

September 2019: A Flurry of New Launches

- Canadian ETFs attracted \$437 million in September; year-to-date ETF flows reached \$16 billion
- Equity ETFs suffered outflows in Canada and the U.S. regions but attracted investor dollars in EAFE and EM
- Fixed Income ETFs had another month of strong inflow into almost all sub-categories except for high yield
- Fourteen ETFs launched; Two ETF providers exited the market by delisting the lone ETFs they offered

Summary: With inflows of \$437 million, Canadian ETFs slowed down after a strong August, bringing total assets to \$188 billion. Equity asset class saw redemptions of \$1.1 billion, dragged by outflows from Canada and U.S. region, offset somewhat by \$594 million in flows towards International Developed and Emerging Market categories. Fixed income had another stellar month with \$1.3 billion created. Multi-asset ETFs took in \$268 million into currency, asset allocation and alternative ETFs, while Commodity ETF flows were flat in September.

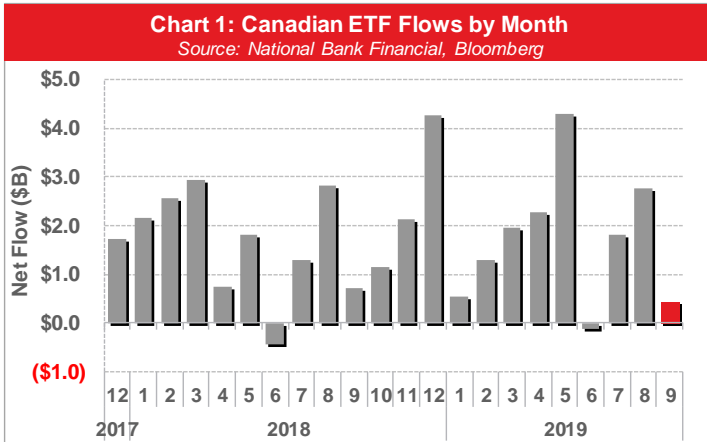
Table 1 - ETF Flows by Category - September 2019

	AUM (\$M)	Mkt Shr (%)	September 2019		Jan-Sept 2019	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$116,129		-\$1,148	-1.0%	\$4,510	4.6%
Canada	\$44,605	24%	-\$972	-2.2%	-\$275	-0.7%
United States	\$38,863	21%	-\$770	-2.0%	\$2,525	8.0%
International	\$32,661	17%	\$594	1.9%	\$2,260	8.1%
Fixed Income	\$64,958	35%	\$1,306	2.0%	\$9,043	16.7%
Commodities	\$916	0%	\$5	0.5%	\$130	19.5%
Multi-Asset	\$5,121	3%	\$268	5.6%	\$1,826	60.6%
Inverse / Levered	\$940	0%	\$6	0.6%	\$18	2.1%
Total	\$188,065	100%	\$437	0.2%	\$15,527	9.9%

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

Flows by Asset Class and Product: (Table 1 & Tables 4, 5 on page 3)

Fixed Income ETFs have remained the green category in flows this year, taking in \$1.3 billion in new assets in September. New money poured into all sub-categories of fixed income except sub-investment grade. Almost all maturity buckets saw inflows at the same time. The most popular categories this month were Canada aggregate bonds and high interest savings account ETFs, a category that just increased in activity with some new launches and filings. The yield curve steadily recovered from August's bottoming of rates, leading to slight losses in Canadian aggregate bonds in September while equities enjoyed a strong month of positive returns.



Equity ETFs bled \$1.1 billion in assets, primarily from XIU (iShares S&P/TSX 60), XUU (iShares U.S. total market) and ZDY (BMO U.S. dividend). Contrariwise, EAFE equities (led by XEF, iShares EAFE IMI ETF) saw creations, on the heels of additional ECB stimulus announced in reaction to deteriorating economic data.

On the Canadian side, financial sector ETFs again saw a net outflow primarily driven by BMO Equal Weighted Bank ZEB and iShares Financials XFN. The financial sector caught up with and outperformed the broad Canadian market in September, but investors still withdrew money as sentiment may still be rooted to the “lower for longer” thesis for interest rates. The real estate sector had the largest monthly inflow in September and highest year-to-date flows among all sector ETFs, boosted by the sector’s strong performance compared to the broader S&P/TSX Composite Index in a low rate environment. iShares Global Real Estate ETF CGR had a \$82 million inflow in September.

Multi-Asset inflows were mostly driven by a few products: Horizons U.S. Dollar Currency DLR saw the largest monthly creation at \$153 million, perhaps as investors play out a contrarian strategy following the recent lows for the U.S. dollar in early September. New ETF provider Picton Mahoney’s Fortified Income Alternative Fund PFIA took in \$23 million in September.

Flows by Provider (Table 2): Two providers exited the market as announced earlier: First Block delisted its only Blockchain ETF **FBCN** and Galileo delisted its only global gold and precious metal ETF **GOGO**. The number of ETF providers in Canada decreased to 35.

New Launches (Table 3): No new providers came to the market this month, but there were fourteen new product launches. Details are provided below and in Table 3.

Horizons launched Horizons Growth TRI ETF (**HGRO**), investing in equity asset class swap-based Horizons TRI ETFs, such as HSH, HXT and HXQ.

CI First Asset launched two ESG ETFs tracking MSCI World ESG Select Impact ex Fossil Fuels Index in currency unhedged (**CESG/B**) and CAD-hedged units (**CESG**). The index selects companies that meet minimum ESG standards defined by MSCI and that generate at least 30% of sales from ESG themes.

Evolve launched Dividend Stability Preferred Share Index ETF (**PREF**), tracking the Solactive Dividend Stability Canada Preferred Share Index. The index tracks up to 50 preferred share securities with a credit rating of P3L or higher and market price close to par.

RBC iShares launched five single factor ETFs.

- **XQLT** (iShares Edge MSCI USA Quality), **XMTM** (iShares Edge MSCI USA Momentum) and **XVLU** (iShares Edge MSCI USA Value) track indices which measure the performance of securities in their corresponding broad market benchmarks that exhibit higher quality, risk-adjusted price momentum and value characteristics, respectively.
- **XSMC** (iShares S&P U.S. Small Cap) and **XSMH** track the S&P 600 index, providing exposure to U.S. small cap companies.

Fidelity launched a suite of actively managed fixed income ETFs and ETF mutual funds:

- Fidelity Global Core Plus Bond ETF (**FCGB**): invests in investment-grade and high yield securities globally.
- Fidelity Canadian Short-Term Corporate Bond ETF (**FCSB**): invests primarily in Canadian corporate fixed income securities, with an average term to maturity of five years or less.
- Fidelity Systematic U.S. High Yield Bond ETF (**FCHY**): invests primarily in U.S. high yield securities using a quantitative multi-factor model.
- Fidelity Systematic U.S. High Yield Bond Currency Neutral ETF (**FCHH**): provides the same underlying exposure as FCHY with U.S. currency hedged back to the Canadian dollar.
- Fidelity Systematic Canadian Bond Index ETF (**FCCB**): replicates an in-house index by investing in investment-grade

Provider	AUM (\$M)	Mkt Shr (%)	September 2019		Jan-Sept 2019	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
1 RBC iShares	\$66,928	35.6%	-\$808	-1%	-\$1,238	-2%
2 BMO	\$59,322	31.6%	\$258	0%	\$5,862	12%
3 Vanguard	\$22,741	12.1%	\$259	1%	\$3,855	23%
4 Horizons	\$9,834	5.2%	-\$18	0%	-\$189	-2%
5 CI First Asset	\$7,411	3.9%	\$184	3%	\$2,448	55%
6 Invesco	\$4,199	2.2%	\$44	1%	-\$50	-1%
7 Mackenzie	\$4,045	2.2%	\$97	2%	\$906	31%
8 Purpose	\$3,701	2.0%	\$74	5%	\$528	17%
9 PIMCO	\$1,673	0.9%	\$73	5%	\$812	97%
10 Franklin Templeton	\$1,645	0.9%	\$5	0%	\$809	112%
11 AGF	\$965	0.5%	-\$10	-1%	\$157	22%
12 WisdomTree	\$936	0.5%	\$9	1%	\$128	17%
13 Harvest	\$686	0.4%	\$3	0%	\$130	23%
14 Fidelity	\$732	0.4%	\$60	2%	\$527	280%
15 Desjardins	\$540	0.3%	\$6	1%	\$186	54%
16 Evolve Funds	\$457	0.2%	\$18	3%	\$92	23%
17 Manulife	\$316	0.2%	\$7	2%	\$1	0%
18 First Trust	\$294	0.2%	-\$19	-7%	-\$91	-27%
19 CIBC	\$254	0.1%	\$43	20%	\$248	NA
20 TDAM	\$240	0.1%	\$12	5%	\$85	57%
21 Hamilton	\$235	0.1%	\$2	1%	\$3	1%
22 Brompton Funds	\$228	0.1%	\$0	0%	\$48	40%
23 Middlefield	\$226	0.1%	\$1	0%	-\$6	NA
24 NBI	\$134	0.1%	\$5	4%	\$179	NA
25 Lysander	\$91	0.0%	\$0	0%	\$1	1%
26 Bristol Gate	\$75	0.0%	\$1	2%	\$35	113%
27 IA Clarington	\$43	0.0%	\$4	10%	\$43	225%
28 Picton Mahoney	\$37	0.0%	\$29	363%	\$37	NA
29 SmartBe	\$27	0.0%	\$1	4%	\$28	NA
30 Arrow Capital	\$15	0.0%	\$0	0%	\$8	109%
31 Emerge	\$9	0.0%	\$0	0%	\$10	NA
32 Scotia Bank	\$8	0.0%	\$0	-2%	\$0	2%
33 Starlight	\$7	0.0%	\$0	0%	\$0	5%
34 Auspice	\$4	0.0%	-\$2	-29%	-\$40	-194%
35 Accelerate	\$3	0.0%	\$0	0%	\$0	NA
Total	\$188,065	100.0%	\$446	0.2%	\$15,550	9.9%

Excludes Equium Capital, Coin Capital, Galileo, and First Block exit flows; Source: NBF, Bloomberg

Name	Ticker	Mgmt Fee (%)	Focus
1 Horizons Growth TRI ETF	HGRO	0.17*	Equity Portfolio
2 CI First Asset MSCI World ESG Impact ETF CAD-H	CESG	0.55	ESG Equity
3 CI First Asset MSCI World ESG Impact ETF	CESG/B	0.55	ESG Equity
4 iShares Edge MSCI USA Value Factor Index ETF	XVLU	0.30	Value
5 iShares S&P US Small-Cap Index ETF	XSMC	0.20	Small Cap
6 iShares Edge MSCI USA Momentum Factor Index ETF	XMTM	0.30	Momentum
7 iShares S&P US Small-Cap Index ETF CAD-Hedged	XSMH	0.20	Small Cap
8 iShares Edge MSCI USA Quality Factor Index ETF	XQLT	0.30	Quality
9 Fidelity Systematic US High Yield Bond ETF	FCHY	0.50	High Yield
10 Fidelity Systematic US High Yield Bond Currency Neutral ETF	FCHH	0.53	High Yield
11 Fidelity Systematic Canadian Bond Index ETF	FCCB	0.25	Aggregate
12 Fidelity Global Core Plus Bond ETF	FCGB	0.50	Global
13 Fidelity Canadian Short Term Corporate Bond ETF	FCSB	0.40	ST Corp
14 Evolve Dividend Stability Preferred Share Index ETF	PREF	0.45	Preferred

**Estimated MER based on underlying MER; Source: National Bank of Canada, SEDAR, Providers*

Canadian government and corporation bonds.

September 2019 ETF Flows: Tables 4 - 11

Table 4 - Top Single Long ETF Inflows - September 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1 XEF	iShares Core MSCI EAFE IMI Index ETF	\$260	9%
2 PSA	Purpose High Interest Savings ETF	\$195	10%
3 ZEA	BMO MSCI EAFE Index ETF	\$162	7%
4 DLR	Horizons US Dollar Currency ETF	\$153	265%
5 ZLB	BMO Low Volatility Canadian Equity ETF	\$148	8%
6 ZFL	BMO Long Federal Bond Index ETF	\$133	11%
7 CSAV	CI First Asset High Interest Savings ETF	\$130	55%
8 ZLU	BMO Low Volatility US Equity ETF	\$107	9%
9 ZAG	BMO Aggregate Bond Index ETF	\$100	2%
10 PGL	Invesco Long Term Government Bond Index ETF	\$90	23%
11 CIF	iShares Global Infrastructure Index ETF	\$82	132%
12 CGR	iShares Global Real Estate Index ETF	\$82	60%
13 QEBH	Mackenzie Emerging Markets Bond Index CAD-H	\$74	44%
14 VAB	Vanguard Canadian Aggregate Bond Index ETF	\$73	3%
15 XEC	CI First Asset MSCI International Low Risk Weighted	\$66	11%
16 ZEM	BMO MSCI Emerging Markets Index ETF	\$59	7%
17 XSH	iShares Core Canadian Short Corp+ Maple Bond	\$56	8%
18 VSC	Vanguard Canadian Short-Term Corporate Bond	\$49	4%
19 XBB	CI First Asset Morningstar International Value Index	\$49	2%
20 PMNT	Pimco Global Short Maturity Fund Canada	\$40	36%

Source: National Bank of Canada, Bloomberg;

Table 6 - ETF Flows by Category - September 2019

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$116,129	62%	\$1,148	-1.0%
Fixed Income	\$64,958	35%	\$1,306	2.0%
Commodities	\$916	0%	\$5	0.5%
Multi-Asset	\$5,121	3%	\$268	5.6%
Inverse / Levered	\$940	0%	\$6	0.6%
Total	\$188,065	100%	\$437	0.2%

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

Table 7 - Equity ETF Flows by Geography - September 2019

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$44,605	38%	-\$972	-2.2%
United States	\$38,863	33%	-\$770	-2.0%
DM: Broad	\$13,515	12%	\$417	3.3%
DM: Regional & Country	\$5,375	5%	\$72	-1.3%
Emerging Markets	\$4,039	3%	\$116	3.0%
Global	\$9,733	8%	\$133	1.4%
Total	\$116,129	100%	-\$1,148	-1.0%

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

Table 8 - Equity ETF Flows by Sector* - September 2019

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,236	40%	-\$201	-3.3%
Real Estate	\$3,312	21%	\$105	3.4%
Basic Materials	\$1,340	9%	-\$16	-1.0%
Health Care	\$1,331	9%	\$0	0.0%
Utilities	\$1,318	9%	\$4	0.3%
Energy	\$906	6%	-\$27	-3.1%
Technology	\$674	4%	-\$12	-1.8%
Other	\$343	2%	\$12	3.6%
Total	\$15,459	100%	-\$134	-0.9%

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

Table 5 - Top Single Long ETF Outflows - September 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1 XIU	iShares S&P/TSX 60 Index ETF	-\$940	-10%
2 XUU	iShares Core S&P US Total Market Index ETF	-\$481	-33%
3 ZDY	BMO US Dividend ETF	-\$179	-14%
4 HTB	Horizons US 7-10 Year Treasury Bond ETF	-\$134	-62%
5 ZEB	BMO High Yield US Corporate Bond CAD-H	-\$89	-8%
6 ZSP	BMO S&P 500 Index ETF	-\$78	-1%
7 ZCN	BMO S&P/TSX Capped Composite Index ETF	-\$73	-2%
8 ZSP/U	BMO S&P 500 Index ETF (US\$)	-\$62	-3%
9 XFN	iShares S&P/TSX Capped Financials Index ETF	-\$55	-5%
10 HXH	Horizons Cdn High Dividend Index ETF	-\$44	-30%
11 ZGD	BMO Equal Weight Global Gold Index ETF	-\$42	-23%
12 ZWP	BMO Europe High Dividend Covered Call ETF	-\$39	-4%
13 ZWE	BMO Europe High Dividend Covered Call CAD-H	-\$39	-4%
14 XFR	iShares Floating Rate Index ETF	-\$34	-5%
15 HXT	Horizon S&P/TSX 60 Index ETF	-\$32	-2%
16 XWD	iShares MSCI World Index ETF	-\$32	-5%
17 HXS	Horizons S&P 500 Index ETF	-\$31	-4%
18 XHY	iShares US High Yield Bond Index ETF CAD-H	-\$30	-7%
19 ZBK	BMO Equal Weight US Banks Index ETF	-\$28	-4%
20 RPF	RBC Canadian Preferred Share ETF	-\$26	-4%

Source: National Bank of Canada, Bloomberg;

Table 9 - Equity ETF Flows by Focus - September 2019

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$66,146	57%	-\$1,121	-1.7%
Dividend / Income	\$16,400	14%	-\$320	-2.0%
Factor: Low Vol	\$8,254	7%	\$326	4.1%
Factor: Multi-factor	\$2,241	2%	\$20	0.9%
Factor: Fundamental	\$3,070	3%	-\$49	-1.6%
Sector	\$15,459	13%	-\$134	-0.9%
Thematic	\$2,577	2%	\$120	4.7%
Other	\$1,983	2%	\$11	0.5%
Total	\$116,129	100%	-\$1,148	-1.0%

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

Table 10 - Fixed Income ETF Flows by Type - September 2019

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$19,387	30%	\$348	1.8%
Canada Government	\$8,284	13%	\$241	3.0%
Canada Corporate	\$11,695	18%	\$112	1.0%
U.S. / North America	\$6,625	10%	\$27	0.4%
Foreign	\$4,975	8%	\$235	4.9%
Sub-Investment Grade	\$4,108	6%	-\$10	-0.2%
Preferred/Convertible	\$7,204	11%	\$22	0.3%
HISA	\$2,680	4%	\$332	14.1%
Total	\$64,958	100%	\$1,306	2.0%

Source: National Bank of Canada, Bloomberg

Table 11 - Fixed Income ETF Flows by Maturity - September 2019

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$31,764	49%	\$622	2.0%
Ultra Short Term	\$6,972	11%	\$349	5.3%
Short Term	\$15,487	24%	\$92	0.6%
Mid Term	\$5,597	9%	-\$34	-0.6%
Long Term	\$3,618	6%	\$247	7.2%
Real Return	\$906	1%	\$34	3.8%
Target Maturity	\$615	1%	-\$4	-0.6%
Total	\$64,958	100%	\$1,306	2.0%

Source: National Bank of Canada, Bloomberg

YTD 2019 ETF Flows: Tables 12 - 19 on page 4

Canadian ETFs saw inflows of \$16 billion year-to-date, on par with the \$15 billion figure from the same period last year. Top inflows in the first three quarters of the year inflows are mostly into broad U.S. equity ETFs (ZSP/U through one institutional creation) and aggregate bond ETFs. Factors such as low volatility, momentum and quality have been more popular than multi-factor and thematic products. Additionally, foreign bonds, high interest savings and asset allocation ETFs have been climbing the year-to-date leaderboard. On the other hand, high yield credit, Canadian and U.S. Financials, and Energy are falling out of favor.

Table 12 - Top ETF Inflows - Jan-Sept 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	ZSP/U BMO S&P 500 Index ETF	\$1,151	209%
2	ZAG BMO Aggregate Bond Index ETF	\$1,123	32%
3	ZFL BMO Long Federal Bond Index ETF	\$971	355%
4	VAB Vanguard Canadian Aggregate Bond Index ETF	\$871	55%
5	ZCPB BMO Core Plus Bond Fund ETF	\$854	NA
6	ZLB BMO Low Volatility Canadian Equity ETF	\$731	65%
7	ZSP BMO S&P 500 Index ETF	\$690	14%
8	PSA Purpose High Interest Savings ETF	\$675	48%
9	XBB iShares Core Canadian Universe Bond Index ETF	\$661	28%
10	PMIF PIMCO Monthly Income Fund	\$612	77%
11	WXM CI First Asset Morningstar Canada Momentum Index	\$572	229%
12	XEF iShares Core MSCI EAFE IMI Index ETF	\$565	28%
13	FQC First Asset MSCI Canada Quality Index Class ETF	\$531	NA
14	ZST BMO Ultra Short-Term Bond ETF	\$508	292%
15	ZLU BMO Low Volatility US Equity ETF	\$491	70%
16	FGO First Asset Enhanced Government Bond Etf CAD-H	\$489	943%
17	ZEM BMO MSCI Emerging Markets Index ETF	\$488	100%
18	VBAL Vanguard Balanced Etf Portfolio	\$419	122%
19	VGRO Vanguard Growth ETF Portfolio	\$366	75%
20	CSAV CI First Asset High Interest Savings ETF	\$365	NA

Source: National Bank of Canada, Bloomberg;

*Structural inflows due to RBC iShares mergers were taken out

Table 13 - Top ETF Outflows - Jan-Sept 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIU iShares S&P/TSX 60 Index ETF	-\$1,934	-22%
2	XUU iShares Core S&P US Total Market Index ETF	-\$473	-37%
3	ZJK BMO High Yield US Corporate Bond Index ETF	-\$400	-37%
4	ZCN BMO S&P/TSX Capped Composite Index ETF	-\$388	-10%
5	ZDY BMO US Dividend ETF	-\$382	-27%
6	ZEB BMO Equal Weight Banks Index ETF	-\$378	-29%
7	ZHY BMO High Yield US Corp CAD-H Index ETF	-\$354	-36%
8	RWW/B First Asset MSCI World Low Risk Weighted ETF	-\$318	-47%
9	ZBK BMO Equal Weight US Banks Index ETF	-\$269	-33%
10	ZCS BMO Short Corporate Bond Index ETF	-\$250	-17%
11	ZFH BMO Floating Rate High Yield ETF	-\$242	-67%
12	HXT Horizon S&P/TSX 60 Index ETF	-\$209	-12%
13	XIN iShares MSCI EAFE Index ETF CAD-Hedged	-\$200	-16%
14	XEG iShares S&P/TSX Capped Energy Index ETF	-\$197	-25%
15	XFN iShares S&P/TSX Capped Financials Index ETF	-\$187	-18%
16	XGD iShares S&P/TSX Global Gold Index ETF	-\$176	-22%
17	XSH iShares Core Canadian Short Corp+ Maple Bond	-\$174	-20%
18	ZUB BMO Equal Weight US Banks CAD-H Index ETF	-\$171	-34%
19	XSP iShares Core S&P 500 Index ETF CAD-H	-\$166	-4%
20	PDF Purpose Core Dividend Fund	-\$132	-45%

Source: National Bank of Canada, Bloomberg;

*Structural outflows due to RBC iShares mergers were taken out

Table 14 - ETF Flows by Category - Jan-Sept 2019

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$116,129	62%	\$4,510	5%
Fixed Income	\$64,958	35%	\$9,043	17%
Commodities	\$916	0%	\$130	19%
Multi-Asset	\$5,121	3%	\$1,826	61%
Inverse / Leveraged	\$940	0%	\$18	2%
Total	\$188,065	100%	\$15,527	10%

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

Table 17 - Equity ETF Flows by Focus - Jan-Sept 2019

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$66,146	57%	\$1,762	3%
Dividend / Income	\$16,400	14%	\$72	0%
Factor: Low Vol	\$8,254	7%	\$1,764	32%
Factor: Multi-factor	\$2,241	2%	\$6	0%
Factor: Fundamental	\$3,070	3%	\$689	33%
Sector	\$15,459	13%	-\$709	-5%
Thematic	\$2,577	2%	\$236	11%
Other	\$1,983	2%	\$689	64%
Total	\$116,129	100%	\$4,510	5%

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

Table 15 - Equity ETF Flows by Geography - Jan-Sept 2019

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$44,605	38%	-\$275	-1%
United States	\$38,863	33%	\$2,525	8%
DM: Broad	\$13,515	12%	\$1,337	12%
DM: Regional & Country	\$5,375	5%	-\$404	-7%
Emerging Markets	\$4,039	3%	\$630	19%
Global	\$9,733	8%	\$698	9%
Total	\$116,129	100%	\$4,510	5%

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

Table 18 - Fixed Income ETF Flows by Type - Jan-Sept 2019

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$19,387	30%	\$4,816	35%
Canada Government	\$8,284	13%	\$781	11%
Canada Corporate	\$11,695	18%	\$242	2%
U.S. / North America	\$6,625	10%	\$822	15%
Foreign	\$4,975	8%	\$2,387	97%
Sub-Investment Grade	\$4,108	6%	-\$1,175	-23%
Preferred/Convertible	\$7,204	11%	\$25	0%
HISA	\$2,680	4%	\$1,144	74%
Total	\$64,958	100%	\$9,043	17%

Source: National Bank of Canada, Bloomberg

Table 16 - Equity ETF Flows by Sector* - Jan-Sept 2019

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,236	40%	-\$940	-15%
Real Estate	\$3,312	21%	\$373	16%
Basic Materials	\$1,340	9%	-\$134	-11%
Health Care	\$1,331	9%	\$19	2%
Utilities	\$1,318	9%	\$165	17%
Energy	\$906	6%	-\$262	-23%
Technology	\$674	4%	\$77	16%
Other	\$343	2%	-\$7	-2%
Total	\$15,459	100%	-\$709	-5%

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

Table 19 - Fixed Income ETF Flows by Maturity - Jan-Sept 2019

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$31,764	49%	\$6,322	26%
Ultra Short Term	\$6,972	11%	\$1,631	31%
Short Term	\$15,487	24%	-\$267	-2%
Mid Term	\$5,597	9%	-\$87	-2%
Long Term	\$3,618	6%	\$1,065	48%
Real Return	\$906	1%	\$322	60%
Target Maturity	\$615	1%	\$56	10%
Total	\$64,958	100%	\$9,043	17%

Source: National Bank of Canada, Bloomberg

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 2018 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>