	1,764	2.6x	2.1x	1.6x	NEG	NEG	46.9x	NEG	>50	>50
Veeva Systems Inc Class A	28,204	13.2x	12.0x	10.1x	34.3x	33.9x	27.2x	46.1x	42.9x	36.1x
Shopify, Inc. Class A	77,837	13.9x	11.6x	9.8x	>50	>50	>50	>50	>50	>50
Q4 Inc*	75	1.4x	1.3x	1.2x	NEG	NEG	NEG	NEG	NEG	NEG
Ceridian HCM Holding, Inc.	10,966	8.8x	7.4x	6.4x	43.8x	29.4x	23.7x	>50	>50	41.7x
ServiceNow, Inc.	109,292	15.1x	12.4x	10.2x	47.8x	40.0x	31.7x	>50	>50	46.0x
Workday, Inc. Class A	56,332	9.2x	7.9x	6.8x	35.9x	29.5x	24.5x	>50	43.9x	36.1x
Software As A Service Average		9.5x	8.0x	6.8x	39.7x	31.9x	31.9x	>50	>50	>50
Infrastructure Vendors										
Microsoft Corporation	2,461,929	12.0x	11.0x	9.8x	24.4x	22.2x	19.2x	35.5x	32.4x	28.2x
Infrastructure Vendors Average		12.0x	11.0x	9.8x	24.4x	22.2x	19.2x	35.5x	32.4x	28.2x
Software Average		8.2x	7.2x	6.3x	27.3x	23.0x	23.7x	29.6x	28.6x	27.6x
*Share Price Converted to USD										

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Note: Bolded names are covered by CIBC World Markets Inc.



Exhibit 6: Business Services Stocks - Comp Table, 2022 - 2024E

	Enterprise Value	rprise Value EV/EBITDA				P/E			EV/S		
	(\$mlns.)	C22	C23E	C24E	C22	C23E	C24E	C22	C23E	C24E	
Business & IT Services											
CGI Inc. Class A	34,967	13.5x	12.3x	11.4x	22.0x	18.9x	17.8x	2.6x	2.4x	2.3x	
TELUS International (CDA), Inc.	5,838	9.6x	8.3x	7.2x	12.1x	11.9x	9.9x	2.4x	2.0x	1.8x	
Accenture Plc Class A	200,738	17.5x	16.8x	15.6x	28.1x	26.0x	24.1x	3.2x	3.1x	2.9x	
Booz Allen Hamilton	17,113	17.2x	15.9x	14.9x	24.7x	22.8x	20.6x	1.9x	1.7x	1.6x	
CACI International Inc Class A	9,716	14.3x	13.2x	12.4x	18.7x	17.5x	15.8x	1.5x	1.4x	1.3x	
DXC Technology Co.	9,036	3.8x	4.0x	3.9x	7.5x	7.0x	6.0x	0.6x	0.6x	0.6x	
Genpact Limited	7,913	10.1x	9.5x	8.4x	13.6x	12.7x	11.3x	1.8x	1.7x	1.6x	
International Business Machines	166,868	10.5x	11.2x	10.7x	14.7x	14.2x	13.4x	2.8x	2.7x	2.6x	
Atos SE	3,222	3.7x	2.9x	2.8x	NEG	5.3x	4.3x	0.3x	0.3x	0.3x	
Capgemini SE	34,819	9.9x	9.6x	8.8x	14.7x	15.1x	13.7x	1.6x	1.5x	1.4x	
Sopra Steria Group SA	4,945	8.3x	7.3x	6.8x	13.2x	10.7x	9.4x	1.0x	0.9x	0.8x	
Converge Technology Solutions Cor	962	6.7x	5.7x	5.3x	29.0x	48.3x	33.3x	0.4x	0.4x	0.4x	
Business & IT Services Average		10.8x	10.1x	9.4x	16.9x	14.7x	13.3x	1.8x	1.7x	1.6x	
HR Outsourcing			EV/EBITDA			P/E			EV/S		
Ceridian HCM Holding, Inc.	10,966	43.8x	29.4x	23.7x	>50	>50	41.7x	8.8x	7.4x	6.4x	
Willis Towers Watson	28,930	43.6x 12.2x	29.4x 12.1x	10.9x	17.3x	16.2x	41.7X 13.8x	3.3x	7.4x 3.1x	3.0x	
Aon Plc Class A	79,907	20.1x	12.1X 18.4x	10.9x 17.2x	25.4x	23.6x	21.0x	6.4x	6.0x	5.7x	
Automatic Data Processing, Inc.	91,239	19.8x	17.7x	16.2x	28.4x	25.3x	22.8x	5.3x	5.0x	4.6x	
Paychex, Inc.	39,429	18.4x	17.7x	15.8x	27.2x	24.7x	22.0x 22.9x	8.1x	7.6x	7.2x	
HR Outsourcing Average	00,420	22.8x	18.9x	16.8x	24.6x	22.5x	24.5x	6.4x	5.8x	5.4x	
o a o a. o g / o . a.g o			10.01	10101				0.1	O.O.A.	V	
nformation Services			EV/EBITD#			P/E			EV/S		
Broadridge Financial Solutions, Inc.	23,050	17.6x	16.3x	15.2x	24.3x	22.6x	20.6x	3.9x	3.7x	3.5x	
Dye & Durham Ltd.	2,243	14.1x	12.8x	11.7x	0.1x	0.1x	0.1x	4.7x	4.9x	4.6x	
Deluxe Corporation	2,103	5.0x	5.2x	5.1x	4.2x	5.4x	5.1x	0.9x	1.0x	0.9x	
Information Services Corp	408	6.3x	6.2x	5.9x	10.4x	9.9x	9.2x	2.1x	2.0x	1.9x	
Information Services Average		10.8x	10.1x	9.5x	9.7x	9.5x	8.7x	2.9x	2.9x	2.7x	
Financial Services Technology			EV/EBITDA			P/E			EV/S		
Fidelity National Information Services	49,833	8.0x	8.2x	7.7x	8.0x	8.9x	8.2x	3.4x	3.4x	3.3x	
Fiserv, Inc.	97,529	13.5x	12.3x	11.4x	19.0x	16.8x	14.7x	5.8x	5.4x	5.0x	
Jack Henry & Associates, Inc.	12,307	19.5x	18.0x	16.6x	34.0x	32.7x	29.5x	6.2x	5.8x	5.4x	
ACI Worldwide, Inc.	3,535	9.5x	9.2x	8.5x	18.6x	24.3x	15.9x	2.5x	2.4x	2.3x	
Temenos AG	6,077	16.6x	16.0x	14.0x	25.2x	23.5x	20.3x	6.4x	6.1x	5.6x	
Global Payments Inc.	38,071	9.8x	8.8x	8.1x	10.4x	9.4x	8.2x	4.7x	4.4x	4.1x	
Financial Services Technology Avera		12.8x	12.1x	11.0x	19.2x	19.3x	16.1x	4.8x	4.6x	4.3x	
									=>//0		
Diversified Real Estate Services Colliers International Group Inc.	6,097	9.7x	EV/EBITDA 9.1x	8.2x	13.9x	P/E 14.3x	12.6x	1.4x	EV/S 1.4x	1.3x	
		9.7x 15.8x									
Altus Group Limited	2,135		15.6x	12.2x	22.8x	21.2x	18.4x	2.9x	2.7x	2.4x	
CBRE Group, Inc. Class A Jones Lang LaSalle Incorporated	26,814	9.2x	10.4x	9.3x	13.9x	16.7x	13.8x	0.9x	0.8x	0.8x	
ŭ	9,815	7.8x	9.4x	7.6x	9.8x	12.6x	9.2x	0.5x	0.5x	0.4x	
Diversified Real Estate Services Ave	rage	10.6x	11.1x	9.3x	15.1x	16.2x	13.5x	1.4x	1.3x	1.2x	
			EV/EBITDA			P/E			EV/S**		
Software Focused <u>IT Solutions/VARs</u>	840	10.3x	9.7x	8.8x	15.9x	16.4x	14.6x	2.7x	2.5x	2.4x	
	U T U 1			13.0x	21.1x	19.6x	18.5x	6.5x	5.5x	4.9x	
Softchoice Corporation* USD		15.7x	14.1X	IO.UA							
Software Focused IT Solutions/VARs Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA*	2,691	15.7x >50	14.1x >50				>50	25.1x		18.6	
Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA*	2,691 11,104	>50	>50	>50	>50	>50	>50 19.1x	25.1x NA	21.6x		
Softchoice Corporation* USD Softcat Plc*	2,691 11,104 1,171						>50 19.1x 17.4 x	25.1x NA 11.4x		18.6x NA 8.6x	
Softchoice Corporation* USD Softcat Plc* Crayon Group Holding ASA* Bytes Technology Group Plc*	2,691 11,104 1,171	>50 17.1x	>50 14.9x	>50 13.1x	>50 22.8x	>50 21.1x	19.1x	NA	21.6x NA	NA	

Note: Bolded names are covered by CIBC World Markets Inc.



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

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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.
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Not Rated	NR	CIBC World Markets does not maintain an investment recommendation on the stock.
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Overweight	0	Sector is expected to outperform the broader market averages.
Marketweight	M	Sector is expected to equal the performance of the broader market averages.
Underweight	U	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.



CIBC World Markets Inc. Price Chart

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

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