

February 2023: Fixed Income ETFs knocked down, get up again

- Canadian ETFs followed January's outflow with inflows of \$4 billion in February
- Equity ETFs had nearly \$1 billion in flows thanks to dividends and financials; multi-factor had outflows
- Cash-like "high interest savings" ETFs continue to rake in money in with another \$1 billion inflow
- Some ESG ETFs saw creations as the debate around the concept continues

Summary: After January's minor outflow, Canadian ETFs followed with inflows of \$4 billion in February, more than half of which (\$2.6 billion) went into Fixed Income ETFs. Equity ETFs enjoyed inflows close to \$1 billion, spread among all regions. Commodities and Crypto-Asset ETFs each suffered small withdrawals. Even after a volatile 2022 which was among the worst calendar years for traditional 60/40 portfolios, multi-asset ETFs signaled their staying power by extending their inflow streak which has been going strong since 2018; the Multi-Asset category gathered \$357 million in new assets in February, led by alternative and asset allocation ETFs.

Flows by Asset Class, Category and Product: (Table 1 & Tables 4 - 11)

Equity ETFs welcomed inflows of \$955 million, led by Canada and broad Developed Market regions, but Emerging Market and Global equities suffered outflows of more than \$60 million each. Especially with Canada, Dividend/Income ETFs (VDY) outpaced the Market-cap weighted category in net flows with \$201 million created. Sector ETFs also registered inflows of \$212 million, primarily into Financials (HMAX) and Healthcare sectors while Technology (TEC) saw redemptions. Although the ESG narrative has come in for some debate in recent months, the iShares ESG Aware suite of products (XSUS) and actively managed ESG ETFs from NBI continued to attract new money in February; as a result, the ESG equity category pulled in \$288 million overall. In the outflow column, multi-factor ETFs bled assets— the Manulife multi-factor ETF suite (e.g., MEME/B for emerging markets) had net outflows of \$113 million, driving the wider multi-factor category itself to \$118 million withdrawn.

Fixed Income ETFs topped the inflow leaderboard with \$2.6 billion created. Within the wider "fixed income" umbrella, we currently group high interest saving account ETFs and money market ETFs under a sub-category called "Money Market" (see Table 11). However, in future iterations of this note, we may break out "money market ETFs" into their own asset class, especially as their footprint grows; additionally, this practice would be consistent with reporting styles from the wider mutual fund industry. The category of "cash alternative" ETFs has historically been popular but received a shot in the arm in 2022 when interest rates started to rise, driving down traditional bond prices, making savings account rates increasingly attractive. At the end of February 2023, these ETFs had a total AUM of \$17.9 billion, fully 18% of the entire fixed income ETF market. Last month, the high interest savings ETFs (led by CSAV, CASH, and PSA) took up \$1.4 billion. Sub-investment grade

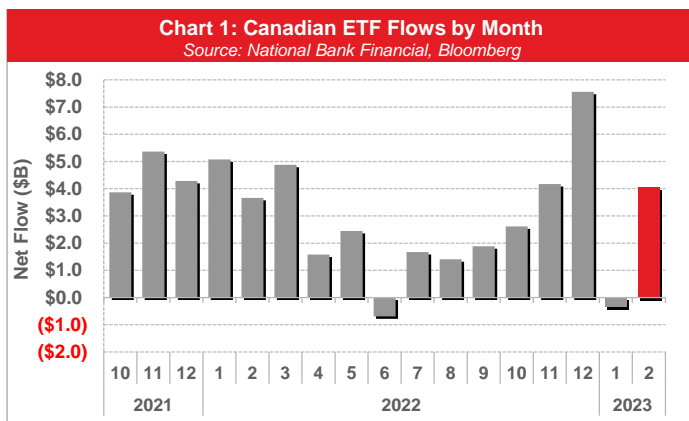


Table 1 - ETF Flows by Category - Feb YTD 2023

	AUM (\$M)	Mkt Shr (%)	Feb 2023		Feb YTD 2023	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$204,583		\$955	0.5%	\$627	0.3%
Canada	\$76,650	23%	\$608	0.8%	\$68	0.1%
United States	\$69,968	21%	\$68	0.1%	-\$273	-0.4%
International	\$57,966	18%	\$278	0.5%	\$833	1.4%
Fixed Income	\$99,461	30%	\$2,643	2.7%	\$2,147	2.1%
Commodities	\$1,616	0%	-\$15	-0.9%	\$10	0.6%
Multi-Asset	\$16,717	5%	\$357	2.2%	\$552	3.5%
Inverse / Levered	\$3,311	1%	\$156	4.8%	\$325	10.9%
Crypto-Asset	\$2,362	1%	-\$52	-2.2%	\$53	3.1%
Total	\$328,050	100%	\$4,045	1.2%	\$3,714	1.1%

*Equity Flows include option strategies;
Source: National Bank of Canada, Bloomberg

ETFs (ZHY) also saw strong inflows at \$253 million, the second largest percentage flow in February after the money market ETFs. On the outflow side, Canada corporate bond (XCB, ZCS) and preferred share ETFs were the only fixed income categories with redemptions.

Sentiment reversed for **Crypto-Asset** ETFs after a brief burst of inflows in January, when inflows were \$105 million; in February, the category saw \$52 million in outflows.

Even though the January U.S. CPI data may suggest more upside surprise to inflation than what the market priced in, ETF investors in Canada didn't express demand for inflation protection in the form of **Commodities** ETFs – after an essentially flat month in January (\$24 million created), \$15 million was withdrawn in February, primarily from gold ETFs.

Flows by Provider and New Launches
(Tables 2 - 3):

The top 13 ETF issuers in Canada had inflows in February. Further down Table 2, we observed small outflows from CIBC, Manulife, Desjardins and Guardian Capital. In terms of percentage flow, National Bank Investments (NUBF, NSCB, NHYB), Hamilton (HMAX, HYLD), AGF (QBTL), Bristol Gate (BGU, BGU/U) and Mulvihill (XLVE) enjoyed the highest inflows relative to their starting assets.

15 new ETFs were launched in February, including covered call, long bond, ESG and broad market index ETFs (Table 3).

Provider	New Methodology (adjusted for ETF-of-ETFs)				Unadjusted	
	AUM (\$M)	Mkt Shr (%)	Feb 2023 Flow (\$M)	Feb 2023 Flow/AUM	Feb 2023 AUM (\$M)	Feb 2023 Flow (\$M)
1 RBC iShares	\$93,505	28.5%	\$543	1%	\$99,244	\$586
2 BMO	\$81,589	24.9%	\$623	1%	\$90,826	\$962
3 Vanguard	\$42,576	13.0%	\$495	1%	\$52,417	\$643
4 Horizons	\$23,389	7.1%	\$304	1%	\$24,039	\$328
5 CI GAM	\$17,570	5.4%	\$702	4%	\$17,786	\$722
6 Mackenzie*	\$12,105	3.7%	\$120	1%	\$12,358	\$127
7 TDAM	\$9,107	2.8%	\$142	2%	\$9,197	\$142
8 National Bank Investments	\$7,347	2.2%	\$390	6%	\$7,347	\$390
9 Purpose	\$6,734	2.1%	\$172	3%	\$7,016	\$172
10 Invesco	\$4,884	1.5%	\$34	1%	\$4,903	\$34
11 Fidelity	\$3,345	1.0%	\$156	5%	\$3,642	\$180
12 Evolve Funds	\$2,593	0.8%	\$79	3%	\$2,645	\$78
13 Harvest	\$2,587	0.8%	\$62	2%	\$3,096	\$108
14 CIBC	\$2,536	0.8%	-\$4	0%	\$2,546	-\$4
15 Manulife	\$2,446	0.7%	-\$65	-3%	\$2,446	-\$65
16 Dynamic	\$2,261	0.7%	\$18	1%	\$2,261	\$18
17 PIMCO	\$2,139	0.7%	\$14	1%	\$2,139	\$14
18 Hamilton	\$1,796	0.5%	\$167	10%	\$2,195	\$163
19 Desjardins	\$1,609	0.5%	-\$90	-5%	\$1,609	-\$90
20 Scotia Bank	\$1,288	0.4%	\$19	1%	\$1,288	\$19
21 Franklin Templeton	\$1,262	0.4%	\$3	0%	\$1,262	\$3
22 AGF	\$1,218	0.4%	\$73	6%	\$1,218	\$73
23 Ninepoint Partners	\$659	0.2%	\$8	1%	\$659	\$8
24 Picton Mahoney	\$606	0.2%	\$23	4%	\$606	\$23
25 Brompton Funds	\$473	0.1%	\$11	2%	\$573	\$20
26 3iQ	\$452	0.1%	\$14	3%	\$452	\$14
27 Middlefield	\$428	0.1%	-\$3	-1%	\$428	-\$3
28 First Trust	\$378	0.1%	-\$1	0%	\$378	-\$1
29 Bristol Gate	\$346	0.1%	\$46	15%	\$346	\$46
30 Guardian Capital	\$213	0.1%	-\$19	-8%	\$213	-\$19
31 Emerge	\$119	0.0%	\$0	0%	\$119	\$0
32 IA Clarington	\$101	0.0%	\$0	0%	\$101	\$0
33 Lysander	\$84	0.0%	-\$1	-1%	\$84	-\$1
34 Mulvihill	\$76	0.0%	\$7	11%	\$76	\$7
35 Accelerate	\$60	0.0%	\$0	0%	\$66	\$0
36 Russell Investments	\$55	0.0%	\$0	0%	\$55	\$0
37 Arrow Capital	\$42	0.0%	\$2	5%	\$42	\$2
38 Starlight	\$25	0.0%	\$0	1%	\$25	\$0
39 SmartBe	\$23	0.0%	-\$1	-3%	\$23	-\$1
40 Evermore Capital	\$14	0.0%	\$0	0%	\$14	\$0
41 NCM Investments	\$5	0.0%	\$0	0%	\$5	\$0
42 Caldwell	\$5	0.0%	\$0	0%	\$5	\$0
Total	\$328,050	100.0%	\$4,045	1.2%	\$355,751	\$4,698

*Includes Wealthsimple asset and flows. Source: NBF, Bloomberg

Ticker	Name	Provider	Grouped by Provider	
			Fee (%)	Launch Date
1 XLVE	Mulvihill U.S. Health Care Enhanced Yield ETF	Mulvihill	0.65	2/1/2023
2 XFLB	iShares Core Canadian 15+ Year Federal Bond Index ETF	RBC iShares	0.15	2/13/2023
3 XTLT†	iShares 20+ Year U.S. Treasury Bond Index ETF	RBC iShares	0.18	2/13/2023
4 XTLH	iShares 20+ Year U.S. Treasury Bond Index ETF (CAD-Hedged)	RBC iShares	0.18	2/13/2023
5 XEMC	iShares MSCI Emerging Markets ex China Index ETF	RBC iShares	0.30	2/13/2023
6 XDRV	iShares Global Electric and Autonomous Vehicles Index ETF	RBC iShares	0.39	2/13/2023
7 CUTL**	CI Utilities Giants Covered Call ETF	CI GAM	0.65	2/21/2023
8 ICAE	Invesco S&P/TSX Canadian Dividend Aristocrats ESG Index ETF	Invesco	0.20	2/23/2023
9 IUAE*	Invesco S&P US Dividend Aristocrats ESG Index ETF	Invesco	0.30	2/23/2023
10 IIAE*	Invesco S&P Int'l Developed Dividend Aristocrats ESG Index ETF	Invesco	0.35	2/23/2023
11 CIEH	CIBC International Equity Index ETF (CAD-Hedged)	CIBC	0.16	2/27/2023

* Also has CAD-hedged (.F) units. ** Also has unhedged (.B) units. † Also has USD (.U) units. Source: NBF, ETF Providers

Note: the tables below all use the revised flows calculation methodology from February 2021.

Tables continue on the next page

Ticker	Name	Flow (\$M)	Flow/AUM
1	CSAV CI High Interest Savings ETF	\$609	10%
2	XIU iShares S&P/TSX 60 Index ETF	\$453	4%
3	CASH Horizons High Interest Savings ETF	\$413	26%
4	ZEA BMO MSCI EAFE Index ETF	\$220	4%
5	ZHY BMO High Yield US Corporate Bond CAD-H ETF	\$216	24%
6	TTP TD Canadian Equity Index ETF	\$183	17%
7	XBB iShares Core Canadian Universe Bond Index ETF	\$178	4%
8	ZUAG/F BMO US Aggregate Bond Index ETF	\$148	702%
9	PFL Invesco 1-3 Year Laddered Floating Rate Note	\$146	32%
10	XSUS iShares ESG Aware MSCI USA Index ETF	\$128	50%
11	ZMU BMO Mid-Term US IG Corporate Bond CAD-H	\$126	5%
12	CRED CI Alternative Investment Grade Credit Fund	\$114	106%
13	XMA iShares S&P/TSX Capped Materials Index ETF	\$104	59%
14	XFR iShares Floating Rate Index ETF	\$89	18%
15	NUBF NBI Unconstrained Fixed Income ETF	\$88	4%
16	VAB Vanguard Canadian Aggregate Bond Index ETF	\$88	3%
17	HMAX Hamilton Canadian Financials Yield Maximizer Etf	\$87	165%
18	VDY Vanguard FTSE Canadian High Dividend Yield	\$85	4%
19	VSB Vanguard Canadian Short-Term Bond Index ETF	\$84	7%
20	PSA Purpose High Interest Savings Fund	\$81	3%

Source: National Bank of Canada, Bloomberg;

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIC iShares Core S&P/TSX Capped Composite	-\$244	-3%
2	HXT Horizon S&P/TSX 60 Index ETF	-\$228	-6%
3	ZCN BMO S&P/TSX Capped Composite	-\$167	-2%
4	XSB iShares Core Canadian Short Term Bond	-\$134	-5%
5	ZST BMO Ultra Short-Term Bond ETF	-\$122	-17%
6	ZAG BMO Aggregate Bond Index ETF	-\$99	-2%
7	XSP iShares Core S&P 500 Index ETF CAD- H	-\$89	-1%
8	ZCPB BMO Core Plus Bond Fund ETF	-\$84	-5%
9	MEME/B Manulife Multifactor Emerging Markets	-\$82	-20%
10	XGD iShares S&P/TSX Global Gold Index ETF	-\$76	-6%
11	PGL Invesco Long Term Government Bond	-\$67	-42%
12	XWD iShares MSCI World Index ETF	-\$65	-8%
13	XUS iShares Core S&P 500 Index ETF	-\$62	-1%
14	ZTIP/F BMO Short-Term US Tips Index ETF	-\$58	-25%
15	TEC TD Global Technology Leaders Index ETF	-\$56	-4%
16	XCB iShares Core Canadian Corporat	-\$49	-3%
17	TQSM TD Q U.S. Small-Mid-Cap Equity ETF	-\$47	-67%
18	ZCS BMO Short Corporate Bond Index ETF	-\$45	-4%
19	FSB CI Enhanced Short Duration Bon	-\$44	-5%
20	QQC/F Invesco NASDAQ 100 Index ETF	-\$41	-8%

Source: National Bank of Canada, Bloomberg;

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$204,583	62%	\$955	0.5%
Fixed Income	\$99,461	30%	\$2,643	2.7%
Commodities	\$1,616	0%	-\$15	-0.9%
Multi-Asset	\$16,717	5%	\$357	2.2%
Inverse / Levered	\$3,311	1%	\$156	4.8%
Crypto-Asset	\$2,362	1%	-\$52	-2.2%
Total	\$328,050	100%	\$4,045	1.2%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$119,152	58%	\$175	0.1%
Dividend / Income	\$22,439	11%	\$201	0.9%
Factor: Low Vol	\$7,915	4%	\$19	0.2%
Factor: Multi-factor	\$2,876	1%	-\$118	-3.9%
Factor: Fundamental	\$5,112	2%	\$65	1.3%
Sector	\$27,638	14%	\$212	0.8%
Thematic	\$12,819	6%	\$238	1.9%
ESG**	\$8,838	4%	\$288	3.3%
Other	\$6,632	3%	\$163	2.5%
Total	\$204,583	100%	\$955	0.5%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

** Only includes ESG ETFs under Thematic category

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$76,650	37%	\$608	0.8%
United States	\$69,968	34%	\$68	0.1%
DM: Broad	\$22,840	11%	\$370	1.6%
DM: Regional & Country	\$5,693	3%	\$41	0.7%
Emerging Markets	\$5,524	3%	-\$62	-1.1%
Global	\$23,908	12%	-\$71	-0.3%
Total	\$204,583	100%	\$955	0.5%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$28,346	28%	\$224	0.8%
Canada Government	\$10,971	11%	\$277	2.5%
Canada Corporate	\$13,026	13%	-\$19	-0.1%
U.S. / North America	\$8,469	9%	\$341	4.1%
Foreign	\$10,169	10%	\$234	2.3%
Sub-Investment Grade	\$4,269	4%	\$253	6.2%
Preferred/Convertible	\$6,337	6%	-\$46	-0.7%
Money Market	\$17,875	18%	\$1,379	8.4%
Total	\$99,461	100%	\$2,643	2.7%

Source: National Bank of Canada, Bloomberg

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$10,110	37%	\$138	1.4%
Energy	\$3,465	13%	\$1	0.0%
Real Estate	\$3,310	12%	\$21	0.6%
Health Care	\$2,801	10%	\$88	3.1%
Technology	\$2,743	10%	-\$89	-3.2%
Utilities	\$2,393	9%	\$10	0.4%
Materials	\$2,221	8%	\$45	1.8%
Other	\$596	2%	-\$1	-0.2%
Total	\$27,638	100%	\$212	0.8%

*Includes all geo focuses and Covered Call Strategies; Source: NBF, Bloomberg

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$47,511	48%	\$1,036	2.2%
Ultra Short Term	\$3,843	4%	\$101	2.7%
Short Term	\$16,884	17%	-\$154	-0.9%
Mid Term	\$5,758	6%	\$141	2.5%
Long Term	\$5,367	5%	\$75	1.4%
Real Return	\$1,402	1%	-\$3	-0.2%
Target Maturity	\$820	1%	\$69	9.1%
Money Market	\$17,875	18%	\$1,379	8.4%
Total	\$99,461	100%	\$2,643	2.7%

Source: National Bank of Canada, Bloomberg

YTD February ETF Flows (Tables 12 - 21):

February's ETF inflows more than offset the small outflows from January, resulting in a net \$3.7 billion created for Canadian ETFs. Fixed Income ETFs took up 58% of the total flows year-to-date, followed by Equity, Multi-Asset and Leverage & Inverse ETFs. The resurgence of fixed income ETFs on the leaderboard can mean a number of things: investors are still risk-averse and skittish after the precipitous selloffs of 2022; this negative attitude towards equities may be coupled with a new reality of higher interest rates within the bond markets, overturning over a decade of near-zero central bank policy around the world. Money market ETFs still occupy the lion's share (89%) of Fixed Income ETF inflows but the remaining 11% is still significant – the balance has been spread among Canada government bond, U.S. bond and High Yield bond ETFs.

So far, in 2023, Equity ETFs are showing few bright spots of demand. Dividend/Income, ESG, Low Volatility and all-equity asset allocation ETFs are the only product categories with net inflows. Multi-factor, sector (Financials, Energy, Technology) and even market-cap weighted ETFs saw redemptions. Though the tide might have turned in February, Developed Markets and Global regions still stand stronger in favour relative to Canada and the U.S.

Table 12 - Top ETF Inflows - Feb YTD 2023

Ticker	Name	Flow (\$M)	Flow/AUM
1	CSAV CI High Interest Savings ETF	\$1,137	21%
2	CASH Horizons High Interest Savings ETF	\$592	41%
3	TDB TD Canadian Aggregate Bond Index ETF	\$472	95%
4	ZHY BMO High Yield US Corporate Bond CAD-H	\$452	69%
5	ZEA BMO MSCI EAFE Index ETF	\$397	7%
6	HISA High Interest Savings Account Fund	\$273	25%
7	TTP TD Canadian Equity Index ETF	\$211	22%
8	NUBF NBI Unconstrained Fixed Income ETF	\$204	10%
9	XIU iShares S&P/TSX 60 Index ETF	\$202	2%
10	PFL Invesco 1-3 Year Laddered Floating Rate Note	\$193	48%
11	ZMU BMO Mid-Term US IG Corporate Bond CAD-H	\$186	7%
12	CRED CI Alternative Investment Grade Credit Fund	\$182	463%
13	HNU BetaPro Natural Gas Leveraged Daily Bull ETF	\$182	172%
14	ZUAG/F BMO US Aggregate Bond Index ETF	\$169	NA
15	XSUS iShares ESG Aware MSCI USA Index ETF	\$153	70%
16	PSU/U Purpose US Cash Fund	\$147	38%
17	HMAX Hamilton Canadian Financials Yield Maximizer	\$139	NA
18	VEQT Vanguard All-Equity ETF Portfolio	\$135	6%
19	NHYB NBI High Yield Bond ETF	\$128	13%
20	NINT NBI Active International Equity ETF	\$126	51%

Source: National Bank of Canada, Bloomberg;

Table 13 - Top ETF Outflows - Feb YTD 2023

Ticker	Name	Flow (\$M)	Flow/AUM
1	QEBL Mackenzie EM Local Currency Bond	-\$414	-51%
2	ZAG BMO Aggregate Bond Index ETF	-\$400	-6%
3	PSA Purpose High Interest Savings Fund	-\$372	-10%
4	XSB iShares Core Canadian Short Term Bond	-\$364	-13%
5	ZSP BMO S&P 500 Index ETF	-\$326	-3%
6	XIC iShares Core S&P/TSX Capped Composite	-\$281	-3%
7	CBH iShares 1-10 Year Laddered Corporate Bond	-\$268	-44%
8	ZST BMO Ultra Short-Term Bond ETF	-\$243	-29%
9	ZEB BMO Equal Weight Banks Index ETF	-\$226	-7%
10	HXT Horizon S&P/TSX 60 Index ETF	-\$222	-6%
11	XBB iShares Core Canadian Universe Bon	-\$205	-4%
12	ZCPB BMO Core Plus Bond Fund ETF	-\$179	-11%
13	ZCN BMO S&P/TSX Capped Composite Index ETF	-\$160	-2%
14	XEG iShares S&P/TSX Capped Energy Index ETF	-\$156	-8%
15	ZMMK BMO Money Market Fund ETF Series	-\$135	-29%
16	MGB Mackenzie Core Plus Global Fixed Income	-\$131	-56%
17	CLF iShares 1-5 Year Laddered Government Bond	-\$123	-18%
18	HND BetaPro Natural Gas Inverse Le	-\$117	-132%
19	XUS iShares Core S&P 500 Index ETF	-\$95	-2%
20	XSP iShares Core S&P 500 Index ETF CAD- H	-\$91	-1%

Source: National Bank of Canada, Bloomberg;

Tables continue on the next page

Table 14 - ETF Flows by Category - Feb YTD 2023

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$204,583	62%	\$627	0%
Fixed Income	\$99,461	30%	\$2,147	2%
Commodities	\$1,616	0%	\$10	1%
Multi-Asset	\$16,717	5%	\$552	4%
Inverse / Leveraged	\$3,311	1%	\$325	11%
Crypto-Asset	\$2,362	1%	\$53	3%
Total	\$328,050	100%	\$3,714	1.1%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

Table 15 - Equity ETF Flows by Geography - Feb YTD 2023

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$76,650	37%	\$68	0%
United States	\$69,968	34%	-\$273	0%
DM: Broad	\$22,840	11%	\$609	2%
DM: Regional & Country	\$5,693	3%	\$29	0%
Emerging Markets	\$5,524	3%	\$10	0%
Global	\$23,908	12%	\$185	1%
Total	\$204,583	100%	\$627	0.3%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

Table 16 - Equity ETF Flows by Sector* - Feb YTD 2023

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$10,110	37%	-\$254	-2%
Energy	\$3,470	13%	-\$68	-2%
Real Estate	\$3,310	12%	\$14	0%
Health Care	\$2,801	10%	\$149	5%
Technology	\$2,743	10%	-\$50	-2%
Utilities	\$2,393	9%	\$18	1%
Materials	\$2,221	8%	\$126	6%
Other	\$591	2%	\$0	0%
Total	\$27,638	100%	-\$64	0%

*Includes all geo focuses and Covered Call Strategies; Source: NBF, Bloomberg

Table 17 - Equity ETF Flows by Focus - Feb YTD 2023

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$119,152	58%	-\$300	0%
Dividend / Income	\$22,439	11%	\$293	1%
Factor: Low Vol	\$7,915	4%	\$69	1%
Factor: Multi-factor	\$2,876	1%	-\$113	-4%
Factor: Fundamental	\$5,112	2%	-\$38	-1%
Sector	\$27,638	14%	-\$64	0%
Thematic	\$12,819	6%	\$466	4%
ESG**	\$8,838	4%	\$494	6%
Other	\$6,632	3%	\$313	5%
Total	\$204,583	100%	\$627	0.3%

*Equity Flows include option strategies; Source: National Bank of Canada, Bloomberg

** Only includes ESG ETFs under Thematic category

Table 18 - Fixed Income ETF Flows by Type - Feb YTD 2023

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$28,346	28%	-\$274	-1%
Canada Government	\$10,971	11%	\$333	3%
Canada Corporate	\$13,026	13%	-\$450	-3%
U.S. / North America	\$8,469	9%	\$468	4%
Foreign	\$10,169	10%	-\$128	-1%
Sub-Investment Grade	\$4,269	4%	\$332	7%
Preferred/Convertible	\$6,337	6%	-\$40	-1%
Money Market	\$17,875	18%	\$1,907	12%
Total	\$99,461	100%	\$2,147	2.1%

Source: National Bank of Canada, Bloomberg

Table 19 - Fixed Income ETF Flows by Maturity - Feb YTD 2023

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$47,511	48%	\$705	1%
Ultra Short Term	\$3,843	4%	-\$88	-2%
Short Term	\$16,884	17%	-\$822	-5%
Mid Term	\$5,758	6%	-\$24	0%
Long Term	\$5,367	5%	\$405	8%
Real Return	\$1,402	1%	-\$42	-3%
Target Maturity	\$820	1%	\$106	12%
Money Market	\$17,875	18%	\$1,907	12%
Total	\$99,461	100%	\$2,147	2.1%

Source: National Bank of Canada, Bloomberg

Table 20 - Canada listed ESG ETF Flows by Categories* - February 2023

Category	February 2023		February YTD 2023	
	AUM (\$M)	AUM (%)	Flow (\$M)	Flow/AUM
Equity	\$9,945	84%	\$266	2.7%
Broad - Canada	\$2,743	23%	\$109	4.1%
Broad - U.S.	\$2,554	22%	\$136	5.6%
Broad - DM	\$1,470	12%	\$64	4.5%
Broad - EM	\$351	3%	-\$1	-0.3%
Broad - Global	\$1,288	11%	\$26	2.1%
Environment	\$984	8%	-\$72	-6.7%
Clean Energy	\$323	3%	\$4	1.1%
Social	\$155	1%	\$0	-0.3%
Infrastructure	\$77	1%	\$0	0.1%
Commodities	\$16	0%	\$2	11.3%
Multi-Asset	\$162	1%	\$4	2.8%
Fixed Income	\$1,688	14%	\$91	5.6%
Total Displayed	\$11,811	100%	\$363	3.1%
			\$572	5.2%

Source: National Bank of Canada, Bloomberg

Tables continue on the next page

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Table 21 - ETF Flows by Provider - Feb YTD 2023						
Provider	New Methodology (adjusted for ETF-of-ETFs)				Unadjusted	
	AUM (\$M)	Mkt Shr (%)	Feb YTD 2023 Flow (\$M)	Feb YTD 2023 Flow/AUM	Feb YTD 2023 AUM (\$M)	Feb YTD 2023 Flow (\$M)
1 RBC iShares	\$93,505	28.5%	-\$825	-1%	\$99,244	-\$731
2 BMO	\$81,589	24.9%	-\$48	0%	\$90,826	\$484
3 Vanguard	\$42,576	13.0%	\$380	1%	\$52,417	\$637
4 Horizons	\$23,389	7.1%	\$608	3%	\$24,039	\$644
5 CI GAM	\$17,570	5.4%	\$1,263	8%	\$17,786	\$1,301
6 Mackenzie	\$12,105	3.7%	-\$415	-3%	\$12,358	-\$415
7 TDAM	\$9,107	2.8%	\$852	11%	\$9,197	\$855
8 National Bank Investments	\$7,347	2.2%	\$810	13%	\$7,347	\$810
9 Purpose	\$6,734	2.1%	-\$175	-3%	\$7,016	-\$166
10 Invesco	\$4,884	1.5%	\$106	2%	\$4,903	\$105
11 Fidelity	\$3,345	1.0%	\$234	7%	\$3,642	\$270
12 Evolve Funds	\$2,593	0.8%	\$378	17%	\$2,645	\$376
13 Harvest	\$2,587	0.8%	\$154	5%	\$3,096	\$251
14 CIBC	\$2,536	0.8%	\$19	1%	\$2,546	\$19
15 Manulife	\$2,446	0.7%	-\$40	-2%	\$2,446	-\$40
16 Dynamic	\$2,261	0.7%	-\$21	-1%	\$2,261	-\$21
17 PIMCO	\$2,139	0.7%	\$51	2%	\$2,139	\$51
18 Hamilton	\$1,796	0.5%	\$298	16%	\$2,195	\$291
19 Desjardins	\$1,609	0.5%	-\$46	-3%	\$1,609	-\$46
20 Scotia Bank	\$1,288	0.4%	-\$3	0%	\$1,288	-\$3
21 Franklin Templeton	\$1,262	0.4%	-\$90	-7%	\$1,262	-\$90
22 AGF	\$1,218	0.4%	\$70	6%	\$1,218	\$70
23 Ninepoint Partners	\$659	0.2%	\$20	3%	\$659	\$20
24 Picton Mahoney	\$606	0.2%	\$28	5%	\$606	\$28
25 Brompton Funds	\$473	0.1%	\$28	5%	\$573	\$46
26 3iQ	\$452	0.1%	\$61	22%	\$452	\$61
27 Middlefield	\$428	0.1%	-\$2	0%	\$428	-\$2
28 First Trust	\$378	0.1%	-\$1	0%	\$378	-\$1
29 Bristol Gate	\$346	0.1%	\$44	15%	\$346	\$44
30 Guardian Capital	\$213	0.1%	-\$20	-9%	\$213	-\$20
31 Emerge	\$119	0.0%	-\$4	-4%	\$119	-\$4
32 IA Clarington	\$101	0.0%	-\$13	-11%	\$101	-\$13
33 Lysander	\$84	0.0%	-\$1	-2%	\$84	-\$1
34 Mulvihill	\$76	0.0%	\$13	NA	\$76	\$13
35 Accelerate	\$60	0.0%	-\$3	-4%	\$66	-\$3
36 Russell Investments	\$55	0.0%	\$2	4%	\$55	\$2
37 Arrow Capital	\$42	0.0%	\$2	6%	\$42	\$2
38 Starlight	\$25	0.0%	\$0	-1%	\$25	\$0
39 SmartBe	\$23	0.0%	-\$1	-4%	\$23	-\$1
40 Evermore Capital	\$14	0.0%	\$0	NA	\$14	\$0
41 NCM Investments	\$5	0.0%	\$0	0%	\$5	\$0
42 Caldwell	\$5	0.0%	\$0	0%	\$5	\$0
Total	\$328,050	100.0%	\$3,714	1.1%	\$355,751	\$4,823

*Includes Wealthsimple asset and flows. Source: NBF, Bloomberg

Appendix 1 - Glossary

AUM (Assets Under Management): AUM is expressed in local currency, which is the Canadian dollar for the purpose of this report.

Flow/AUM (Flow as % AUM): Net flow as a percentage of assets under management from the beginning of the period.

Flow: The net dollar amount of fund creations and redemptions for the period based on daily NAV and daily changes in Shares Outstanding. Flows are expressed in local currency, which is the Canadian dollar for the purpose of this report.

Market Share (%): category's AUM as % of the total AUM.

MER (Management Expense Ratio): Manager's 2021 annual fee for managing and administering the fund, expressed as a percentage of total fund value. In most cases, this includes fees from investing in other ETFs. Where audited MER is unavailable or if the fee has been significantly reduced recently, the MER is estimated using the Stated Management Fee and sales tax.

Canadian MER does not include trading commissions incurred by the ETF, nor does it include trading expenses (such as swap or forward fees). An asterisk (*) indicates that the fund pays additional expenses such as swap or forward fees, which are normally reported under trading expenses. The asterisk can also indicate that the fund charges a performance fee. Data are sourced from annual filings.

NAV (Net Asset Value per share): ETF price is used when NAV is not available.

All numbers are as of last month's final business day.

Appendix 2 - Equity ETF Categories

We group Equity ETFs into the categories below. These groupings follow NBF's discretion and can differ from the ETF Provider's definition and classification from other sources.

Cap-Weighted: A fund that weights securities based on the total or float-adjusted market capitalization of each security.

Dividend/Income: A fund with primary goal of providing income. We classify a fund as belonging to the Income category when its strategy focuses on providing income, or the fund self-identifies as using an income strategy, even though it may incorporate other factors in addition to income.

Fundamental: A fund that selects and/or weights securities based on fundamental metrics from a company's financial statements such as balance sheet. Strategies include Value, Growth, Quality, RAFI Fundamental, Earnings, etc.

Low Vol or Risk: A fund that aims to achieve reduced portfolio volatility, either by screening for low volatility stocks, low beta stocks and/or minimizing the portfolio volatility.

Multi-Factor: ETFs that consider more than one NBF-defined factor including Income, Fundamental and Risk.

Sector: ETFs that provide exposure to broad industry sectors classified by the Global Industry Classification Standard (GICS) or other similar classifications. This category contains all sector funds, including ones that screen and/or weight the portfolio using factors.

Thematic: ETFs that provide niche exposures such as blockchain technology, infrastructure, Marijuana companies, Socially Responsible Investing, technology sub-sectors, agriculture, water, sentiment & behaviour, etc. This category contains all thematic funds, including ones that screen and/or weight the portfolio using factors.

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Other: Any non-cap weighted strategy that is not covered by otherwise defined categories. This includes momentum, equal-weight, share buyback, high beta, proprietary, actively managed, tactical rotation, price-weighted, etc.

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