

June 2022: A Rare Month of Outflows

- Canadian ETFs suffered a rare month of outflows of \$682 million, the first in three years and the largest in 9
- Canadian and U.S. Equity both saw redemptions at over \$1 billion each
- Fixed Income ETF registered strong inflows of \$2 billion, led by aggregate bond and cash alternative ETFs
- Two new ETFs launched in June; a covered call ETF from Harvest and a Target Income fund from Ninepoint

Summary: Canadian ETF suffered a rare month of outflows of \$682 million dollars, led by Equity and Crypto-Asset ETFs. Fixed Income on the other hand registered a major monthly net inflow of \$2 billion, despite the fact that 2022 has been the worst year for aggregate bonds since the first fixed income ETF was launched in Canada almost 22 years ago (Chart 2). Commodity and Multi-Asset ETFs were mostly flat on the month in terms of flows.

Equity outflows came from a combination of passive, cap-weighted index-tracking products for Canada and the U.S. in addition to some multifactor ETFs for the same regions, netting to over \$1 billion in outflow from each; in contrast, the Global and International region held up better with \$96 million in flows.

Fixed Income welcomed \$2 billion, with Canadian aggregate bond and “cash alternative” (or “high interest savings”) ETFs leading the inflows. The threat of a possible recession bringing wider credit spreads and associated economic fears might have driven investors out from Corporate bond, Sub-Investment Grade bond, and Preferred Share ETFs.

After a remarkable streak of inflows during characteristically volatile markets for this speculative new asset class, Crypto-Asset ETFs suffered sudden outsized redemptions of \$697 million dollars in June, the bulk of which came from two of Canada’s largest bitcoin ETFs (BTCQ from 3iQ and BTCC/U from Purpose). Crypto-asset prices continued to move lower amid a market-wide risk-off sentiment that is punishing growth and technology alike. As Canadian crypto-asset ETFs find international adoption, the flow from global institutional investors and hedge funds might insert more influence on the creation/redemption pattern of these ETFs.

Flows by Asset Class, Category and Product: (Table 1 & Tables 5 - 12)

Equity ETFs bled \$2.2 billion in assets. Market cap-weighted

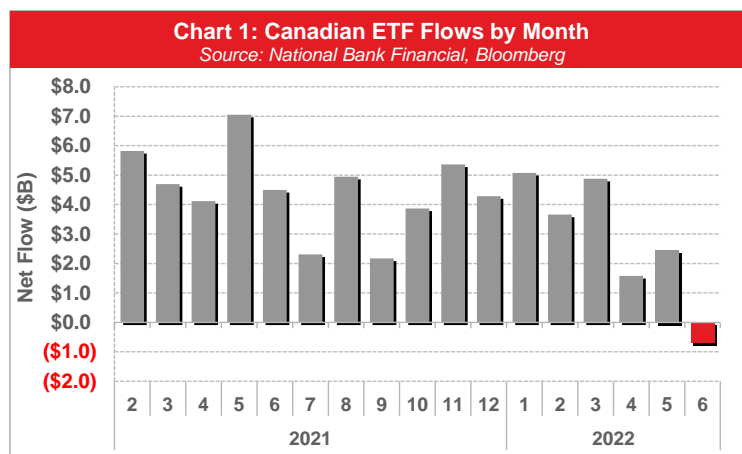
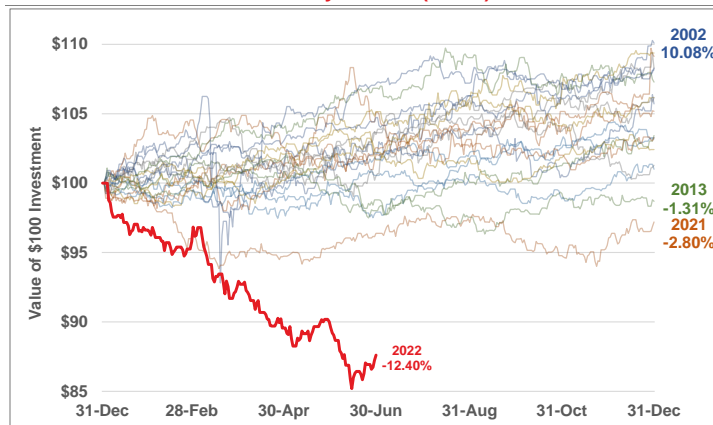


Table 1 - ETF Flows by Category - YTD June 2022

	AUM (\$M)	Mkt Shr (%)	June 2022		YTD June 2022	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$185,919		-\$2,232	-1.1%	\$10,096	4.5%
Canada	\$73,223	25%	-\$1,276	-1.6%	\$4,357	5.5%
United States	\$62,220	21%	-\$1,052	-1.5%	\$2,664	3.3%
International	\$50,475	17%	\$96	0.2%	\$3,075	4.8%
Fixed Income	\$84,343	29%	\$2,079	2.5%	\$4,939	5.1%
Commodities	\$1,616	1%	-\$29	-1.7%	-\$266	-13.9%
Multi-Asset	\$14,990	5%	\$110	0.7%	\$1,370	8.7%
Inverse / Levered	\$2,243	1%	\$87	3.8%	\$738	41.9%
Crypto-Asset	\$1,824	1%	-\$697	-16.2%	\$60	1.0%
Total	\$290,936	100%	-\$682	-0.2%	\$16,936	4.9%

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

Chart 2: XBB (iShares Core Canadian Universe Bond ETF) Calendar Year Returns: 2022 is the worst year ever (so far)



Source: NBF ETF Research, Bloomberg. Data as of June 30, 2022.

ETFs for broad exposure (HXS, XIU, HXCN, XIC, QUU etc.) bore the brunt of the falling equity markets and bled \$2.4 billion; Multi-factor and Fundamental ETFs, (particularly those focusing on the value-factor) saw withdrawals of \$493 million and \$112 million respectively. Low volatility ETF, Sector ETF (Financials sector ZEB), and ESG ETF (NSCE) pulled in some inflows that were not sufficient to cover the outflows from the other above categories. Global equity indices have been backsliding for months, and after a brief hiatus in the losing streak in May, they continued to move lower in June—the U.S. stock market dipped into bear market territory mid-June, given a challenging and complicated macroeconomic backdrop. Inflation pressures refuse to abate; central banks determined to fight it are raising interest rates and removing liquidity from the system. At the same time, economic data is flashing early signs of recession risk.

Fixed Income ETFs pulled in net flows of \$2 billion, a significant increase over previous months. Bond yields and credit spreads pushed higher in June, a strong headwind that surely caused headaches for fixed income managers. However, investors poured into aggregate bond ETFs (HBB, QBB, XBB) perhaps in expectation of a reversal in trend if central banks would be able to orchestrate a “soft landing”, or to make strategic allocations as the yields on bonds finally start to make sense. Preference for cash-like high interest savings ETF (CSAV, PSA) continued to demonstrate a comeback as overnight rates inch higher.

Multi-asset ETFs welcomed inflows overall. Asset allocation ETFs and “alternative strategies” were the most popular sub-categories.

Crypto-Asset ETFs saw sudden major redemptions in June - 16% of this category’s starting AUM flowed out in a single month. BTCC/U from Purpose, BTCQ from 3iQ were on top of the outflow leaderboard. The outflows from these two ETFs were unusually large and took place on a single day, suggesting institutional activities were present in the outflows. However, nine other crypto ETFs saw moderate outflows, while 17 actually had inflows in June, suggesting a low-level retail presence of continuously active trading taking place among the activity of institutional “whales.”

Table 2 - ETF Flows by Provider - YTD June 2022

Provider	AUM (\$M)	Mkt Shr (%)	June 2022		YTD June 2022	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
1 RBC iShares	\$87,412	30.0%	-\$1,049	-1%	\$2,941	3%
2 BMO	\$74,876	25.7%	\$93	0%	\$3,221	4%
3 Vanguard	\$36,695	12.6%	\$278	1%	\$3,286	7%
4 Horizons	\$20,373	7.0%	-\$97	-1%	\$2,856	14%
5 CI First Asset	\$12,829	4.4%	\$43	0%	-\$603	-4%
6 Mackenzie*	\$11,419	3.9%	-\$164	-1%	\$900	7%
7 TDAM	\$7,316	2.5%	\$306	4%	\$669	8%
8 National Bank Investments	\$5,670	1.9%	\$389	7%	\$1,521	31%
9 Purpose	\$4,709	1.6%	-\$339	-6%	\$774	13%
10 Invesco	\$4,085	1.4%	\$25	1%	\$141	3%
11 Fidelity	\$2,647	0.9%	\$21	1%	\$410	14%
12 CIBC	\$2,547	0.9%	-\$77	-6%	-\$202	-7%
13 Manulife	\$2,318	0.8%	\$6	0%	\$132	5%
14 Harvest	\$2,277	0.8%	\$31	6%	\$703	36%
15 Dynamic	\$2,134	0.7%	-\$17	-1%	-\$228	-8%
16 PIMCO	\$1,908	0.7%	\$57	3%	-\$11	-1%
17 Desjardins	\$1,773	0.6%	-\$60	-3%	-\$131	-6%
18 Hamilton	\$1,438	0.5%	\$23	1%	\$541	47%
19 Franklin Templeton	\$1,361	0.5%	-\$24	-2%	-\$549	-25%
20 Evolve Funds	\$1,326	0.5%	\$35	2%	\$62	3%
21 AGF	\$1,126	0.4%	\$37	3%	-\$159	-12%
22 Scotia Bank	\$988	0.3%	\$8	1%	\$306	34%
23 Ninepoint Partners	\$630	0.2%	\$45	6%	\$288	90%
24 Picton Mahoney	\$537	0.2%	\$6	1%	\$85	17%
25 Brompton Funds	\$494	0.2%	-\$2	0%	\$27	4%
26 3iQ	\$389	0.1%	-\$212	-21%	-\$211	-13%
27 First Trust	\$361	0.1%	\$1	0%	\$7	2%
28 Bristol Gate	\$282	0.1%	-\$7	-2%	-\$4	-1%
29 Middlefield	\$219	0.1%	\$8	4%	-\$16	-29%
30 Guardian Capital	\$215	0.1%	\$7	3%	\$107	73%
31 IA Clarington	\$123	0.0%	-\$4	-3%	-\$3	-2%
32 Emerge	\$114	0.0%	\$12	11%	\$11	5%
33 Lysander	\$88	0.0%	\$1	1%	-\$2	-2%
34 Accelerate	\$68	0.0%	\$3	4%	\$12	17%
35 Russell Investments	\$45	0.0%	\$0	0%	-\$2	-4%
36 Mulvihill	\$35	0.0%	\$36	1094%	\$40	NA
37 Arrow Capital	\$33	0.0%	\$0	0%	\$12	49%
38 Starlight	\$32	0.0%	\$0	-1%	-\$2	-5%
39 SmartBe	\$21	0.0%	\$0	0%	-\$4	-15%
40 Evermore Capital	\$10	0.0%	\$0	0%	\$11	NA
41 NCM Investments	\$5	0.0%	\$0	0%	\$0	0%
42 Caldwell	\$5	0.0%	\$0	0%	\$5	NA
Total	\$290,936	100.0%	-\$682	-0.2%	\$16,936	4.9%

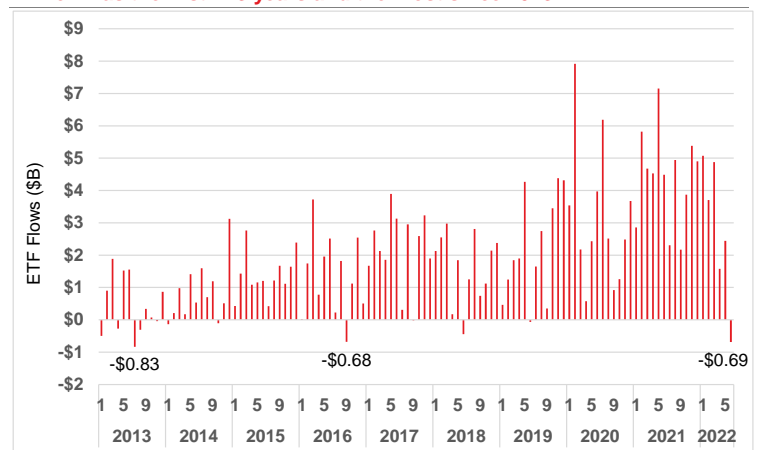
*Includes Wealthsimple asset and flows. Source: NBF, Bloomberg

Table 3: New Launches - June 2022

Name	Ticker	Mgmt Fee (%)	Focus
1 Harvest Canadian Equity Income Leaders ETF	HLIF	0.65	Covered Call
2 Ninepoint Target Income Fund	TIF	0.60	Option Strategy

Source: NBF, SEDAR, ETF Providers

Chart 3: Monthly Flows of Canada-listed ETFs: June’s outflow of \$680 million was the first in 3 years and the most since 2013



Source: NBF ETF Research, Bloomberg. Data as of June 30, 2022. ETF Flows since 2019 follow our “new methodology” calculation and are adjusted for fund of funds.

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

Several ETF providers suffered outflows in June as the withdrawals were quite widespread across many asset classes and categories. CIBC had withdrawals from its multifactor suite, Horizons from their total-return swap-based ETFs for Canada and the U.S., and Purpose from its USD-denominated bitcoin ETF. Because of a seasonally large redemption from XIU, RBC iShares also suffered outflows in June, and because of these independent sources of ETF selling, June 2022 ended up being a rare month of net ETF outflows in Canada, the first in three years and the largest since 2013 (Chart 3). National Bank Investments enjoyed the largest inflow of \$389 million among all the providers primarily due to the inflows into its ESG suite of products.

June was relatively quiet in terms of ETF launches, with two new products: Harvest Canadian Equity Income Leaders ETF (HLIF), a covered call ETF. On the last day of June, Ninepoint listed Ninepoint Target Income Fund (TIF) on the NEO exchange.

Canadian ESG ETF Flows (Table 4): Canada listed ESG ETFs continued to pull in assets in June with \$292 million in flows. Institutional subscriptions to NBI Sustainable Canadian Bond ETF (NSCB) and NBI Sustainable Canadian Equity ETF (NSCE) explained most of the inflows. Institutional trades also drove outflows from certain ETFs; Desjardin’s RI Canada Multifactor Low CO2 ETF (DRFC) had \$33 million in institutional redemptions in June, the third of such large trades that we observed in 2022. DRFC’s year-to-date outflows total \$90 million, or 28% of the ETF’s starting assets. Such outflows are not likely to be performance driven, because DRFC actually outperformed the energy-intensive S&P/TSX Composite Index

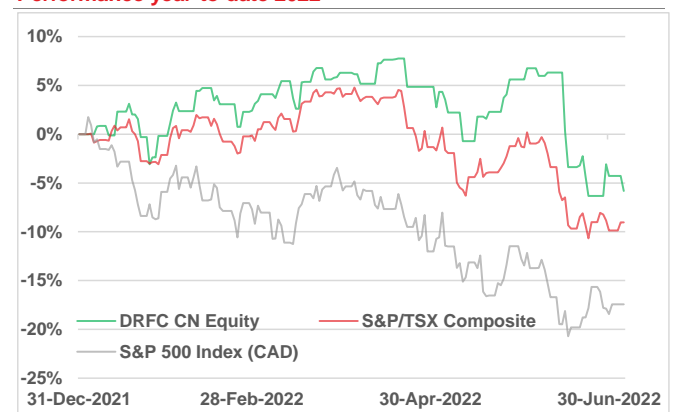
in H1 2022 (Chart 4). Canada-listed ESG ETFs’ total H1 2022 inflows accumulate to the sum of \$2.1 billion, which is noteworthy considering the category started the year at the humble base of \$9 billion in AUM. Recall, ESG ETFs pulled in \$4 billion in 2021, which was the highest year in history.

Table 4: Canada Listed ESG ETFs – June 2022

Category	AUM (\$M)	AUM (%)	June 2022		Jan - June 2022	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
Equity	\$8,148	84%	\$134	1.6%	\$1,552	18.9%
Broad - Canada	\$2,009	21%	\$118	5.8%	\$749	48.9%
Broad - U.S.	\$2,113	22%	\$0	0.0%	\$396	17.4%
Broad - DM	\$1,116	12%	-\$4	-0.3%	\$126	9.5%
Broad - EM	\$309	3%	-\$4	-1.2%	-\$5	-1.5%
Broad - Global	\$1,138	12%	\$55	4.8%	\$189	16.2%
Environment	\$928	10%	-\$29	-2.8%	-\$62	-5.3%
Clean Energy	\$317	3%	-\$2	-0.7%	\$177	103.7%
Social	\$149	2%	\$1	0.5%	-\$8	-4.0%
Infrastructure	\$70	1%	-\$1	-0.8%	-\$9	-86.0%
Commodities	\$13	0%	\$2	18.7%	\$12	NA
Multi-Asset	\$141	1%	\$0	0.2%	\$26	18.2%
Fixed Income	\$1,406	14%	\$158	12.3%	\$518	47.8%
Total Displayed	\$9,695	100%	\$292	2.9%	\$2,096	22.2%

Source: NBF ETF Research, Bloomberg. Data as of June 30, 2022

Chart 4: DRFC (Desjardins RI Canada Multifactor - Low CO2 ETF) Performance year-to-date 2022



Source: NBF ETF Research, Bloomberg. Data as of June 30, 2022

Note: the tables below all use the “new” flows calculation methodology.

Ticker	Name	Flow (\$M)	Flow/AUM
1	HBB Horizons Cdn Select Universe Bond ETF	\$936	65%
2	ZEB BMO Equal Weight Banks Index ETF	\$437	20%
3	CSAV CI High Interest Savings ETF	\$255	11%
4	QBB Mackenzie Canadian Aggregate Bond Index ETF	\$219	105%
5	TULB TD US Long Term Treasury Bond ETF	\$202	533%
6	XBB iShares Core Canadian Universe Bond Index ETF	\$200	5%
7	ZUS/U BMO Ultra Short-Term US Bond ETF	\$175	NA
8	XEF iShares Core MSCI EAFE IMI Index ETF	\$159	5%
9	PSA Purpose High Interest Savings ETF	\$153	9%
10	NSCB NBI Sustainable Canadian Bond ETF	\$151	133%
11	NSCE NBI Sustainable Canadian Equity ETF	\$138	15%
12	ZST BMO Ultra Short-Term Bond ETF	\$137	16%
13	QUIG Mackenzie US Investment Grade Corporate Bond Index ETF CAD-H	\$135	42%
14	TCLB TD Canadian Long Term Federal Bond ETF	\$119	15%
15	CGBI CIBC Global Bond EX-Canada Index ETF Cad-Hedged	\$113	51%
16	CUEI CIBC US Equity Index ETF	\$98	42%
17	RCDB RBC Canadian Discount Bond ETF	\$76	26%
18	VFV Vanguard S&P 500 Index ETF	\$75	1%
19	XLB iShares Core Canadian Long Term Bond Index ETF	\$72	14%
20	PMIF PIMCO Monthly Income Fund	\$64	4%

Source: National Bank of Canada, Bloomberg;

Ticker	Name	Flow (\$M)	Flow/AUM
1	HXS Horizons S&P 500 Index ETF	-\$896	-26%
2	XIU iShares S&P/TSX 60 Index ETF	-\$719	-6%
3	BTCC/U Purpose Bitcoin ETF - USD	-\$455	-46%
4	HXCN Horizons S&P/TSX Capped Composite Index ETF	-\$346	-16%
5	XIC iShares Core S&P/TSX Capped Composite Index ETF	-\$333	-4%
6	ZMU BMO Mid-Term US IG Corporate Bond CAD Hedged	-\$248	-11%
7	CMCE CIBC Multifactor Canadian Equity ETF	-\$241	-100%
8	CMUE CIBC Multifactor US Equity ETF	-\$212	-99%
9	XEI iShares S&P/TSX Composite High Dividend Index ETF	-\$211	-14%
10	QUU Mackenzie US Large Cap Equity Index ETF	-\$198	-9%
11	BTCC 3iQ CoinShares Bitcoin ETF	-\$197	-25%
12	ZEM BMO MSCI Emerging Markets Index ETF	-\$183	-14%
13	QCN Mackenzie Canadian Equity Index ETF	-\$179	-14%
14	ZEA BMO MSCI EAFE Index ETF	-\$98	-2%
15	ZCN BMO S&P/TSX Capped Composite Index ETF	-\$97	-1%
16	XSB iShares Core Canadian Short Term Bond Index ETF	-\$91	-3%
17	ZPR BMO Laddered Preferred Share Index ETF	-\$83	-4%
18	FSF CI Global Financial Sector ETF	-\$82	-8%
19	MFT Mackenzie Floating Rate Income ETF	-\$81	-7%
20	FGO CI Enhanced Government Bond ETF	-\$75	-8%

Source: National Bank of Canada, Bloomberg;

Tables continue on the next page.

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$185,919	64%	-\$2,232	-1.1%
Fixed Income	\$84,343	29%	\$2,079	2.5%
Commodities	\$1,616	1%	-\$29	-1.7%
Multi-Asset	\$14,990	5%	\$110	0.7%
Inverse / Levered	\$2,243	1%	\$87	3.8%
Crypto-Asset	\$1,824	1%	-\$697	-16.2%
Total	\$290,936	100%	-\$682	-0.2%

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

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$73,223	39%	-\$1,276	-1.6%
United States	\$62,220	33%	-\$1,052	-1.5%
DM: Broad	\$18,869	10%	\$25	0.1%
DM: Regional & Country	\$5,354	3%	\$82	1.4%
Emerging Markets	\$4,938	3%	-\$96	-1.9%
Global	\$21,314	11%	\$86	0.4%
Total	\$185,919	100%	-\$2,232	-1.1%

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

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$9,989	37%	\$442	4.1%
Energy	\$3,679	14%	\$37	0.9%
Real Estate	\$2,987	11%	-\$44	-1.3%
Utilities	\$2,553	10%	\$59	2.2%
Technology	\$2,510	9%	\$47	1.7%
Health Care	\$2,494	9%	\$53	2.1%
Materials	\$1,960	7%	-\$2	-0.1%
Other	\$534	2%	-\$14	-2.8%
Total	\$26,706	100%	\$577	2.0%

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

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$108,172	58%	-\$2,415	-2.0%
Dividend / Income	\$20,233	11%	-\$2	0.0%
Factor: Low Vol	\$7,220	4%	\$28	0.4%
Factor: Multi-factor	\$2,858	2%	-\$493	-13.7%
Factor: Fundamental	\$4,724	3%	-\$112	-2.1%
Sector	\$26,706	14%	\$577	2.0%
Thematic	\$10,546	6%	\$118	1.0%
ESG**	\$6,783	4%	\$145	2.0%
Other	\$5,458	3%	\$67	1.1%
Total	\$185,919	100%	-\$2,232	-1.1%

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

** Only includes ESG ETFs under Thematic category

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$26,365	31%	\$1,600	6.3%
Canada Government	\$7,996	9%	\$154	1.9%
Canada Corporate	\$12,626	15%	-\$81	-0.6%
U.S. / North America	\$7,385	9%	\$154	2.1%
Foreign	\$9,966	12%	-\$11	-0.1%
Sub-Investment Grade	\$4,529	5%	-\$131	-2.7%
Preferred/Convertible	\$7,616	9%	-\$165	-2.0%
Cash Alternative	\$7,859	9%	\$559	7.7%
Total	\$84,343	100%	\$2,079	2.5%

Source: National Bank of Canada, Bloomberg

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$44,799	53%	\$1,447	3.2%
Ultra Short Term	\$4,892	6%	\$307	6.6%
Short Term	\$16,934	20%	-\$411	-2.3%
Mid Term	\$4,228	5%	-\$272	-6.0%
Long Term	\$3,863	5%	\$399	11.0%
Real Return	\$1,580	2%	-\$26	-1.6%
Target Maturity	\$188	0%	\$76	67.7%
Cash Alternative	\$7,859	9%	\$559	7.7%
Total	\$84,343	100%	\$2,079	2.5%

Source: National Bank of Canada, Bloomberg

H1 2022 Flow (Table 13 - 20):

Despite challenges coming from all corners of the markets in 2022, Canadian ETF managed to rake in \$16.9 billion in H1 2022, a smaller figure relative to last year but still impressive given the worst calendar start to both Equity and Fixed Income in recent history.

Equity ETFs registered \$10 billion inflows, twice the amount for Fixed Income ETFs. Commodities ETFs had small outflows of \$266 million primarily from gold ETFs. Multi-Asset ETFs welcomed \$1.4 billion thanks to the adoption of liquid alternative

ETFs, some of which are among the best-performing ETFs year-to-date because of their uncorrelated exposure. After June's prodigious outflow from Crypto-Asset ETFs, the whole category is net flat on the year—still an impressive accomplishment given the -60% decline in bitcoin and -70% drawdown in Ethereum year-to-date.

Within Equity, Canada was the clear leader over the U.S. and International regions. The S&P/TSX Composite Index held up much better than the U.S. indices because of its resource and energy exposure, both beneficiaries of worldwide inflationary pressures. In addition to home-based geographic exposure, ETF investors also utilized factor-based ETFs to express their market views; for instance, value-factor ETFs received strong inflows in the first five months this year, but they saw outflows in June as investors took gains off the table. In a mirror image of this pattern, outflows from low volatility factor ETF reversed in June, finally logging small inflows on the back of recent outperformance. Financials and energy sector ETFs contributed a combined \$1.6 billion to the Equity flows year-to-date.

The preference for Canada carried over to Fixed Income as well; Canadian aggregate bonds took up 65% of the total inflows into Fixed Income ETFs. Cash alternative ETFs sat in distant second with \$1.7 billion created, or 27% of this category's starting assets. Investors usually turn to cash when they await better opportunities in volatile markets. Canada Corporate bond ETF and Preferred Share ETF each lost over \$600 million. Another counterintuitive trend: year-to-date we have been observing outflows from short-term fixed income ETFs and inflows into long-term fixed income ETFs, despite a constant drumbeat of rising interest rates. During the last calendar year of 2021, short-term bond ETFs had inflows every single month, but this year when interest rates are on an upward path, short-term ETFs lost \$1.3 billion in AUM already. Long-term bonds, normally quite vulnerable to rising rates, attracted \$595 million year-to-date, even as their punishing negative performance continued through Q2.

Tables continue on the next page.

Table 13 - Top ETF Inflows - YTD June 2022

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIU iShares S&P/TSX 60 Index ETF	\$1,201	11%
2	ESGY BMO MSCI USA ESG Leaders Index ETF	\$1,084	119%
3	HXT Horizon S&P/TSX 60 Index ETF	\$1,049	36%
4	VFV Vanguard S&P 500 Index ETF	\$1,041	16%
5	HBB Horizons Cdn Select Universe Bond ETF	\$1,007	64%
6	TCLB TD Canadian Long Term Federal Bond ETF	\$717	244%
7	NSCE NBI Sustainable Canadian Equity ETF	\$703	198%
8	ZEAF BMO MSCI EAFE Index ETF	\$694	13%
9	ZEB BMO Equal Weight Banks Index ETF	\$627	23%
10	ZCPB BMO Core Plus Bond Fund ETF	\$543	42%
11	HSAX Horizons Cash Maximizer ETF	\$530	35%
12	VEQT Vanguard All-Equity ETF Portfolio	\$528	31%
13	CSAV CI High Interest Savings ETF	\$516	25%
14	ZMU BMO Mid-Term US IG Corporate Bond Hedged to CAD Index ETF	\$491	26%
15	XSP iShares Core S&P 500 Index ETF CAD- Hedged	\$466	5%
16	VGRO Vanguard Growth ETF Portfolio	\$463	14%
17	ZAG BMO Aggregate Bond Index ETF	\$421	7%
18	ZWB BMO Covered Call Canadian Banks ETF	\$420	16%
19	XEQT iShares Core Equity ETF Portfolio	\$415	47%
20	FGO CI Enhanced Government Bond ETF	\$401	79%

Source: National Bank of Canada, Bloomberg;

Table 14 - Top ETF Outflows - YTD June 2022

Ticker	Name	Flow (\$M)	Flow/AUM
1	ESGY/F BMO MSCI USA ESG Leaders Index ETF	-\$768	-94%
2	ZEM BMO MSCI Emerging Markets Index ETF	-\$679	-33%
3	XIC iShares Core S&P/TSX Capped Composite Index ETF	-\$626	-6%
4	ZLU BMO Low Volatility US Equity ETF	-\$505	-27%
5	TEC TD Global Technology Leaders Index ETF	-\$418	-20%
6	ZFL BMO Long Federal Bond Index ETF	-\$376	-15%
7	ZCM BMO Mid Corporate Bond Index ETF	-\$356	-35%
8	ZMP BMO Mid Provincial Bond Index ETF	-\$339	-45%
9	CMUE CIBC Multifactor US Equity ETF	-\$339	-92%
10	CMCE CIBC Multifactor Canadian Equity ETF	-\$333	-101%
11	VALT/U CI Gold Bullion Fund	-\$317	-90%
12	XSH iShares Core Canadian Short Term Corporate Bond Index ETF	-\$305	-16%
13	CGXF CI Gold Giants Covered Call ETF	-\$278	-59%
14	TTP TD Canadian Equity Index ETF	-\$272	-16%
15	HXS Horizons S&P 500 Index ETF	-\$266	-8%
16	FLGA Franklin Liberty Global Aggregate Bond ETF Cad-Hedged	-\$257	-38%
17	HPR Horizons Active Preferred Share ETF	-\$257	-14%
18	ZLB BMO Low Volatility Canadian Equity ETF	-\$231	-8%
19	ZGB BMO Government Bond Index ETF	-\$225	-25%
20	XEI iShares S&P/TSX Composite High Dividend Index ETF	-\$222	-15%

Source: National Bank of Canada, Bloomberg

Table 15 - ETF Flows by Category - YTD June 2022

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$185,919	64%	\$10,096	4%
Fixed Income	\$84,343	29%	\$4,939	5%
Commodities	\$1,616	1%	-\$266	-14%
Multi-Asset	\$14,990	5%	\$1,370	9%
Inverse / Leveraged	\$2,243	1%	\$738	42%
Crypto-Asset	\$1,824	1%	\$60	1%
Total	\$290,936	100%	\$16,936	4.9%

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

Table 16 - Equity ETF Flows by Geography - YTD June 2022

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$73,223	39%	\$4,357	5%
United States	\$62,220	33%	\$2,664	3%
DM: Broad	\$18,869	10%	\$814	3%
DM: Regional & Country	\$5,354	3%	\$930	14%
Emerging Markets	\$4,938	3%	-\$485	-7%
Global	\$21,314	11%	\$1,816	8%
Total	\$185,919	100%	\$10,096	4.5%

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

Table 17 - Equity ETF Flows by Sector* - YTD June 2022

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$9,989	37%	\$885	7%
Energy	\$3,684	14%	\$730	33%
Real Estate	\$2,987	11%	-\$207	-5%
Utilities	\$2,553	10%	\$273	12%
Technology	\$2,510	9%	-\$58	-2%
Health Care	\$2,494	9%	\$337	14%
Materials	\$1,960	7%	-\$250	-10%
Other	\$529	2%	-\$71	-11%
Total	\$26,706	100%	\$1,639	5%

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

Table 18 - Equity ETF Flows by Focus - YTD June 2022

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$108,172	58%	\$5,351	4%
Dividend / Income	\$20,233	11%	\$1,327	6%
Factor: Low Vol	\$7,220	4%	-\$973	-11%
Factor: Multi-factor	\$2,858	2%	-\$885	-21%
Factor: Fundamental	\$4,724	3%	\$529	10%
Sector	\$26,706	14%	\$1,639	5%
Thematic	\$10,546	6%	\$1,998	18%
ESG**	\$6,783	4%	\$1,634	25%
Other	\$5,458	3%	\$1,110	21%
Total	\$185,919	100%	\$10,096	4.5%

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

** Only includes ESG ETFs under Thematic category

Table 19 - Fixed Income ETF Flows by Type - YTD June 2022

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$26,365	31%	\$3,155	11%
Canada Government	\$7,996	9%	-\$202	-2%
Canada Corporate	\$12,626	15%	-\$684	-4%
U.S. / North America	\$7,385	9%	\$1,031	11%
Foreign	\$9,966	12%	\$228	2%
Sub-Investment Grade	\$4,529	5%	\$325	6%
Preferred/Convertible	\$7,616	9%	-\$604	-6%
Cash Alternative	\$7,859	9%	\$1,690	27%
Total	\$84,343	100%	\$4,939	5.1%

Source: National Bank of Canada, Bloomberg

Table 20 - Fixed Income ETF Flows by Maturity - YTD June 2022

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$44,799	53%	\$3,076	6%
Ultra Short Term	\$4,892	6%	\$819	19%
Short Term	\$16,934	20%	-\$1,297	-6%
Mid Term	\$4,228	5%	-\$99	-1%
Long Term	\$3,863	5%	\$595	14%
Real Return	\$1,580	2%	\$45	2%
Target Maturity	\$188	0%	\$111	34%
Cash Alternative	\$7,859	9%	\$1,690	27%
Total	\$84,343	100%	\$4,939	5.1%

Source: National Bank of Canada, 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 2020 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.

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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