

August 2020: Year-to-Date ETF Inflows Break Through \$30 Billion

- August ETF inflows were \$2.8 billion, bringing year-to-date inflows to \$32 billion
- Creations were split equally between Equity and Fixed Income asset classes
- Gold sector flows show some divergence: bullion ETFs saw inflows while equity ETFs suffered redemptions
- New provider Guardian Capital joined the ETF market with ten actively managed ETFs

Summary: Canadian ETFs attracted net flows of \$2.8 billion in August, with new money coming from virtually all corners of the markets, bringing inflows year-to-date over the \$30 billion milestone. Equity and Fixed Income categories almost equally split the August inflows, and Commodities category continued to garner attention, led by gold and silver bullion, as their prices consolidated recently after a parabolic run.

Flows by Asset Class, Category and Product: (Table 1 & Tables 4 - 11 on page 3)

Equity ETFs experienced inflows of \$1.2 billion in August, a healthy tally albeit concentrated in a few products and product suites. Passive, cap-weighted Canadian equity ETFs (XIU, TTP), multi-factor ETFs from Manulife, (MINT/B, MCLC, MEME/B), and broad-based U.S. and International ETFs (TPU, VFV, ZEM, ZEA) logged the highest monthly inflows among equity ETFs. Sector rotation was in play during August; the pro-cyclical financial sector (XFN) saw redemptions while the more defensive real estate and utility sectors raked in money. Interestingly, the gold equity ETF XGD lost assets while gold bullion category (such as CGL) was still in favour with ETF investors. Even though most of the thematic equity ETFs do not show up on the leaderboard in table 4, it's still worthwhile to mention their steady creation activity; we observed inflows into infrastructure (CINF) and ESG ETFs (WSRI, WSRD).

Fixed Income ETFs gathered \$1.2 billion in August. Canada aggregate bond ETFs (XBB, ZAG, VAB), a Canada corporate bond ETF (QCB), and cash-like deposit ETFs (HSAV) topped the leaderboard.

Liquid Alternative ETFs also had a meaningful month: Horizons Adaptive Asset Allocation ETF (HRAA) took in \$63 million in August after its recent corporate class reorganization. On the other hand, several market neutral ETFs (DANC, QBTL) and buffer ETFs (AUGB/F) experienced outflows; perhaps investors were daunted by the momentum of major equity indices in the U.S., which appear to have defied gravity by reaching historical highs in recent months.

Flows by Provider (Table 2):

One new provider, Guardian Capital, joined the fray with ten actively managed ETFs in August. This brings the total number of ETF providers in Canada to thirty-seven. (Guardian Capital is also the sub-advisor for some Horizons ETFs.) All of the top five providers welcomed inflows in August. In terms of percentage flows based on starting assets, Manulife and TD Asset Management post the highest numbers because of creations in several products with previously low assets.

New Launches Fourteen new ETFs were launched in August, including ten from new provider Guardian Capital. Details are provided below and in Table 3.

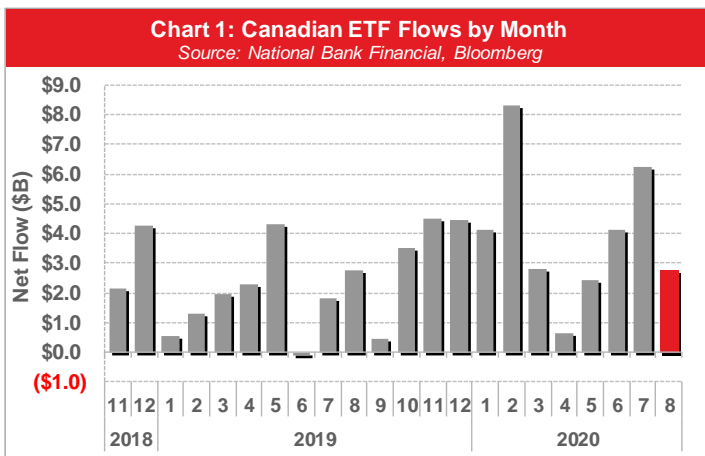


Table 1 - ETF Flows by Category - YTD August 2020

	AUM (\$M)	Mkt Shr (%)	August 2020		YTD August 2020	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$144,336		\$1,157	0.8%	\$18,729	14.8%
Canada	\$51,238	22%	\$598	1.2%	\$6,121	12.7%
United States	\$51,726	22%	\$168	0.3%	\$5,799	13.5%
International	\$41,372	17%	\$391	1.0%	\$6,809	19.1%
Fixed Income	\$82,087	35%	\$1,249	1.5%	\$10,109	14.4%
Commodities	\$2,020	1%	\$150	8.1%	\$720	76.9%
Multi-Asset	\$7,599	3%	\$214	2.9%	\$1,784	30.5%
Inverse / Levered	\$1,132	0%	-\$15	-1.4%	\$135	10.3%
Total	\$237,176	100%	\$2,754	1.2%	\$31,478	15.4%

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

Horizons launched a corporate class ETF.

- Horizons Emerging Markets Equity Index ETF (HXEM). It tracks the Horizons Emerging Markets Futures Roll Index (Total Return) currently through swaps.

New provider Guardian Capital launched ten actively managed ETFs.

- Guardian Directed Equity Path ETF (GDEP, GDEP.B). These primarily invest in global equities of high-quality companies with at least 50% allocation to U.S. equities. GDEP and GDEP.B use a collar option overlay to manage downside risk. They target an annual distribution yield of 4%.
- Guardian Directed Premium Yield ETF (GDPY, GDPY.B). These primarily invest in global equities of high-quality companies with at least 50% allocation to U.S. equities. GDPY and GDPY.B use a covered call strategy to manage downside risk. They target an annual distribution yield of 6%.
- Guardian i³ Global Quality Growth ETF (GIQG, GIQG.B). These primarily invest in global equities through a multi-factor quantitative approach with machine learning techniques and a focus on capital growth. GIQG and GIQG.B will invest up to 15% in emerging market securities.
- Guardian i³ US Quality Growth ETF (GIQU, GIQU.B). These primarily invest in U.S. equities through a multi-factor quantitative approach with machine learning techniques and a focus on capital growth.
- Guardian i³ Global REIT ETF (GIGR, GIGR.B). These invest primarily in global REITs through a quantitative approach with machine learning techniques and a focus on dividend growth and dividend quality. GIGR and GIGR.B will invest up to 15% in emerging market securities.

TDAM launched three asset allocation ETFs that primarily invest in other TD ETFs.

- TD One-Click Conservative ETF Portfolio (TOCC) targets 70% in fixed income and 30% in equities.
- TD One-Click Moderate ETF Portfolio (TOCM) targets 40% in fixed income and 60% in equities.
- TD One-Click Aggressive ETF Portfolio (TOCA) targets 10% in fixed income and 90% in equities.

Table 2 - ETF Flows by Provider - YTD August 2020

Provider	AUM (\$M)	Mkt Shr (%)	August 2020		YTD August 2020	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
1 RBC iShares	\$77,078	32.5%	\$316	0%	\$5,661	8%
2 BMO	\$68,640	28.9%	\$459	1%	\$5,896	9%
3 Vanguard	\$28,183	11.9%	\$224	1%	\$2,645	11%
4 Horizons	\$14,794	6.2%	\$296	2%	\$4,653	45%
5 CI First Asset	\$10,317	4.3%	\$127	1%	\$1,099	11%
6 Mackenzie*	\$7,520	3.2%	\$406	6%	\$2,584	55%
7 Purpose	\$4,190	1.8%	-\$83	-2%	\$165	4%
8 Invesco	\$3,957	1.7%	-\$28	-1%	-\$116	-3%
9 TDAM	\$3,888	1.6%	\$586	18%	\$2,419	187%
10 NBI	\$2,974	1.3%	\$7	0%	\$2,594	1245%
11 Franklin Templeton	\$1,980	0.8%	-\$18	-1%	\$64	3%
12 Dynamic	\$1,947	0.8%	\$47	3%	\$252	16%
13 PIMCO	\$1,770	0.7%	\$23	1%	\$30	2%
14 Fidelity	\$1,753	0.7%	\$55	3%	\$695	63%
15 AGF	\$1,318	0.6%	-\$12	-1%	\$129	11%
16 Manulife	\$1,197	0.5%	\$252	27%	\$868	257%
17 Desjardins	\$1,132	0.5%	-\$21	-2%	\$546	89%
18 CIBC	\$1,027	0.4%	\$64	7%	\$541	115%
19 Evolve Funds	\$879	0.4%	\$17	2%	\$332	61%
20 Harvest	\$843	0.4%	\$17	2%	\$107	14%
21 Hamilton	\$301	0.1%	\$0	0%	\$110	46%
22 First Trust	\$296	0.1%	-\$6	-2%	\$15	5%
23 Brompton Funds	\$271	0.1%	\$0	0%	\$25	10%
24 Bristol Gate	\$229	0.1%	\$0	0%	\$29	15%
25 Middlefield	\$225	0.1%	-\$1	0%	-\$8	-3%
26 Picton Mahoney	\$169	0.1%	\$10	6%	\$85	106%
27 IA Clarington	\$84	0.0%	\$1	1%	\$6	8%
28 Lysander	\$61	0.0%	-\$2	-3%	-\$12	0%
29 SmartBe	\$39	0.0%	\$0	0%	\$10	30%
30 Arrow Capital	\$22	0.0%	\$0	0%	\$7	47%
31 Guardian Capital	\$21	0.0%	\$20	NA	\$20	NA
32 Starlight	\$17	0.0%	\$1	7%	\$8	78%
33 Emerge	\$17	0.0%	\$0	0%	\$0	0%
34 Russell Investments	\$13	0.0%	\$0	0%	\$14	NA
35 Accelerate	\$10	0.0%	-\$3	-21%	\$6	190%
36 Scotia Bank	\$9	0.0%	\$0	2%	\$1	7%
37 Caldwell	\$1	0.0%	\$0	0%	\$1	NA
Total	\$237,176	100.0%	\$2,754	1.2%	\$31,481	15.4%

*Includes Wealthsimple ETF asset and flows; Source: NBF, Bloomberg

Table 3: New Launches - August 2020

Name	Ticker	Mgmt Fee (%)	Focus
1 Horizons Emerging Markets Equity Index ETF	HXEM	0.25*	Emerging Markets
2 Guardian Directed Equity Path ETF CAD-Hedged	GDEP	0.85	Option Strategy
3 Guardian Directed Equity Path ETF	GDEP.B	0.85	Option Strategy
4 Guardian Directed Premium Yield ETF CAD-Hedged	GDPY	0.85	Option Strategy
5 Guardian Directed Premium Yield ETF	GDPY.B	0.85	Option Strategy
6 Guardian i3 Global Quality Growth ETF CAD-Hedged	GIQG	0.65	Global Multi-Factor
7 Guardian i3 Global Quality Growth ETF	GIQG.B	0.65	Global Multi-Factor
8 Guardian i3 US Quality Growth ETF CAD-Hedged	GIQU	0.55	U.S. Multi-Factor
9 Guardian i3 US Quality Growth ETF	GIQU.B	0.55	U.S. Multi-Factor
10 Guardian i3 Global REIT ETF CAD-Hedged	GIGR	0.70	Global REIT
11 Guardian i3 Global REIT ETF	GIGR.B	0.70	Global REIT
12 TD One-Click Conservative ETF Portfolio	TOCC	0.25	Asset Allocation
13 TD One-Click Moderate ETF Portfolio	TOCM	0.25	Asset Allocation
14 TD One-Click Aggressive ETF Portfolio	TOCA	0.25	Asset Allocation

* This ETF also charges a swap fee. Source: NBF, SEDAR, ETF Providers

Table 4 - Top Single Long ETF Inflows - August 2020

Ticker	Name	Flow (\$M)	Flow/AUM
1 XIU	iShares S&P/TSX 60 Index ETF	\$713	8%
2 TPU	TD US Equity Index ETF	\$439	97%
3 VV	Vanguard S&P 500 Index ETF	\$237	8%
4 QCB	Mackenzie Canadian All Corporate Bond Index ETF	\$204	106%
5 MCLC	Manulife Multifactor Canadian Large Cap Index ETF	\$153	271%
6 TTP	TD Canadian Equity Index ETF	\$130	19%
7 ZMP	BMO Mid Provincial Bond Index ETF	\$115	16%
8 XBB	iShares Core Canadian Universe Bond Index ETF	\$112	2%
9 HSAV	Horizons Cash Maximizer ETF	\$108	22%
10 ZAG	BMO Aggregate Bond Index ETF	\$106	2%
11 MINT/B	Manulife Multifactor Developed International Index ETF	\$105	27%
12 ZEA	BMO MSCI EAFE Index ETF	\$86	2%
13 ZEM	BMO MSCI Emerging Markets Index ETF	\$82	4%
14 MEME/B	Manulife Multifactor Emerging Markets Index Etf	\$71	25%
15 ZFL	BMO Long Federal Bond Index ETF	\$66	3%
16 VAB	Vanguard Canadian Aggregate Bond Index ETF	\$66	2%
17 HRAA	Horizons ReSolve Adaptive Asset Allocation ETF	\$63	639%
18 CGL	iShares Gold Bullion ETF	\$58	6%
19 ZST	BMO Ultra Short-Term Bond ETF	\$51	7%
20 CINF	CI Global Infrastructure Private Pool	\$48	279%

Source: National Bank of Canada, Bloomberg;

Table 5 - Top Single Long ETF Outflows - August 2020

Ticker	Name	Flow (\$M)	Flow/AUM
1 XFN	iShares S&P/TSX Capped Financials Index ETF	-\$306	-27%
2 XIC	iShares Core S&P/TSX Capped Composite Index ETF	-\$301	-4%
3 VSP	Vanguard S&P 500 Index ETF CAD-hedged	-\$237	-17%
4 XSP	iShares Core S&P 500 Index ETF CAD- Hedged	-\$86	-1%
5 PSA	Purpose High Interest Savings ETF	-\$85	-3%
6 ZFS	BMO Short Federal Bond Index ETF	-\$82	-13%
7 MULC/B	Manulife Multifactor US Large Cap Index ETF	-\$74	-55%
8 ZLU	BMO Low Volatility US Equity ETF	-\$69	-4%
9 ZSP	BMO S&P 500 Index ETF	-\$66	-1%
10 XWD	iShares MSCI World Index ETF	-\$66	-8%
11 XAW	iShares Core MSCI All Country World ex Canada Index ETF	-\$48	-4%
12 ZGB	BMO Government Bond Index ETF	-\$47	-22%
13 ZLI	BMO Low Volatility International Equity ETF	-\$42	-10%
14 XGD	iShares S&P/TSX Global Gold Index ETF	-\$36	-2%
15 NHYB	NBI High Yield Bond ETF	-\$35	-4%
16 PGL	Invesco Long Term Government Bond Index ETF	-\$32	-8%
17 ZSP/U	BMO S&P 500 Index ETF	-\$30	-2%
18 CMR	iShares Premium Money Market ETF	-\$25	-6%
19 VE	Vanguard FTSE Developed Europe All Cap Index ETF	-\$24	-14%
20 DANC	Desjardins Alt Long/Short Equity Market Neutral ETF	-\$23	-10%

Source: National Bank of Canada, Bloomberg;

Table 6 - ETF Flows by Category - August 2020

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$144,336	61%	\$1,157	0.8%
Fixed Income	\$82,087	35%	\$1,249	1.5%
Commodities	\$2,020	1%	\$150	8.1%
Multi-Asset	\$7,599	3%	\$214	2.9%
Inverse / Levered	\$1,132	0%	-\$15	-1.4%
Total	\$237,176	100%	\$2,754	1.2%

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

Table 7 - Equity ETF Flows by Geography - August 2020

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$51,238	35%	\$598	1.2%
United States	\$51,726	36%	\$168	0.3%
DM: Broad	\$17,667	12%	\$191	1.1%
DM: Regional & Country	\$5,190	4%	-\$52	-1.0%
Emerging Markets	\$5,406	4%	\$204	3.9%
Global	\$13,109	9%	\$49	0.4%
Total	\$144,336	100%	\$1,157	0.8%

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

Table 8 - Equity ETF Flows by Sector* - August 2020

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,071	35%	-\$289	-4.0%
Materials	\$2,917	17%	-\$19	-0.8%
Real Estate	\$2,841	16%	\$24	1.5%
Health Care	\$1,778	10%	\$2	0.1%
Utilities	\$1,423	8%	\$51	3.7%
Technology	\$1,319	8%	\$7	0.5%
Energy	\$807	5%	\$6	0.8%
Other	\$391	2%	\$11	3.2%
Total	\$17,546	100%	-\$137	-0.8%

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

Table 9 - Equity ETF Flows by Focus - August 2020

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$90,363	63%	\$959	1.1%
Dividend / Income	\$15,476	11%	\$47	0.3%
Factor: Low Vol	\$8,619	6%	-\$154	-1.8%
Factor: Multi-factor	\$3,171	2%	\$278	9.8%
Factor: Fundamental	\$2,669	2%	\$50	2.0%
Sector	\$17,546	12%	-\$137	-0.8%
Thematic	\$3,921	3%	\$91	2.4%
Other	\$2,571	2%	\$21	0.9%
Total	\$144,336	100%	\$1,157	0.8%

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

Table 10 - Fixed Income ETF Flows by Type - August 2020

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$24,879	30%	\$357	1.4%
Canada Government	\$8,748	11%	\$25	0.3%
Canada Corporate	\$12,754	16%	\$402	3.3%
U.S. / North America	\$9,007	11%	\$208	2.3%
Foreign	\$8,776	11%	\$184	2.1%
Sub-Investment Grade	\$4,744	6%	-\$21	-0.4%
Preferred/Convertible	\$6,927	8%	\$20	0.3%
Cash Alternative	\$6,253	8%	\$74	1.2%
Total	\$82,087	100%	\$1,249	1.5%

Source: National Bank of Canada, Bloomberg

Table 11 - Fixed Income ETF Flows by Maturity - August 2020

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$43,401	53%	\$833	1.9%
Ultra Short Term	\$3,876	5%	\$44	1.1%
Short Term	\$15,574	19%	\$10	0.1%
Mid Term	\$6,731	8%	\$166	2.5%
Long Term	\$4,334	5%	\$60	1.4%
Real Return	\$1,459	2%	\$57	4.1%
Target Maturity	\$460	1%	\$5	1.0%
Cash Alternative	\$6,253	8%	\$74	1.2%
Total	\$82,087	100%	\$1,249	1.5%

Source: National Bank of Canada, Bloomberg

YTD August 2020 ETF Flows: Tables 12 - 19

Inflows into Canadian ETFs total \$32 billion in 2020 year-to-date, a historic record in the making, and already surpassing the record annual inflow of \$28 billion set in 2019. Equity ETF assets have swelled with creations during the market's wild whipsaws this year, seeing inflows of \$19 billion so far, almost twice the dollar figure of Fixed Income inflows. Both market-cap weighted ETFs and thematic ETFs (primarily ESG ETFs) have enjoyed enormous growth. Within fixed income ETFs, the largest dollar inflow year-to-date has gone to the Foreign bond category (driven by NUBF among other products), followed by Canada Aggregate Bond, and Cash like ETFs.

Table 12 - Top ETF Inflows - YTD August 2020

Ticker	Name	Flow (\$M)	Flow/AUM
1	NUBF NBI Unconstrained Fixed Income ETF	\$1,664	NA
2	XIU iShares S&P/TSX 60 Index ETF	\$1,371	16%
3	HXCN Horizons S&P/TSX Capped Composite Index ETF	\$1,287	NA
4	HBB Horizons Cdn Select Universe Bond ETF	\$1,238	283%
5	CSAV CI First Asset High Interest Savings ETF	\$1,108	77%
6	XUS iShares Core S&P 500 Index ETF	\$927	46%
7	ZSP BMO S&P 500 Index ETF	\$898	12%
8	ZEAF BMO MSCI EAFE Index ETF	\$887	26%
9	HXS Horizons S&P 500 Index ETF	\$812	88%
10	NHYB NBI High Yield Bond ETF	\$771	NA
11	TPE TD International Equity Index Etf	\$724	1708%
12	ZEM BMO MSCI Emerging Markets Index ETF	\$677	56%
13	XBB iShares Core Canadian Universe Bond Index ETF	\$662	17%
14	HSAV Horizons Cash Maximizer ETF	\$592	NA
15	TPU TD US Equity Index ETF	\$555	179%
16	XIC iShares Core S&P/TSX Capped Composite Index ETF	\$451	7%
17	MINT/B Manulife Multifactor Developed International Index ETF	\$437	588%
18	XFH iShares Core MSCI EAFE IMI Index ETF CAD-Hedged	\$417	166%
19	FCGB Fidelity Global Core Plus Bond ETF	\$415	168%
20	XSP iShares Core S&P 500 Index ETF CAD- Hedged	\$402	8%

Source: National Bank of Canada, Bloomberg;

Table 13 - Top ETF Outflows - YTD August 2020

Ticker	Name	Flow (\$M)	Flow/AUM
1	FQC CI First Asset MSCI Canada Quality Index Class ETF	-\$421	-72%
2	ZDY BMO US Dividend ETF	-\$417	-43%
3	ZAG BMO Aggregate Bond Index ETF	-\$343	-7%
4	XCB iShares Canadian Corporate Bond Index ETF	-\$285	-14%
5	HOD BetaPro Crude Oil Inverse Leveraged Daily Bear ETF	-\$253	-228%
6	XFR iShares Floating Rate Index ETF	-\$237	-37%
7	ZFS BMO Short Federal Bond Index ETF	-\$235	-30%
8	HFR Horizons Active Ultra-Short Term Investment Grade Bond ETI	-\$217	-32%
9	RWX/B CI First Asset MSCI International Low Risk Weighted ETF	-\$191	-86%
10	XGB iShares Canadian Government Bond Index ETF	-\$154	-20%
11	RQI RBC Target 2021 Corporate Bond Index ETF	-\$141	-48%
12	XFN iShares S&P/TSX Capped Financials Index ETF	-\$104	-9%
13	ZID BMO India Equity Index ETF	-\$102	-55%
14	ZCS BMO Short Corporate Bond Index ETF	-\$101	-8%
15	VXMB CI First Asset Morningstar International Value Index ETF	-\$101	-23%
16	XMU iShares MSCI Min Vol USA Index ETF	-\$99	-21%
17	PSB Invesco 1-5 Year Laddered Investment Grade Corporate Bond	-\$91	-12%
18	DFE Desjardins Emerging Markets Multifactor-Controlled Volatility	-\$91	-49%
19	HPR Horizons Active Preferred Share ETF	-\$90	-6%
20	RLB RBC 1-5 Year Laddered Canadian Bond ETF	-\$89	-30%

Source: National Bank of Canada, Bloomberg;

Table 14 - ETF Flows by Category - YTD August 2020

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$144,336	61%	\$18,729	15%
Fixed Income	\$82,087	35%	\$10,109	14%
Commodities	\$2,020	1%	\$720	77%
Multi-Asset	\$7,599	3%	\$1,784	30%
Inverse / Leveraged	\$1,132	0%	\$135	10%
Total	\$237,176	100%	\$31,478	15.4%

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

Table 15 - Equity ETF Flows by Geography - YTD August 2020

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$51,238	35%	\$6,121	13%
United States	\$51,726	36%	\$5,799	14%
DM: Broad	\$17,667	12%	\$3,322	22%
DM: Regional & Country	\$5,190	4%	\$382	7%
Emerging Markets	\$5,406	4%	\$982	22%
Global	\$13,109	9%	\$2,123	20%
Total	\$144,336	100%	\$18,729	14.8%

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

Table 16 - Equity ETF Flows by Sector* - YTD August 2020

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,071	35%	\$660	10%
Materials	\$2,917	17%	\$787	53%
Real Estate	\$2,841	16%	\$223	7%
Health Care	\$1,778	10%	\$269	18%
Utilities	\$1,423	8%	\$188	14%
Technology	\$1,319	8%	\$291	38%
Energy	\$807	5%	\$196	20%
Other	\$391	2%	\$42	12%
Total	\$17,546	100%	\$2,655	16%

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

Table 17 - Equity ETF Flows by Focus - YTD August 2020

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$90,363	63%	\$12,971	17%
Dividend / Income	\$15,476	11%	\$681	4%
Factor: Low Vol	\$8,619	6%	\$74	1%
Factor: Multi-factor	\$3,171	2%	\$813	34%
Factor: Fundamental	\$2,669	2%	-\$295	-9%
Sector	\$17,546	12%	\$2,655	16%
Thematic	\$3,921	3%	\$1,432	55%
Other	\$2,571	2%	\$399	19%
Total	\$144,336	100%	\$18,729	14.8%

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

Table 18 - Fixed Income ETF Flows by Type - YTD August 2020

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$24,879	30%	\$2,571	12%
Canada Government	\$8,748	11%	\$178	2%
Canada Corporate	\$12,754	16%	\$79	1%
U.S. / North America	\$9,007	11%	\$1,627	23%
Foreign	\$8,776	11%	\$3,022	53%
Sub-Investment Grade	\$4,744	6%	\$693	17%
Preferred/Convertible	\$6,927	8%	-\$196	-3%
Cash Alternative	\$6,253	8%	\$2,135	52%
Total	\$82,087	100%	\$10,109	14.4%

Source: National Bank of Canada, Bloomberg

Table 19 - Fixed Income ETF Flows by Maturity - YTD August 2020

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$43,401	53%	\$7,044	20%
Ultra Short Term	\$3,876	5%	-\$111	-3%
Short Term	\$15,574	19%	-\$243	-2%
Mid Term	\$6,731	8%	\$771	14%
Long Term	\$4,334	5%	\$333	9%
Real Return	\$1,459	2%	\$416	44%
Target Maturity	\$460	1%	-\$235	-34%
Cash Alternative	\$6,253	8%	\$2,135	52%
Total	\$82,087	100%	\$10,109	14.4%

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 2019 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 fillings.

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 & behavior, 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.

DISCLOSURES

Levered and Inverse Exchange-Traded Funds are very different from most ETFs. They pursue leveraged investment goals, and they are riskier than alternatives that do not use leverage because they magnify the performance of the benchmark on an investment. These ETFs seek daily leveraged investment results. The return of an inverse or levered ETF for periods longer than a single day, especially in periods of market volatility, may be completely uncorrelated to the return of the benchmark over such longer periods. Levered and inverse ETFs are intended to be used as short-term trading vehicles for investors managing their portfolios on a daily basis. They are not to be used by, and are not appropriate for, investors who intend to hold positions.

Unless otherwise agreed in writing, National Bank of Canada and its affiliates act solely in the capacity of an arm's length contractual counterparty and not as an adviser or fiduciary. Accordingly you should not regard transaction proposals or other written or oral communications from us as a recommendation or advice that a transaction is appropriate for you or meets your financial objectives. Any financial transaction involves a variety of potentially significant risks and issues. Before entering into any financial transaction, you should ensure that you fully understand the terms, have evaluated the risks and have determined that the transaction is appropriate for you in all respects. If you believe that you need assistance, you should consult appropriate advisers before entering into the transaction. The attached material does not constitute an offer to enter into any transaction. Such material is believed by us to be reliable, but we make no representation as to its accuracy or completeness. This brief statement does not purport to describe all of the risks associated with financial transactions and should not be construed as advice to you.

General

This Report was prepared by National Bank Financial Inc. (NBF), a Canadian investment dealer, a dealer member of IIROC and an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on the Toronto Stock Exchange.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete and may be subject to change without notice. The information is current as of the date of this document. Neither the author nor NBF assumes any obligation to update the information or advise on further developments relating to the topics or securities discussed. The opinions expressed are based upon the author(s) analysis and interpretation of these particulars and are not to be construed as a solicitation or offer to buy or sell the securities mentioned herein, and nothing in this Report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this Report. The Report alone is not intended to form the basis for an investment decision, or to replace any due diligence or analytical work required by you in making an investment decision.

This Report is for distribution only under such circumstances as may be permitted by applicable law. This Report is not directed at you if NBF or any affiliate distributing this Report is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you.

National Bank of Canada Financial Markets is a trade name used by National Bank Financial Inc. and National Bank of Canada Financial Inc.

National Bank Financial Inc. or an affiliate thereof, owns or controls an equity interest in TMX Group Limited ("TMX Group") and has a nominee director serving on the TMX Group's board of directors. As such, each such investment dealer may be considered to have an economic interest in the listing of securities on any exchange owned or operated by TMX Group, including the Toronto Stock Exchange, the TSX Venture Exchange and the Alpha Exchange. No person or company is required to obtain products or services from TMX Group or its affiliates as a condition of any such dealer supplying or continuing to supply a product or service.

Research analysts

The Research Analyst(s) who prepared these reports certify that their respective report accurately reflects his or her personal opinion and that no part of his/her compensation was, is, or will be directly or indirectly related to the specific recommendations or views as to the securities or companies.

NBF compensates its Research Analysts from a variety of sources. The Research Department is a cost centre and is funded by the business activities of NBF including Institutional Equity Sales and Trading, Retail Sales, the correspondent clearing business, and Corporate and Investment Banking. Since the revenues from these businesses vary, the funds for research compensation vary. No one business line has a greater influence than any other for Research Analyst compensation.

Canadian Residents

NBF or its affiliates may engage in any trading strategies described herein for their own account or on a discretionary basis on behalf of certain clients and, as market conditions change, may amend or change investment strategy including full and complete divestment. The trading interests of NBF and its affiliates may also be contrary to any opinions expressed in this Report.

NBF or its affiliates often act as financial advisor, agent, lender or underwriter or provides trading related services for certain issuers mentioned herein and may receive remuneration for its services. As well, NBF and its affiliates and/or their officers, directors, representatives, associates, may have a position in the securities mentioned herein and may make purchases and/or sales of these securities from time to time in the open market or otherwise. NBF and its affiliates may make a market in securities mentioned in this Report. This Report may not be independent of the proprietary interests of NBF and its affiliates.

NBF is a member of the Canadian Investor Protection Fund.

UK Residents

This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research.

In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as

DISCLOSURES

up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorized and regulated by the Financial Conduct Authority and has its registered office at 71 Fenchurch Street, London, EC3M 4HD.

NBF is not authorized by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

U.S. Residents

With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") is registered with the Securities Exchange Commission (SEC), the Financial Industry Regulatory Authority (FINRA), and is a member of the Securities Investor Protection Corporation (SIPC). NBCFI operates pursuant to a 15 a-6 Agreement with its Canadian affiliates, NBF and National Bank of Canada.

This report has been prepared in whole or in part by research analysts employed by non-US affiliates of NBCFI that are not registered as broker/dealers in the US. These non-US research analysts are not registered as associated persons of NBCFI and are not licensed or qualified as research analysts with FINRA or any other US regulatory authority and, accordingly, may not be subject (among other things) to FINRA restrictions regarding communications by a research analyst with the subject company, public appearances by research analysts and trading securities held in a research analyst account.

All of the views expressed in this research report accurately reflects the research analyst's personal views regarding any and all of the subject securities or issuers. No part of the analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report. The analyst responsible for the production of this report certifies that the views expressed herein reflect his or her accurate personal and technical judgment at the moment of publication.

Because the views of analysts may differ, members of the National Bank Financial Group may have or may in the future issue reports that are inconsistent with this report, or that reach conclusions different from those in this report. To make further inquiry related to this report, United States residents should contact their NBCFI registered representative.

HK Residents

With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA") which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc., is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

Copyright

This Report may not be reproduced in whole or in part, or further distributed or published or referred to in any manner whatsoever, nor may the information, opinions or conclusions contained in it be referred to without in each case the prior express written consent of NBF.

Dissemination policy

The NBF Research Dissemination Policy is available on our website under Legal/Research Policy (link attached) <http://www.nbin.ca/cmst/site/index.html?navid=712&templateid=243>