

FOR THE WEEK ENDING AUGUST 2, 2024

41 ETF Providers | **1440** ETFs (+17% YoY) | **\$496B** CAD AUM (+29% YoY) | **\$21.7** Traded (Last Week)

WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASSES

Equity (+C\$720M) led inflows last week, as Preferreds (-C\$133M) led outflows

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	Net C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Equity	13,575.3	0.6%	317,183	719.7	0.2%	1.2%	14.7%
Mixed Allocation	278.0	0.2%	18,261	98.0	0.5%	3.2%	32.2%
Commodity	628.4	0.4%	3,106	34.2	1.1%	3.0%	-0.9%
Cryptocurrency	431.0	0.2%	6,296	29.6	0.4%	1.3%	11.0%
Fixed Income	3,658.4	0.2%	119,784	26.6	0.0%	1.3%	24.7%
Specialty/Alternative	61.8	6.3%	3,169	-0.2	0.0%	1.4%	-1.2%
Cash	2,771.6	0.3%	21,556	-35.4	-0.2%	0.5%	4.4%
Preferreds	263.2	1.2%	6,323	-132.7	-2.0%	-1.4%	-6.4%
Total	21,667.7	0.5%	495,678	739.8	0.1%	1.2%	16.6%

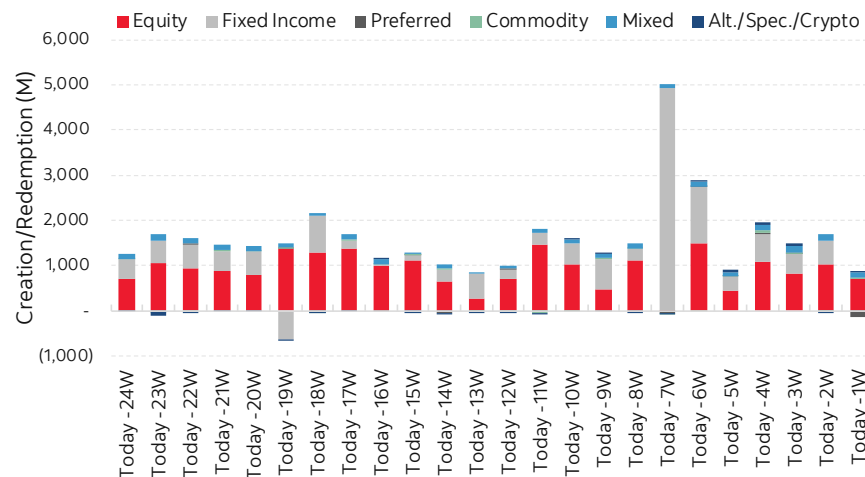
WEEKLY LARGEST CREATIONS/REDEMPTIONS

Investors poured into US: broad equities (ZSP, XUS, VFV); broad Cdn equities and Long Canadas were sold (ZCN, ZFL, TCLB)

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	\$ Traded (CAD M)	Net C/R (CAD M)	Net C/R (% of AUM)
ZSP	BMO S&P 500 Index ETF	-1.9%	1.8%	1,096.7	543.4	3.6%
XUS	iShares Core S&P 500 Index ETF	-1.9%	0.0%	564.6	221.0	3.3%
ZCS	BMO Short Corporate Bond Index ET	1.1%	0.0%	256.6	213.8	8.1%
VFV	Vanguard S&P 500 Index ETF	-1.9%	0.0%	777.8	83.9	0.5%
XEF	iShares Core MSCI EAFE IMI Index ETF	-2.9%	0.2%	267.1	79.4	0.9%
ZBK	BMO Equal Weight US Banks Index E	-7.8%	1.0%	75.7	69.9	8.9%
CGSB	CI Global Short-Term Bond Fund	0.5%	0.0%	63.7	63.2	3151.4%
ZCN	BMO S&P/TSX Capped Composite In	-2.5%	0.2%	574.8	-517.2	-6.1%
ZFL	BMO Long Federal Bond Index ETF	5.5%	0.0%	277.7	-232.0	-7.0%
TCLB	TD Canadian Long Term Federal Bon	4.6%	0.0%	165.3	-163.7	-9.1%
XSP	iShares Core S&P 500 Index ETF CAD	-2.1%	0.1%	415.6	-152.9	-1.5%
XQQ	iShares NASDAQ 100 Index ETF CAD	-3.1%	0.1%	308.9	-84.2	-2.9%
ZPR	BMO Laddered Preferred Share Inde	-1.6%	4.1%	133.4	-73.2	-4.9%
FSB	CI Enhanced Short Duration Bon	0.7%	0.1%	69.5	-67.4	-11.2%

HISTORICAL CREATIONS/REDEMPTIONS BY ASSET CLASS

Weekly ETF flows fall below C\$1B for the first time since May as fixed income flows slow significantly



LAST WEEK'S MOST ACTIVE ETFs

Investors traded a MONSTER C\$21.7B last week, led by Cdn equities, Cdn banks, and cash (XIU, ZEB, HISA)

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	B/A Spread (bps)	\$ Traded (CAD M)	\$ Traded vs CR/RD
XIU	iShares S&P/TSX 60 Index ETF	-2.3%	7.6%	1.5	1,656.1	477.5 x
HISA	High Interest Savings Account Fund	0.1%	0.0%	1.2	1,157.6	463.6 x
ZEB	BMO Equal Weight Banks Index ETF	-2.4%	6.0%	1.6	1,151.1	19.0 x
ZSP	BMO S&P 500 Index ETF	-1.9%	1.8%	2.3	1,096.7	2.0 x
VFV	Vanguard S&P 500 Index ETF	-1.9%	0.0%	21.8	777.8	9.3 x
CASH	Global X High Interest Savings ETF	0.1%	0.1%	1.1	587.9	10.0 x
ZCN	BMO S&P/TSX Capped Composite In	-2.5%	0.2%	1.9	574.8	1.1 x
XUS	iShares Core S&P 500 Index ETF	-1.9%	0.0%	3.4	564.6	2.6 x
XIC	iShares Core S&P/TSX Capped Comp	-2.6%	0.8%	2.0	493.0	23 x
XSP	iShares Core S&P 500 Index ETF CAD	-2.1%	0.1%	2.0	415.6	2.7 x
PSA	Purpose High Interest Savings Fund	0.1%	0.3%	1.1	405.0	8.5 x
XEG	iShares S&P/TSX Capped Energy Ind	-4.9%	7.7%	1.6	350.4	91.0 x
XQQ	iShares NASDAQ 100 Index ETF CAD	-3.1%	0.1%	7.3	308.9	3.7 x
ZMMK	BMO Money Market Fund ETF Series	0.1%	0.1%	1.1	301.6	22.0 x



EQUITY FUND FLOWS

Last Week's Net Creations/Redemptions by Strategy & Sector

Investors bought blend (C\$1,070M/+0.5%) and sold growth (-C\$450M/-1.1%)

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Blend	10,564.3	0.9%	227,876	1,069.9	0.5%	1.3%	18.5%
Value	204.2	0.1%	12,123	55.9	0.5%	1.8%	10.9%
Dividend/Income	500.8	0.1%	20,930	40.8	0.2%	1.2%	24.2%
Low Volatility	96.3	0.0%	6,782	9.1	0.1%	0.6%	8.2%
Momentum	0.5	0.0%	74	-	-	-5.8%	17.4%
Multi-Factor	8.4	0.0%	2,350	-	-	0.5%	9.3%
ESG/SRI	34.0	0.0%	6,144	-2.4	-0.0%	1.0%	-21.4%
Leverage/Inverse	552.3	0.0%	697	-4.3	-0.6%	-3.0%	-26.9%
Growth	1,618.6	0.1%	40,208	-449.3	-1.1%	0.1%	2.3%
Total	13,579.3	0.6%	317,183	719.7	0.2%	1.2%	14.7%
Preferreds	263.2	1.2%	6,323	-132.7	-2.0%	-1.4%	-6.4%

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Communications	2.6	0.1%	51	0.8	1.6%	5.2%	34.3%
Industrials	3.3	0.1%	188	1.9	1.0%	3.3%	-0.4%
Info Tech	251.6	0.1%	6,392	26.6	0.4%	2.6%	31.4%
Financials	1,800.2	0.7%	15,422	37.4	0.2%	-3.8%	-0.9%
Energy	461.8	3.0%	3,768	6.5	0.2%	0.2%	-17.1%
Thematic	119.7	0.2%	12,232	19.7	0.2%	1.0%	-8.3%
Consumer Staples	5.0	0.1%	260	-	-	-1.0%	-18.0%
Health Care	50.7	0.0%	3,739	-3.1	-0.1%	-0.1%	7.1%
Utilities	304.5	0.2%	5,002	-28.4	-0.6%	-1.6%	10.9%
Cons. Discretionary	-	0.0%	393	-3.3	-0.8%	-1.6%	14.7%
Real Estate	144.8	0.9%	3,186	-31.7	-1.0%	0.3%	6.6%
Materials	262.1	0.6%	2,849	-31.3	-1.1%	-1.8%	18.5%
Sector Subtotal	3,406.3	0.5%	53,481	-4.8	0.2%	0.5%	10.0%

Last Week's Net Creations/Redemptions by Geography

Investors added to most geographies, while once again exiting Canada

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
United States	5,477.1	0.3%	118,742	1,017.0	0.8%	2.4%	19.8%
Global/International	1,738.0	0.3%	79,451	236.2	0.3%	1.9%	19.3%
DM Regional/Country	321.0	0.0%	17,173	14.1	0.1%	0.5%	8.5%
EM Regional/Country	37.9	0.2%	4,468	1.1	0.0%	0.8%	18.9%
Canada	6,001.3	1.4%	97,349	-548.7	-0.5%	-0.8%	7.3%
Total	13,575.3	0.6%	317,183	719.7	0.2%	1.2%	14.7%

FIXED INCOME, CURRENCIES AND COMMODITIES FUND FLOWS

Last Week's Net Creations/Redemptions by Strategy & Term/Rating

Investors bought credit, universe, short-term, BBB-rated; sold Govies & long end

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Target Date	137.3	0.1%	3,836	71.6	1.9%	6.1%	147.5%
Corporate	612.2	0.6%	27,418	162.2	0.6%	1.6%	11.9%
Aggregate	4491.6	0.1%	66,575	166.7	0.3%	1.2%	24.5%
Inflation Protected	8.6	0.0%	1,020	0.8	0.1%	-7.3%	-25.1%
Convertible	1.0	0.0%	144	-	-	-0.3%	-11.4%
Bank Loans	40.6	0.1%	995	-16.8	-1.6%	-2.8%	0.8%
Government	1034.5	0.1%	19,796	-358.1	-1.8%	0.6%	13.5%
FI Subtotal	6,325.8	0.2%	119,784	26.6	0.0%	1.3%	24.7%
Commodity	628.4	0.4%	3,106	34.2	1.1%	3.0%	-0.9%
Cash/Currency	2771.6	0.3%	21,556	-35.4	-0.2%	0.5%	4.4%
FICC Total	9,725.8		144,446	25.4	0.0%		

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
IG BBB or higher	981.2	0.5%	48,841	196.8	0.4%	2.2%	27.7%
High Yield	90.0	0.0%	8,992	-19.7	-0.2%	-1.5%	22.2%
IG A or Higher	2587.2	0.1%	61,951	-150.5	-0.2%	1.1%	22.9%
FI Total	3,658.4	0.2%	119,784	26.6	0.0%	1.3%	24.7%

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Short-Term	813.7	0.1%	16,106	208.0	1.3%	2.1%	4.8%
Mixed	875.7	0.3%	63,229	156.4	0.3%	1.2%	24.9%
Intermediate	299.7	0.1%	17,853	26.5	0.2%	1.1%	12.5%
Ultra Short	1021.2	0.2%	9,981	-14.7	-0.1%	4.9%	96.2%
Long-Term	648.1	0.3%	12,615	-349.7	-2.8%	-1.6%	37.3%
FI Total	3,658.4	0.2%	119,784	26.6	0.0%	1.3%	24.7%

Last Week's Net Commodity-Linked Creations/Redemptions

Precious metals and energy ETFs see strong buying last week

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Natural Gas	324.4	0.7%	222	23.2	11.1%	28.4%	59.1%
Crude Oil	215.6	0.9%	163	6.3	3.9%	-5.1%	-32.1%
Energy Subtotal	540.0	0.7%	384	29.4	8.0%	12.8%	11.7%
Silver	35.0	0.1%	381	3.5	0.9%	0.9%	-3.3%
Gold	49.3	0.2%	2,190	4.6	0.2%	1.8%	-6.2%
Broad Based	4.0	0.0%	150	-3.3	-2.1%	-0.9%	40.5%
Commodity Total	628.4	0.4%	3,106	34.2	1.1%	3.0%	-0.9%



CRYPTOCURRENCY FUND FLOWS

Last Week's Net Creations/Redemptions by Strategy

Crypto bulls add to both Ether and Bitcoin ETFs last week

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Ether	135.3	0.3%	1,577	13.2	0.8%	1.6%	-0.8%
Bitcoin	294.8	0.2%	4,662	16.5	0.3%	1.2%	16.4%
Multi-Crypto	0.9	0.1%	57	-0.1	-0.2%	6.2%	-10.0%
Total	431.0	0.2%	6,296	29.6	0.4%	1.3%	11.0%

Last Week's Net Creations/Redemptions by Provider

Crypto ETFs from 3iQ and Evolve saw the largest inflows (as % of AuM)

	# of Crypto ETFs	AUM (CAD M)	Market Share	Net C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Purpose	14	3,062	48.6%	0.1	0.0%	0.5%	-13.8%
CI ETFs	6	1,952	31.0%	-13.6	-0.6%	0.0%	10.9%
Fidelity	3	535	8.5%	-	-	3.9%	373.5%
3iQ	2	378	6.0%	24.9	6.5%	7.0%	63.6%
Evolve	6	351	5.6%	17.8	5.1%	8.1%	8.0%
Global X	1	18	0.3%	0.4	2.3%	-4.5%	18.9%
Total	32	6,296	100.0%	29.6	0.4%	1.3%	11.0%

ACTIVE STRATEGIES FUND FLOWS

Last Week's Net Creations/Redemptions by Strategy

Flows into active ETFs slowdown significantly

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Mixed Allocation	358.3	0.3%	17,766	109.6	0.6%	3.3%	30.1%
Factor/Multi-Factor	126.2	0.0%	8,997	40.5	0.4%	2.9%	32.9%
Dividend/Income	574.4	0.1%	12,716	53.1	0.4%	1.8%	28.6%
True Active	2,538.0	0.1%	92,774	67.6	0.1%	1.9%	25.6%
Proprietary	22.0	0.1%	2,775	-1.7	-0.1%	-0.3%	-17.9%
Smart Beta	7.5	0.1%	653	-7.0	-1.0%	-2.2%	-18.9%
Total	3,626.4	0.1%	135,682	262.1	0.2%	1.7%	23.2%

Last Week's Net Creations/Redemptions by Asset Class

Within active, only equity ETFs were broadly bought

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	Net C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Mixed Allocation	278.0	0.2%	18,245	98.0	0.5%	3.2%	32.5%
Specialty/Alternative	93.5	0.2%	4,090	21.9	0.5%	2.1%	7.9%
Equity	1,573.7	0.1%	70,174	231.8	0.3%	1.9%	19.7%
Fixed Income	1,676.2	0.1%	42,958	-85.8	-0.2%	2.0%	33.9%
Commodity	5.1	0.0%	214	-3.8	-1.7%	-0.9%	22.1%
Total	3,626.4	0.1%	135,682	262.1	0.2%	1.7%	23.2%

ESG-FOCUSED FUND FLOWS

Last Week's Net Creations/Redemptions by ESG Attribute

Institutionals step away from trading ESG ETFs

	\$ Traded (CAD M)	Short Int (% of SO)	AUM (CAD M)	1-Week C/R (CAD M)	Net C/R (% AUM)		
					1-Week	1-Month	1-Year
Climate Change	0.9	0.1%	136	2.7	2.0%	1.9%	6.1%
Socially Responsible	12.9	0.0%	1,539	4.2	0.3%	1.4%	12.7%
Broad ESG	72.0	0.0%	13,627	20.2	0.1%	1.0%	3.3%
Clean Energy	1.1	0.1%	127	0.1	0.1%	1.8%	4.6%
Env. Friendly	5.9	0.0%	1,553	-1.4	-0.1%	0.3%	-1.8%
Total	92.8	0.1%	16,981	25.9	0.2%	1.3%	5.0%



PROVIDER MARKET SHARE

41 Providers have total AuM of C\$496B (+29% YoY)

Providers	# of ETFs	AUM (CAD M)	Market Share	Net C/R (% AUM)		
				1-Week	1-Month	1-Year
iShares	164	125,145	25.2%	0.2%	1.1%	11.7%
BMO GAM	194	115,228	23.2%	-0.1%	0.1%	10.8%
Vanguard	37	77,163	15.6%	0.4%	2.0%	20.2%
Global X	132	35,206	7.1%	0.1%	1.5%	20.9%
CI ETFs	130	21,178	4.3%	-0.1%	-0.2%	0.0%
TD AM	48	16,625	3.4%	-0.2%	2.1%	40.7%
Mackenzie	55	14,617	2.9%	0.0%	-0.1%	3.0%
National Bank	16	12,217	2.5%	0.0%	0.3%	15.7%
Fidelity	54	11,961	2.4%	1.5%	8.5%	146.6%
Purpose	71	10,486	2.1%	-0.4%	0.6%	2.4%
RBC GAM	66	7,554	1.5%	0.6%	3.1%	48.9%
Invesco	59	6,346	1.3%	0.1%	1.6%	9.1%
1832 Asset Management	33	6,105	1.2%	-0.2%	0.2%	46.0%
Hamilton Capital	21	5,244	1.1%	0.8%	3.5%	83.4%
Other (27)	360	30,603	6.2%	0.3%	2.0%	21.1%
Total	1,440	495,678	100.0%	0.1%	1.2%	16.6%

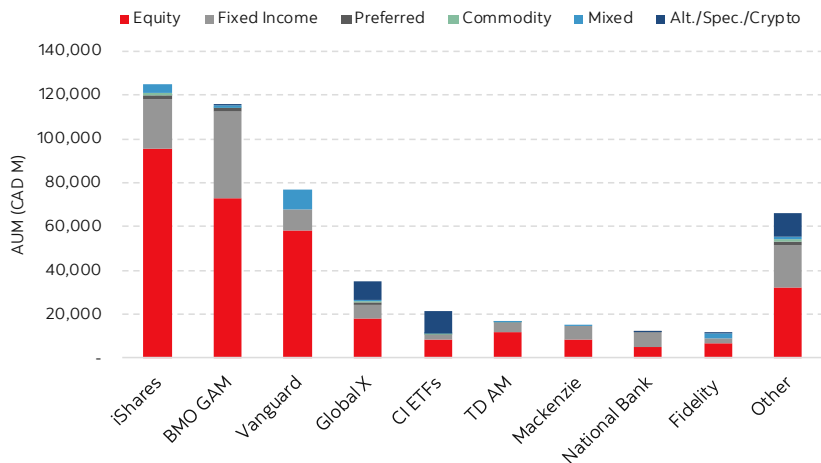
LAST WEEK'S LARGEST NET CREATIONS/REDEMPTIONS BY PROVIDER

Quadravest and Tralucet gathered the most assets (as % AUM) last week

Providers	Average Fund Size (CAD M)	AUM (CAD M)	Net C/R (CAD M)	Net C/R (% AUM)		
				1-Week	1-Month	1-Year
Tralucet ETFs	10.5	10.5	1.5	16.1%	34.9%	N/A
Quadravest	6.9	6.9	0.6	9.7%	66.4%	N/A
3iQ	188.9	377.9	24.9	6.5%	7.0%	63.6%
Fidelity	221.5	11,960.6	182.1	1.5%	8.5%	146.6%
Arrow Capital	24.2	96.9	1.3	1.3%	9.0%	90.9%
Brompton	48.2	915.0	10.2	1.1%	5.2%	41.8%
Hamilton Capital	249.7	5,243.9	44.6	0.8%	3.5%	83.4%
Russell Investments	20.9	62.8	0.5	0.8%	-0.5%	-13.7%
IA Clarington	15.2	121.9	-3.0	-2.4%	-2.3%	5.9%
Purpose	147.7	10,486.5	-60.8	-0.4%	0.6%	2.4%
Ninepoint	85.3	938.2	-3.5	-0.3%	-0.6%	-22.7%
Franklin Liberty	59.8	1,614.8	-5.0	-0.3%	1.1%	21.5%
TD AM	346.4	16,625.0	-41.5	-0.2%	2.1%	40.7%
AGF Investments	80.1	960.7	-2.2	-0.2%	-0.2%	-21.4%
Middlefield	85.9	515.4	-0.8	-0.2%	-0.5%	-9.4%
1832 Asset Management	185.0	6,104.6	-9.3	-0.2%	0.2%	46.0%

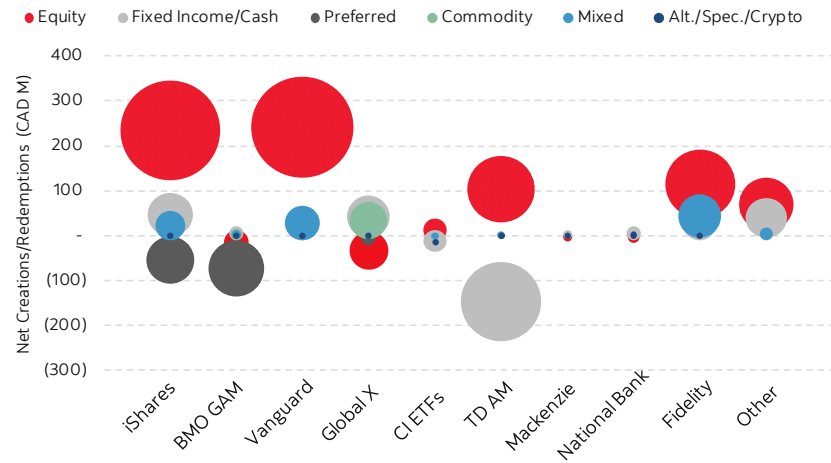
ASSET MIX BY PROVIDER

The five largest providers now account for ~75% of the ETF Canadian landscape



WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASS

Preferred and fixed income ETFs from top providers saw elevated redemptions



Contacts

Daniela Fajardo, MBA

Associate Director, ETF Services
416.860.1023
Scotia Capital Inc. Canada
daniela.fajardogarcia@scotiabank.com

Alex Perel, CFA

MD & Head of ETF services
416.862.3158
Scotia Capital Inc. Canada
alex.perel@scotiabank.com

Morley Conn, CFA

Director, ETF Services
416.863.7882
Scotia Capital Inc. Canada
morley.conn@scotiabank.com

Winnie Jiang, CFA

Associate Director, ETF Services
416.863.7295
Scotia Capital Inc. Canada
winnie.jiang@scotiabank.com

Danielle Tygesen

Analyst, ETF Services
416.863.5902
Scotia Capital Inc. Canada
danielle.tygesen@scotiabank.com

© The Bank of Nova Scotia 2023

To unsubscribe from this specific note/publication, email etfcommentary@scotiabank.com

TM Trademark of The Bank of Nova Scotia. Used under license, where applicable. Scotiabank, together with "Global Banking and Markets", is a marketing name for the global corporate and investment banking and capital markets businesses of The Bank of Nova Scotia and certain of its affiliates in the countries where they operate, including Scotia Capital Inc., Scotia Capital (USA) Inc., Scotiabanc Inc.; Citadel Hill Advisors L.L.C.; The Bank of Nova Scotia Trust Company of New York; Scotiabank Europe plc; Scotiabank (Ireland) Designated Activity Company; Scotiabank Inverlat S.A., Institución de Banca Múltiple, Scotia Inverlat Casa de Bolsa S.A. de C.V., Scotia Inverlat Derivados S.A. de C.V. – all members of the Scotiabank Group and authorized users of the mark. The Bank of Nova Scotia is incorporated in Canada with limited liability. Scotia Capital Inc. is a member of CIPF. Scotia Capital (USA) Inc. is a registered broker-dealer with the SEC and is a member of the NASD and SIPC. The Bank of Nova Scotia is authorised and regulated by the Office of the Superintendent of Financial Institutions of Canada. Scotia Capital Inc. is authorised and regulated by the Investment Industry Regulatory Organization of Canada. The Bank of Nova Scotia (London) and Scotiabank Europe plc. are authorised by the UK Prudential Regulation Authority. The Bank of Nova Scotia is subject to regulation by the UK Financial Conduct Authority and limited regulation by the UK Prudential Regulation Authority. Scotiabank Europe plc is regulated by the UK Financial Conduct Authority and the UK Prudential Regulation Authority. Details about the extent of The Bank of Nova Scotia's regulation by the UK Prudential Regulation Authority are available upon request. Scotiabank (Ireland) Designated Activity Company is authorised and regulated by the CBI Scotiabank Inverlat, S.A., Scotia Inverlat Casa de Bolsa, S.A. de C.V., and Scotia Derivados, S.A. de C.V., are each authorized and regulated by the Mexican financial authorities.

This publication is not a research report and is considered a marketing communication only. Consequently this commentary is not governed by rules applicable to the publication and distribution of research reports, including relevant restrictions or disclosures required to be included in research reports and has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research. This publication is not meant to provide information sufficient upon to base an investment decision, or to replace any due diligence or analytical work required by you in making investment decisions. The information contained in this publication is not subject to any prohibition in the EU on dealing ahead of the dissemination of investment research. This communication has been prepared and distributed by staff of Scotia Capital Inc.'s Institutional Equity Sales and Trading Desk (a Canadian Investment Dealer, member of IIROC) solely for the use of sophisticated institutional investors. Past performance or simulated past performance is not a reliable indicator of future results. Forecasts are not a reliable indicator of future performance. The opinions and statements contained herein are intended for information purposes only and are subject to change without notice. In addition, the opinions and statements contained herein are based on information taken from sources believed to be reliable, but no representation or warranty, express or implied, is made as to their accuracy, completeness, or timeliness. Furthermore, the opinions expressed herein represent the personal views of the writer and may not be shared by other members of the Institutional Equity Desk or other areas, units, divisions or affiliates of Scotia Capital Inc. Additionally, either the Institutional Equity Desk or other areas or divisions could trade in accordance with the views expressed or trade against these views. Any transactions by US Institutional Investors in any security mentioned or referenced in this publication cannot be effected through Scotia Capital Inc. and must be executed with a U.S. broker-dealer, including Scotia Capital (USA) Inc., an affiliate of Scotia Capital Inc. Scotia Capital (USA) Inc. is a registered broker-dealer with the SEC and is a member of FINRA, the NYSE and SIPC.

Scotia Capital Inc., its directors, officers, employees, affiliates or clients may currently or from time to time own or hold interests in long or short positions in the securities referred to herein, and may at any time make purchases or sales of these securities as principal or agent. Scotia Capital Inc. or its affiliates may have provided or may provide investment banking, capital markets advice or other services to the companies referred to in this communication. This email should not be construed as investment advice or as an offer to sell or a solicitation of an offer to buy any securities or other financial instruments. Neither Scotia Capital Inc. nor any of its officers, directors, partners, employees or affiliates accepts any liability for any direct or consequential loss arising from this publication or its contents. Scotia Capital Inc. recommends that investors independently evaluate each issuer and security discussed in this publication, and consult with any advisors they deem necessary prior to making any investment.

If you are subject to the prohibition on third-party benefits in relation to portfolio management and independent investment advice under MIFID II (Directive 2014/65/EU and the accompanying Regulation (EU) No 600/2014) or the UK Markets in Financial Instruments (Amendment)(EU Exit) Regulations 2018, each as amended from time to time, and should not have received this communication, please advise us in writing at trade.supervision@scotiabank.com

Redistribution or onward forwarding of this email is strictly prohibited. If you believe that this email was sent to you in error, please forward a message to that effect as soon as practicable to trade.supervision@scotiabank.com

The information is not advice, a recommendation, or an offer. The information provided herein is intended for general circulation and does not take into account specific investment objectives, financial circumstances or the particular needs of any recipient. It does not constitute an offer or solicitation to buy or sell or subscribe for any security or financial instrument or investment product, or to enter into a transaction or participate in any particular trading or investment strategy.

The information is not for Retail; no assurances as to results. Trading in securities involves risks, including the risk of loss. This document and the products and strategies described herein (collectively, the "Products") are intended for use only by sophisticated professional and institutional investors as may be defined in the respective jurisdictions. Investors should consult their financial, legal and tax advisors and determine that the Products are suitable for their risk tolerance and investment objectives prior to engaging in any activity related to the Products. Scotiabank cannot provide any assurances that the Products will achieve their intended results or that the Products will outperform other similar products or strategies. While this document describes how the Products are intended to work under normal market conditions, the actual performance of the Products may not achieve their intended results, particularly during periods of unusually high volatility, unusually low liquidity and/or other extraordinary market conditions. Nothing in this document should be construed as tax or investment advice and no description of the Products-related transactions. If there are any matters arising from, or in connection with the materials, investors should contact their Scotiabank representative to seek further clarification.

1GBM&T does not deal with retail clients.