

FOR THE WEEK ENDING OCTOBER 6, 2023

**41**  
ETF Providers  
(+3% YoY)

**1353**  
ETFs  
(+15% YoY)

**\$377B**  
CAD AUM  
(+18% YoY)

**\$12.1**  
Traded  
(Last Week)

**WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASSES**

Equity (C\$410M/+0.2%) and cash (C\$394M/+1.8%) led inflows last week

	\$ 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	7,034.9	1.6%	236,227	409.8	0.2%	0.4%	7.5%
Cash	1,239.0	0.3%	22,447	393.8	1.8%	4.4%	92.9%
Fixed Income	2,286.4	0.3%	91,872	254.2	0.3%	0.8%	25.0%
Mixed Allocation	185.5	0.1%	13,414	27.0	0.2%	1.5%	14.8%
Cryptocurrency	167.4	0.8%	2,412	17.9	0.8%	1.5%	-9.7%
Specialty/Alternative	99.2	1.1%	2,932	4.0	0.1%	-0.5%	10.6%
Preferreds	145.8	1.1%	5,544	-33.7	-0.6%	-2.0%	-7.8%
Commodity	920.7	0.8%	2,540	-53.3	-2.0%	-2.8%	2.2%
<b>Total</b>	<b>12,078.9</b>	<b>1.0%</b>	<b>377,387</b>	<b>1,019.7</b>	<b>0.3%</b>	<b>0.7%</b>	<b>14.5%</b>

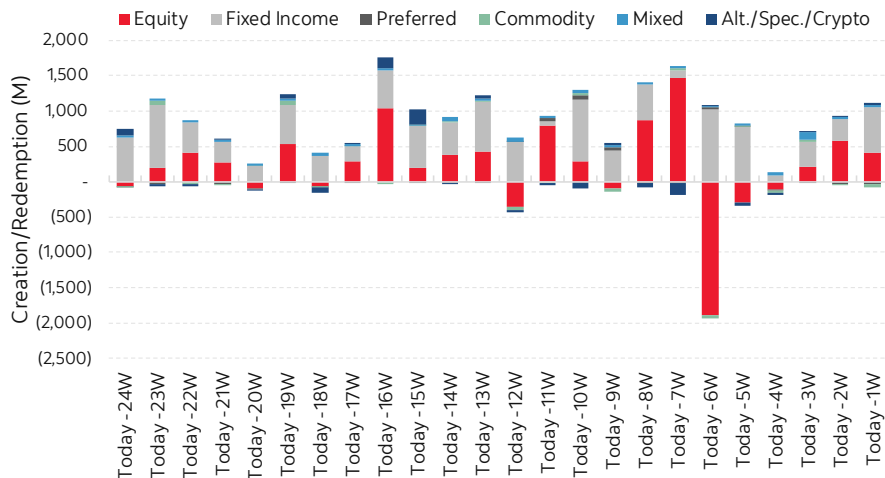
**WEEKLY LARGEST CREATIONS/REDEMPTIONS**

Inflows dominated by cash & money market (CASH, CSAV, ZMMK) and ESG bonds (NSCB). While EM & global securities (QEBL, PZW) led exits.

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	\$ Traded (CAD M)	Net C/R (CAD M)	Net C/R (% of AUM)
NSCB	NBI Sustainable Canadian Bond ETF	-0.8%	0.0%	199.1	<b>199.1</b>	12.6%
CASH	Horizons High Interest Savings ETF	0.1%	0.2%	280.8	<b>146.3</b>	4.1%
CSAV	CI High Interest Savings ETF	0.1%	0.1%	257.1	<b>137.7</b>	1.6%
ZMMK	BMO Money Market Fund ETF Series	0.1%	0.7%	99.2	<b>61.2</b>	5.9%
XIC	iShares Core S&P/TSX Capped Comp	-1.4%	7.9%	223.6	<b>60.7</b>	0.7%
PSU/U	Purpose US Cash Fund	0.1%	1.5%	130.6	<b>55.0</b>	8.3%
ZCN	BMO S&P/TSX Capped Composite Inc	-1.5%	0.7%	88.8	<b>53.9</b>	0.8%
QEBL	Mackenzie Emerging Markets Local Ci	-1.2%	0.0%	117.7	<b>-118.3</b>	-25.5%
PZW	Invesco FTSE RAFI Global Small	-0.8%	0.1%	0.3	<b>-64.7</b>	-76.3%
XSB	iShares Core Canadian Short Term Bc	-0.2%	0.1%	83.5	<b>-58.2</b>	-2.5%
HXS	Horizons S&P 500 Index ETF	1.1%	0.3%	14.7	<b>-47.1</b>	-2.2%
COW	iShares Global Agriculture Index ETF	-2.2%	0.0%	49.6	<b>-45.5</b>	-12.3%
XUT	iShares S&P/TSX Capped Utilities Ind	-0.2%	9.3%	110.4	<b>-40.6</b>	-20.5%
XBB	iShares Core Canadian Universe Bond	-0.7%	0.2%	163.3	<b>-39.5</b>	-0.7%

**HISTORICAL CREATIONS/REDEMPTIONS BY ASSET CLASS**

Weekly ETF flows continued rising (+\$1.02B) as investors poured into “quality” cash & fixed income ETFs



**LAST WEEK'S MOST ACTIVE ETFs**

Investors traded C\$12.1B last week, led by Cdn banks & equities, and Nat gas (ZEB, XIU, HND, HNU)

Ticker	Name	Returns (1-Week)	Short Int (% of SO)	B/A Spread (bps)	\$ Traded (CAD M)	\$ Traded vs CR/RD
ZEB	BMO Equal Weight Banks Index ETF	-2.5%	2.4%	1.5	<b>1,137.9</b>	72.4 x
XIU	iShares S&P/TSX 60 Index ETF	-1.5%	20.8%	1.4	<b>830.8</b>	16.8 x
HND	BetaPro Natural Gas Inverse Le	-23.4%	12.3%	12.3	<b>336.6</b>	20.9 x
HNU	BetaPro Natural Gas Leveraged Daily	25.6%	2.2%	2.2	<b>321.1</b>	11.0 x
PSA	Purpose High Interest Savings Fund	0.1%	0.1%	1.1	<b>285.4</b>	38.0 x
CASH	Horizons High Interest Savings ETF	0.1%	0.2%	1.4	<b>280.8</b>	1.9 x
XSP	iShares Core S&P 500 Index ETF CAD	0.5%	0.1%	1.8	<b>263.5</b>	58.8 x
CSAV	CI High Interest Savings ETF	0.1%	0.1%	1.2	<b>257.1</b>	1.9 x
XIC	iShares Core S&P/TSX Capped Comp	-1.4%	7.9%	1.6	<b>223.6</b>	4 x
NSCB	NBI Sustainable Canadian Bond ETF	-0.8%	0.0%	7.9	<b>199.1</b>	1.0 x
XEG	iShares S&P/TSX Capped Energy Inde	-4.8%	8.9%	1.5	<b>183.8</b>	40.0 x
VFV	Vanguard S&P 500 Index ETF	1.1%	0.1%	3.0	<b>181.4</b>	4.6 x
XBB	iShares Core Canadian Universe Bond	-0.7%	0.2%	1.6	<b>163.3</b>	4.1 x
HQU	BetaPro NASDAQ-100 2x Daily Bull E	3.3%	0.4%	1.4	<b>156.4</b>	N/A

## EQUITY FUND FLOWS

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

Investors bought blend (C\$309M/+0.2%) and financials (C\$56M/+0.4%) equity 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
					Leverage/Inverse	423.6	0.0%
ESG/SRI	39.0	0.0%	6,467	25.6	0.4%	0.6%	66.3%
Dividend/Income	292.8	0.1%	14,267	30.3	0.2%	0.9%	15.9%
Blend	5,450.3	2.3%	168,695	308.9	0.2%	0.4%	7.9%
Value	70.9	0.2%	5,468	9.6	0.2%	0.2%	1.2%
Growth	667.2	0.5%	33,313	33.9	0.1%	0.4%	-2.0%
Low Volatility	86.3	0.0%	5,371	0.3	0.0%	0.2%	12.3%
Momentum	0.3	0.0%	52	-	-	-	-9.4%
Multi-Factor	39.5	0.0%	1,905	-1.6	-0.1%	-0.1%	-12.1%
<b>Total</b>	<b>7,070.0</b>	<b>1.6%</b>	<b>236,227</b>	<b>409.8</b>	<b>0.2%</b>	<b>0.4%</b>	<b>7.5%</b>
Preferreds	145.8	1.1%	5,544	-33.7	-0.6%	-2.0%	-7.8%

	\$ 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
					Consumer Staples	26.7	0.2%
Materials	140.1	0.6%	1,872	12.4	0.7%	1.3%	-3.0%
Financials	1,489.7	0.6%	12,960	55.6	0.4%	2.7%	24.5%
Cons. Discretionary	-	0.0%	343	1.1	0.3%	0.1%	25.5%
Info Tech	65.8	0.2%	4,285	11.2	0.3%	0.4%	20.2%
Communications	1.1	0.1%	29	-	-	-	26.4%
Real Estate	115.7	0.9%	2,576	-4.4	-0.2%	-0.7%	-0.7%
Energy	265.3	4.0%	3,822	-9.7	-0.2%	-0.2%	-16.1%
Thematic	128.7	0.1%	12,846	-49.7	-0.4%	-0.4%	51.1%
Health Care	41.9	0.1%	2,969	-30.2	-1.0%	-0.9%	14.1%
Industrials	2.2	0.1%	158	-2.0	-1.3%	-3.1%	3.0%
Utilities	184.7	1.0%	2,418	-31.6	-1.3%	-1.7%	15.8%
<b>Sector Subtotal</b>	<b>2,462.1</b>	<b>1.0%</b>	<b>44,525</b>	<b>-41.1</b>	<b>0.2%</b>	<b>0.4%</b>	<b>8.0%</b>

### Last Week's Net Creations/Redemptions by Geography

Investors poured into equities from most regions, focusing in 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
					Canada	3,793.1	4.0%
DM Regional/Country	240.6	0.1%	14,175	42.6	0.3%	0.3%	10.7%
United States	2,126.0	0.1%	81,057	80.0	0.1%	0.1%	1.8%
Global/International	857.3	0.2%	58,433	23.3	0.0%	0.2%	10.8%
EM Regional/Country	17.9	0.0%	3,526	-1.5	-0.0%	0.6%	424.7%
<b>Total</b>	<b>7,034.9</b>	<b>1.6%</b>	<b>236,227</b>	<b>409.8</b>	<b>0.2%</b>	<b>0.4%</b>	<b>7.5%</b>

## FIXED INCOME, CURRENCIES AND COMMODITIES FUND FLOWS

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

Fixed income investors bought cash, universe, target date, & barbell (long- & ultra-short)

	\$ 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	44.4	0.4%
Aggregate	2371.2	0.2%	49,236	247.7	0.5%	2.5%	36.8%
Bank Loans	6.4	0.1%	966	1.2	0.1%	-1.3%	-23.3%
Convertible	1.4	0.0%	149	-	-	-0.8%	-8.4%
Corporate	319.3	0.6%	22,173	-5.1	-0.0%	-1.0%	14.6%
Government	675.0	0.2%	17,475	-24.6	-0.1%	0.6%	58.4%
Inflation Protected	11.4	0.0%	848	-3.6	-0.4%	-1.3%	-5.6%
<b>FI Subtotal</b>	<b>3,429.0</b>	<b>0.3%</b>	<b>91,872</b>	<b>254.2</b>	<b>0.3%</b>	<b>0.8%</b>	<b>25.0%</b>
Cash/Currency	1239.0	0.3%	22,447	393.8	1.8%	4.4%	92.9%
Commodity	920.7	0.8%	2,540	-53.3	-2.0%	-2.8%	2.2%
<b>FICC Total</b>	<b>5,588.8</b>		<b>116,859</b>	<b>594.7</b>	<b>0.5%</b>		

	\$ 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
					High Yield	241.3	0.1%
IG A or Higher	1204.4	0.2%	48,313	130.6	0.3%	0.8%	28.1%
IG BBB or higher	840.7	0.4%	36,140	-56.8	-0.2%	0.4%	17.6%
<b>FI Total</b>	<b>2,286.4</b>	<b>0.3%</b>	<b>91,872</b>	<b>254.2</b>	<b>0.3%</b>	<b>0.8%</b>	<b>25.0%</b>

	\$ 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
					Ultra Short	368.0	0.7%
Long-Term	352.0	0.2%	8,429	134.0	1.6%	3.1%	49.9%
Intermediate	199.8	0.1%	15,541	41.0	0.3%	0.6%	43.1%
Mixed	1000.8	0.4%	48,017	39.1	0.1%	0.6%	22.9%
Short-Term	365.9	0.2%	14,704	-67.6	-0.5%	-3.0%	-2.9%
<b>FI Total</b>	<b>2,286.4</b>	<b>0.3%</b>	<b>91,872</b>	<b>254.2</b>	<b>0.3%</b>	<b>0.8%</b>	<b>25.0%</b>

### Last Week's Net Commodity-Linked Creations/Redemptions

After strong inflows, traders now sell out of energy ETFs – gold keeps bleeding

	\$ 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	659.3	2.8%
Crude Oil	209.4	3.6%	190	-27.7	-12.8%	-17.2%	-21.8%
<b>Energy Subtotal</b>	<b>868.7</b>	<b>3.2%</b>	<b>440</b>	<b>-40.7</b>	<b>-9.1%</b>	<b>-13.4%</b>	<b>30.3%</b>
Silver	26.1	0.4%	293	3.2	1.0%	1.4%	-8.7%
Gold	23.2	0.1%	1,666	-16.8	-1.0%	-2.3%	-8.3%
<b>Broad Based</b>	<b>2.7</b>	<b>0.1%</b>	<b>141</b>	<b>1.0</b>	<b>0.7%</b>	<b>19.6%</b>	<b>448.6%</b>
<b>Commodity Total</b>	<b>920.7</b>	<b>0.8%</b>	<b>2,540</b>	<b>-53.3</b>	<b>-2.0%</b>	<b>-2.8%</b>	<b>2.2%</b>



## CRYPTOCURRENCY FUND FLOWS

### Last Week's Net Creations/Redemptions by Strategy

Bitcoin seeing largest inflows since BlackRock US filed for BTC spot ETF

	\$ 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
Bitcoin	140.0	0.7%	1,667	18.8	1.2%	3.0%	-6.7%
Multi-Crypto	0.1	1.2%	30	-	-	-0.8%	22.5%
Ether	27.3	1.0%	714	-0.9	-0.1%	-1.4%	-16.7%
<b>Total</b>	<b>167.4</b>	<b>0.8%</b>	<b>2,412</b>	<b>17.9</b>	<b>0.8%</b>	<b>1.5%</b>	<b>-9.7%</b>

### Last Week's Net Creations/Redemptions by Provider

Crypto ETFs from CI, Purpose, 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	13	1,257	52.1%	7.5	0.6%	2.4%	8.5%
CI ETFs	6	792	32.9%	9.0	1.2%	0.9%	-1.2%
Evolve	6	149	6.2%	2.3	1.6%	1.2%	-5.7%
3iQ	2	102	4.2%	-0.5	-0.5%	-0.9%	-84.6%
Fidelity	3	80	3.3%	-	-	-0.8%	78.5%
Horizons	1	31	1.3%	-0.3	-1.0%	0.1%	-11.1%
<b>Total</b>	<b>31</b>	<b>2,412</b>	<b>100.0%</b>	<b>17.9</b>	<b>0.8%</b>	<b>1.5%</b>	<b>-9.7%</b>

## ACTIVE STRATEGIES FUND FLOWS

### Last Week's Net Creations/Redemptions by Strategy

Despite smart beta/proprietary outflows, active ETFs keep attracting elevated inflows

	\$ 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
Dividend/Income	281.9	0.2%	9,229	50.5	0.5%	0.9%	21.9%
True Active	1,451.2	0.1%	67,360	354.7	0.5%	1.4%	19.3%
Mixed Allocation	170.1	0.1%	12,260	36.3	0.3%	1.5%	16.5%
Factor/Multi-Factor	65.4	0.1%	5,958	15.0	0.3%	0.2%	-1.6%
Smart Beta	5.7	0.1%	655	-5.2	-0.8%	-1.1%	-50.1%
Proprietary	62.5	0.1%	2,801	-60.4	-2.1%	-2.4%	-7.9%
<b>Total</b>	<b>2,036.8</b>	<b>0.1%</b>	<b>98,263</b>	<b>390.8</b>	<b>0.4%</b>	<b>3.3%</b>	<b>32.7%</b>

### Last Week's Net Creations/Redemptions by Asset Class

Within active, investors bought fixed income funds with true active strategies

	\$ 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
Fixed Income	847.2	0.1%	30,912	275.3	0.9%	1.9%	18.9%
Commodity	3.4	0.1%	201	0.8	0.4%	12.9%	104.8%
Specialty/Alternative	88.0	0.1%	3,168	6.9	0.2%	-0.7%	10.5%
Mixed Allocation	185.2	0.1%	13,393	27.5	0.2%	1.6%	15.0%
Equity	913.0	0.1%	50,588	80.4	0.2%	0.7%	14.5%
<b>Total</b>	<b>2,036.8</b>	<b>0.1%</b>	<b>98,263</b>	<b>390.8</b>	<b>0.4%</b>	<b>3.3%</b>	<b>32.7%</b>

## ESG-FOCUSED FUND FLOWS

### Last Week's Net Creations/Redemptions by ESG Attribute

Institutionals back? NSCB single-handedly drove ESG flows last week (+\$200M)

	\$ 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
Broad ESG	259.4	0.1%	11,966	214.3	1.8%	1.8%	79.2%
Env. Friendly	15.9	0.1%	1,337	12.9	1.0%	1.2%	-2.6%
Socially Responsible	9.1	0.0%	1,155	-	-	-0.7%	7.8%
Climate Change	1.5	0.4%	119	-1.4	-1.2%	0.6%	-5.4%
Clean Energy	2.2	0.1%	116	-3.5	-2.8%	-3.6%	-5.8%
<b>Total</b>	<b>288.2</b>	<b>0.1%</b>	<b>14,694</b>	<b>222.3</b>	<b>1.5%</b>	<b>-0.2%</b>	<b>14.6%</b>



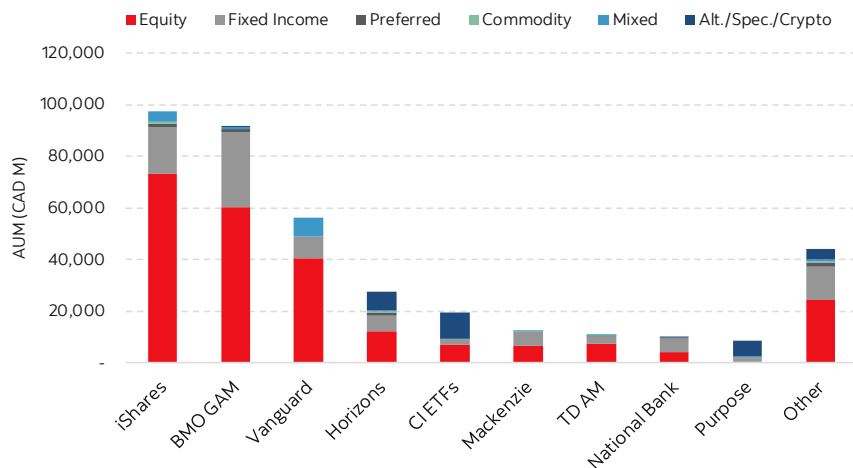
### PROVIDER MARKET SHARE

41 Providers have total AuM of C\$377B (+18% YoY)

Providers	# of ETFs	AUM (CAD M)	Market Share	Net C/R (% AUM)		
				1-Week	1-Month	1-Year
iShares	170	97,345	25.8%	0.0%	-0.2%	5.0%
BMO GAM	193	91,334	24.2%	0.4%	0.8%	9.9%
Vanguard	37	56,272	14.9%	0.2%	1.2%	13.1%
Horizons	118	27,470	7.3%	0.3%	0.5%	24.3%
CI ETFs	135	19,486	5.2%	0.4%	1.0%	39.8%
Mackenzie	48	12,354	3.3%	-1.0%	-0.9%	1.8%
TD AM	47	10,487	2.8%	0.6%	1.8%	30.4%
National Bank	15	10,052	2.7%	1.9%	2.3%	72.1%
Purpose	67	8,434	2.2%	0.4%	3.5%	39.7%
RBC GAM	49	5,082	1.3%	1.5%	6.5%	50.4%
Invesco	56	4,956	1.3%	-1.7%	-2.3%	20.1%
Fidelity	43	4,557	1.2%	1.1%	3.4%	51.0%
Harvest Portfolios	30	3,394	0.9%	0.1%	1.4%	30.0%
Evolve	51	3,336	0.9%	0.9%	1.8%	62.0%
Other (27)	294	22,830	6.0%	0.4%	0.7%	9.7%
<b>Total</b>	<b>1,353</b>	<b>377,387</b>	<b>100.0%</b>	<b>0.3%</b>	<b>0.7%</b>	<b>14.5%</b>

### ASSET MIX BY PROVIDER

The five largest providers account for ~77% of the ETF Canadian landscape



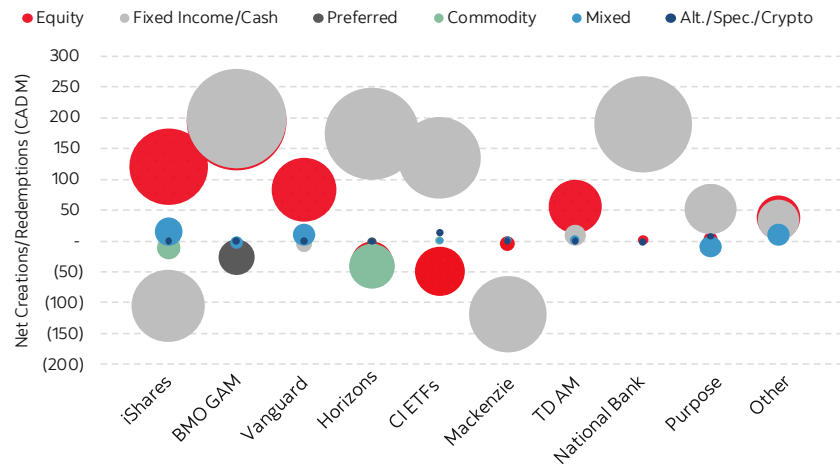
### LAST WEEK'S LARGEST NET CREATIONS/REDEMPTIONS BY PROVIDER

Forstrong and Desjardins gathered the most assets (as % of 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
Forstrong ETFs	7.9	31.4	27.4	<b>714.7%</b>	697.5%	N/A
Desjardins	86.7	1,734.4	40.6	<b>2.4%</b>	3.0%	-0.2%
National Bank	670.1	10,051.8	190.4	<b>1.9%</b>	2.3%	72.1%
RBC GAM	103.7	5,081.9	76.1	<b>1.5%</b>	6.5%	50.4%
Brompton	38.2	612.0	6.9	<b>1.1%</b>	2.8%	28.2%
Fidelity	106.0	4,556.9	47.9	<b>1.1%</b>	3.4%	51.0%
Evolve	65.4	3,336.3	49.7	<b>0.9%</b>	1.8%	62.0%
TD AM	223.1	10,487.1	66.8	<b>0.6%</b>	1.8%	30.4%
Invesco	88.5	4,955.8	-88.4	<b>-1.7%</b>	-2.3%	20.1%
Russell Investments	21.0	63.1	-0.8	<b>-1.2%</b>	-2.4%	50.8%
FT Portfolio	13.7	370.9	-4.2	<b>-1.1%</b>	1.0%	-10.7%
Accelerate Financial	15.8	63.1	-0.6	<b>-1.0%</b>	-3.4%	-7.3%
Mackenzie	257.4	12,354.3	-121.6	<b>-1.0%</b>	-0.9%	1.8%
Dynamic	139.1	1,807.8	-15.7	<b>-0.9%</b>	-1.6%	-12.0%
Middlefield	36.3	217.7	-1.5	<b>-0.7%</b>	-2.1%	-3.0%
3iQ	51.0	102.0	-0.5	<b>-0.5%</b>	-0.9%	-84.6%

### WEEKLY CREATIONS/REDEMPTIONS BY ASSET CLASS

Bond ETFs see outsized creations across issuers, with rare exits at iShares & Mackenzie



# Contacts

## Alex Perel, CFA

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

## Daniela Fajardo, MBA

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

## Morley Conn, CFA

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

## Jean-Francois Boilard, CFA

Associate Director, ETF Services  
416.863.7295  
Scotia Capital Inc. Canada  
jean-francois.boilard@scotiabank.com

## J-C Daigle, CFA

Associate Director, ETF Services  
416.863.5902  
Scotia Capital Inc. Canada  
jean-christian.daigle@scotiabank.com

© The Bank of Nova Scotia 2023

To unsubscribe from this specific note/publication, email [etfcommentary@scotiabank.com](mailto: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](mailto: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](mailto: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.

IGBM&T does not deal with retail clients.