

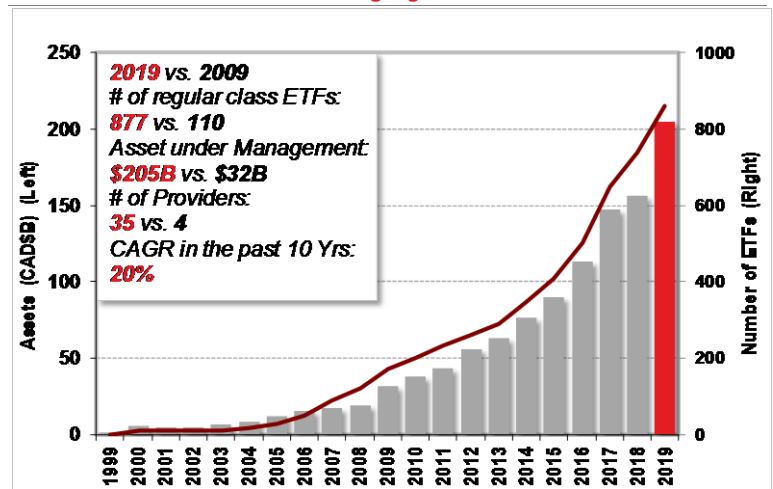
December and Full-Year 2019: A Decade of Investment Milestones

- 2019 was a year of milestones capping an eventful decade for ETF growth in Canada
- ETF inflows broke the record set in 2017 with \$28 billion created last year
- Aggregate bonds, cash alternatives, broad market equity and low volatility ETFs were popular in 2019
- New developments include ESG launches, Alternative, and Multi-asset ETFs

Summary: With \$4.5 billion net inflow in December, Canadian ETFs broke the annual flow record set in 2017, gathering \$28 billion in 2019. Canadian ETF assets crossed the \$200 billion milestone back in November, now standing at \$205 billion (Chart 1).

Looking back at the past 10 years, Canadian investors have embraced ETFs as essential tools for long-term strategic exposure and tactical asset allocation. Compared with this point on the calendar 10 years ago, there are now 877 ETFs versus 110, an eightfold increase. Assets have increased at a fast pace as well, growing to \$205 billion from the \$32 billion that kicked off 2010. This represents a steady 20% cumulative annual growth rate! In fact, the only thing growing faster than ETF assets is the number of ETF providers, which increased from just *four* in 2010 to 35 today. However, that number may be poised to change as new players enter and leave the market in a continuous murmur of activity.

Chart 1: Canada-listed ETF Flows Highlight

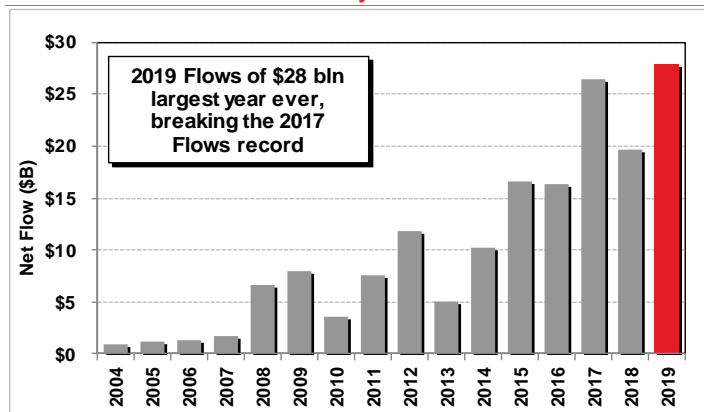


Source: NBF ETF Research, Bloomberg.

2019 Year in Review

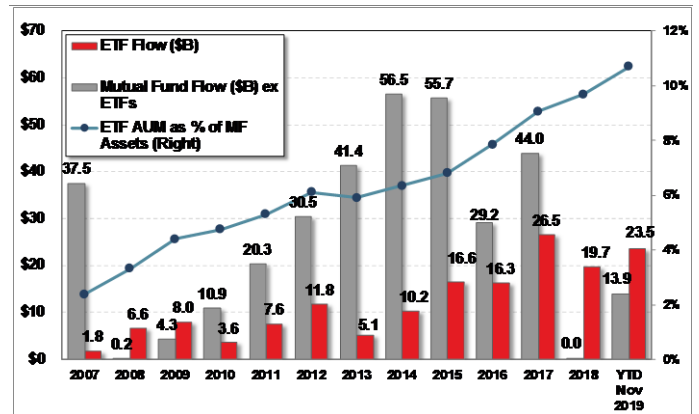
Record-breaking year: Canadian ETFs broke the record set in 2017 with a whopping \$28 billion dollars of annual inflows, the highest ever in Canadian ETF history (Chart 2). A sea-change seems to have occurred in Canadian investor preferences because even though ETFs have a comparatively small market share relative to the juggernaut that is the Canadian mutual fund industry, they outsold mutual funds for the second year in a row. Specifically, ETF assets are just 11% of the \$1.9 trillion still held within Canadian mutual funds, but they outsold their traditional counterparts by approximately \$10 billion as of November 2019 (Chart 3).

Chart 2: Canada-listed ETF Flows by Year



Source: NBF ETF Research, Bloomberg.

Chart 3: Mutual Fund vs. ETF Flow



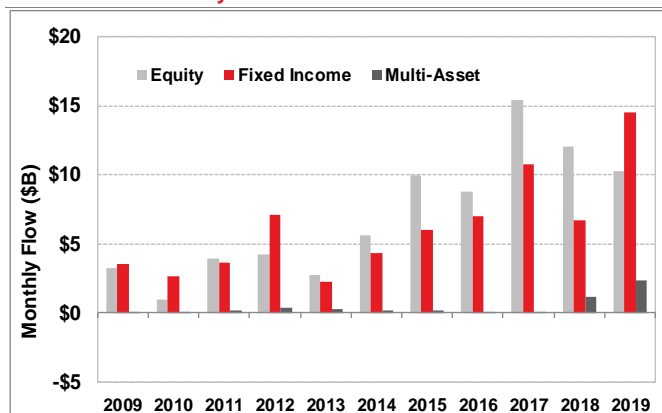
Source: NBF ETF Research, Bloomberg, Strategic Insight, SIMFUND Canada.

Markets closed the year in 2019 on an ebullient note, with double-digit returns across almost all equity categories and regions. But from a behavioural perspective, ETF investors spent the year reacting to the bruising volatility that closed out 2018, and strong preferences for safety were in evidence. Boring old “cash” emerged as a much sought-after class with \$2.6 billion in flows, other low-risk fixed-income categories dominated the inflow leaderboards, and low volatility ETFs once again surged in popularity.

Fixed Income ETF Flow: Fixed Income ETF assets grew at an annual rate of 27% over the past 10 years, faster than Equity and Canadian ETFs overall. From a returns perspective, Canadian corporate, government and aggregate bond ETFs all happened to deliver 4% annually with very low volatility last decade. In contrast, the S&P/TSX Composite Index’s annual return in the past decade was only marginally better at approximately 6% with periodic and sizeable drawdowns and much higher volatility. Solid bond performance, low fees, ease of use and liquidity all attracted retail and institutional investors into Fixed Income ETFs. Fixed Income ETFs currently account for 34% of Canadian ETF assets, but they took up 52% of the \$28 billion ETF flow in 2019, surpassing Equity’s take by \$4 billion (Chart 4).

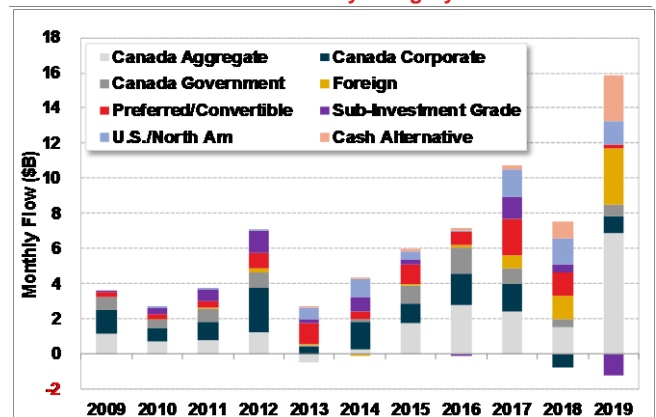
The \$15 billion 2019 flow into Fixed Income was the highest in history, and three categories of Fixed Income ETFs drove the trend: low-cost Canadian aggregate bond products, cash alternative ETFs, and foreign bond ETFs, many of which are actively managed (Chart 5). For the first half of 2019, the yield curves in Canada and the United States started to flatten; as rates dropped lower, investors flocked to Canadian aggregate bonds, which typically show longer durations and can perform well during times of falling rates. As a result, aggregate bonds ETFs, which also happen to be among the cheapest among peers, engulfed 50% of all inflows to fixed income products in 2019. Foreign bond and cash-alternative ETFs, which saw a plethora of new launches, also had a stellar year doubling their AUM on inflows alone.

Chart 4: ETF Flows by Asset Class



Source: NBF ETF Research, Bloomberg.

Chart 5: Fixed Income ETF Flow by Category

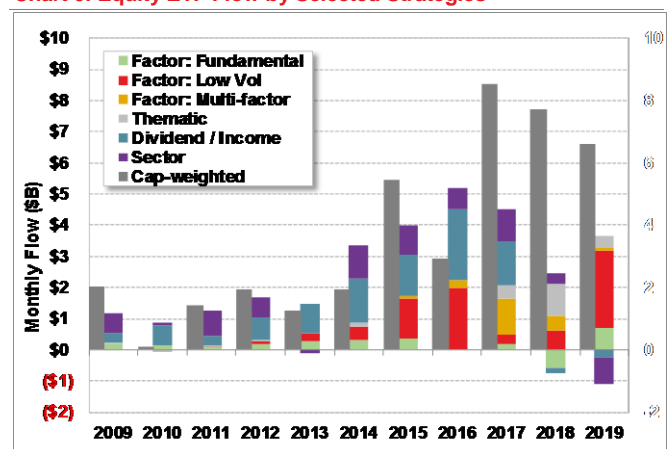


Source: NBF ETF Research, Bloomberg.

Equity ETF Flow: (Chart 6) Equity ETFs have undergone tremendous innovation and asset growth in the past decade. Canadian investors now have access to almost all the major sectors, countries, regions, factors and themes; an unprecedented array of tools lies available for building a diversified portfolio with core and satellite exposures.

Despite the explosion in the number of product types, market cap-weighted index-tracking passive ETFs (especially those extremely low in cost) continue to dominate the flows as they have been doing for 10 years. Perhaps one explanation for this phenomenon lies in the broad-based strength of the up-trending markets that have been the norm since the recovery from the 2008/09 great financial crisis - investors are still seeking quick and easy exposure that offers that participation in an easy-to-understand package.

Chart 6: Equity ETF Flow by Selected Strategies



Source: NBF ETF Research, Bloomberg.

Against that persistent backdrop of cap-weighted inflows, there is still plenty of evidence that some investors are looking for exposure beyond simple passive. Factor-based ETFs had their largest year of inflow in 2019, with main contributions coming from low volatility factor ETFs and Fundamental factor (High Quality and Value) ETFs. This is not the first time that low volatility ETFs have resonated with investors, and we've seen waves of inflows into this category every time they display their ability to offer higher risk-adjusted returns during periods of market tumult. "Low Volatility" ETFs attracted \$2.5 billion in Canada in 2019, and most of that tally came in the aftermath of the late 2018 selloff. Looking back further into the past, after the 2015 oil crisis, inflows into low volatility strategies also sped up.

Fundamental factor ETFs occupy 2% of Equity ETF AUM and flows into this category may be driven by single products used in certain asset management platforms. Other Equity categories include **sector and dividend/income ETFs**, each with about 13% market share among equity ETFs in Canada. Although the net flows for dividend and sector ETFs have been historically positive for most of the past decade, their share of Equity inflows has been decreasing due to the rise of factor ETFs and the continued appeal of low-cost market cap-weighted ETFs. In 2019, we saw outflows from these two categories, illustrated in more detail in Table 5 on page 5.

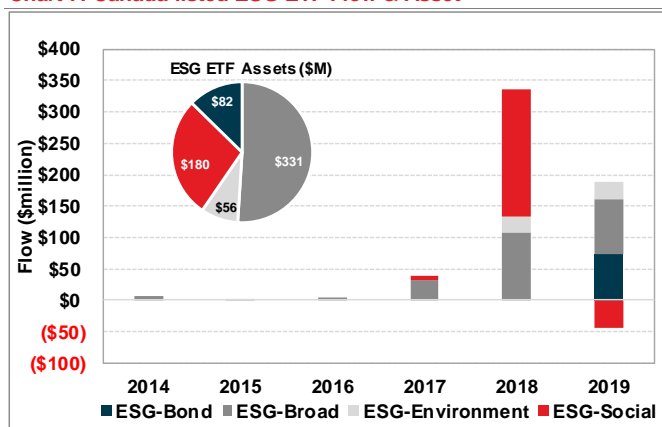
Thematic equity ETFs are not a new concept, but they have recently made a splash with renewed interest around the product development happening in certain areas: ESG (Environmental, Social, Governance), infrastructure, marijuana, and technology among other themes. We covered the flows on thematic ETFs in our 2018 year-end Canadian ETF flows report ([Link](#)). In this report, we update flows and assets for ESG ETFs in particular (Chart 7) because this area is booming with new launches and it seems the concept has started to capture attention from investors and asset managers alike.

Other Developments:

ESG: ESG investing (Environmental, Social, Governance) is not new - in fact, one of the oldest ETFs on the Toronto Stock Exchange is XEN, the iShares Jantzi Social Index ETF, which launched in 2007. For the first decade of its existence, XEN stayed around \$30 million in AUM, but in the last two years it has nearly quintupled in assets, reaching \$178 million. Despite the seasoned nature of the buzzword, ESG has yet to display broad grassroots interest, but sudden waves of development in this category became quite noticeable in 2019, potentially signalling shifts to come. After languishing with near-zero flows until 2017, ESG ETFs assets saw a large burst of activity in the past two years (Chart 7). From the pattern of the flows, the largest driver of new ESG ETF creations has been "pinpoint" creation activity on the part of large institutional subscriptions in certain mandates: e.g., the RBC Vision Women's Leadership MSCI Canada Index ETF (RLDR)'s inflow was driven by institutional subscription. The number of ESG products has also ballooned, to at least 25 pure-play ESG ETFs in Canada and 79 in the United States, with potentially many more on the way.

Alternatives: In 2019, Canadian securities regulators finally unified the rules that govern ETFs and commodity pools, supplanting the fragmented regulations with a new framework for traditional mutual funds (which includes ETFs) and a new class of "alternative mutual funds". These alternative funds, which can also be ETFs, simplify and streamline the rules for strategies that might be deemed as "hedge-fund-like" in the investment landscape, allowing for looser restrictions on leverage, concentration and the use of derivatives. As a result of this change, we saw a raft of new product launches from asset managers old and new. Table 1 summarizes the current class of "alternative ETFs" in Canada, which offer a range of strategies that was previously available only to hedge fund

Chart 7: Canada-listed ESG ETF Flow & Asset



Source: NBF ETF Research, Bloomberg.

Table 1: Canada-listed Alternative ETF Flow & Asset

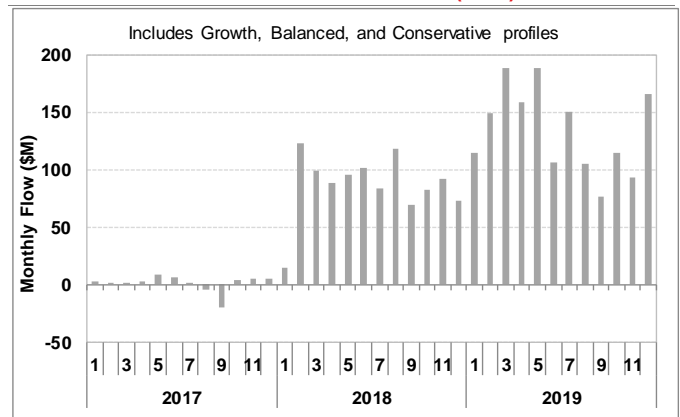
Ticker	2019 Flows (\$M)	AUM (\$M)	MER	Incept Year	Fund Name
QBTL	171	164	0.62%	2019	AGFIQ US Market Neutral Anti-Beta CAD-Hedged
DANC	151	153	1.13%	2019	Desjardins Alt Long/Short Equity Market Neutral
HAC	89	338	1.27%*	2009	Horizons Seasonal Rotation
QUDV	86	86	0.62%	2019	AGFIQ US Long/short Dividend Income CAD-Hedged
PFIA	63	64	1.07%*	2019	Picton Mahoney Fortified Income Alternative
NALT	32	33	0.68%	2019	NBI Liquid Alternatives
PFMN	9	9	1.07%*	2019	Picton Mahoney Fortified Market Neutral Alternative
PFMS	6	6	1.07%*	2019	Picton Mahoney Fortified Multi Strategy Alternative
HURA	6	5	0.85%	2019	Horizons Global Uranium Index
PFAE	1	1	1.07%*	2019	Picton Mahoney Fortified Active Extension Alternative
HARC	1	11	1.09%	2017	Horizons Absolute Return Global Currency
HDGE	0	1	0.00%*	2019	Accelerate Absolute Return Hedge
ALFA	0	1	0.00%*	2019	Accelerate Private Equity Alpha
ATSX	0	1	0.00%*	2019	Accelerate Enhanced Canadian Benchmark Alternative
PRA	-1	9	0.73%	2013	Purpose Diversified Real Asset
PMM	-14	21	1.05%	2014	Purpose Multi-Strategy Market Neutral
HHF	-29	22	1.22%	2012	Horizons Morningstar Hedge Index

Source: NBF ETF Research, Bloomberg. *Performance fee applies

investors. Some of the older ETFs on this table re-filed their prospectus to conform to the new framework.

Multi-Asset Mania: At the beginning of the year, we reported on the sudden popularity of a new breed of multi-asset “single ticket” ETF portfolio ETFs. In February 2018, Vanguard launched a suite of three “balanced portfolio” products structured as ETFs-of-ETFs, and because of their low price (24 bps in MER) and turnkey simplicity, they quickly accumulated \$1 billion between them. Other providers like BMO, iShares and Horizons followed up with either launches or lineup revisions of their own, and the category continued to grow at a blistering pace. What looked like a slowdown in the asset gathering in late 2018 was just a blip, and throughout 2019 this class of ETFs consistently accumulated nearly \$100 million a month (Chart 8), finishing the year with \$3 billion in assets. Because of the aforementioned “ETF-of-ETF” structuring of these products, they have added to the question of “double-counting” of ETF assets and flows, which we treat in further detail in Appendix 1.

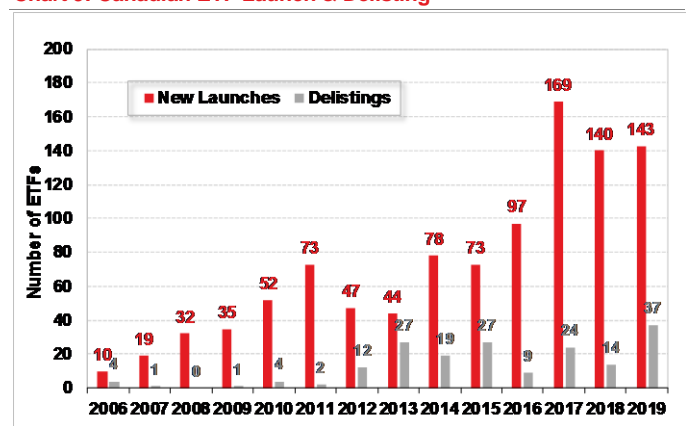
Chart 8: Selected Asset Allocation ETF Flow (\$Mln)



Source: NBF ETF Research, Bloomberg.

Product innovation continues unabated: It seems like ETFs in Canada are proliferating in leaps and bounds, and we often face the question of how many is too many. The number of ETFs in Canada is likely to surpass 1,000 in 2020 if recent trends are any sign, but interestingly the year 2019 was not the record for launches, which was set in 2017 at 169 (Chart 9). We did, however, observe a record number of ETF terminations in 2019 at 37 in total. Every once in a while, the industry passes through a wave of closures as providers streamline their product shelves by delisting redundant or unpopular ETFs. In addition, last year a few smaller ETF providers in Canada decided to exit entirely. In our view, this roiling activity indicates a healthy and robust market, albeit one that is increasingly competitive.

Chart 9: Canadian ETF Launch & Delisting



Source: NBF ETF Research, Bloomberg. Excludes advisory class ETFs

Additional Tables - Full-Year 2019 Canadian ETF Flow:

Flows by Provider (Table 3): At the start of 2019, the Canadian ETF market played host to 33 ETF provider companies. During the calendar year, seven new providers entered and four small providers exited; also, iShares and RBC formed a strategic alliance to become the largest ETF provider in Canada. We expect the landscape to continue to change into the new year. CI announced its acquisition of the WisdomTree Canada ETFs in 2019, and the deal is closing in the first quarter of 2020 subject to approvals. More consolidation, exits and new entrances may hit the markets as the ETF industry matures in Canada.

	AUM (\$M)	Mkt Shr (%)	December 2019		Full Year 2019	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$126,560		\$2,125	1.7%	\$10,292	10.5%
Canada	\$48,065	23%	\$632	1.3%	\$2,444	6.3%
United States	\$42,846	21%	\$1,161	2.8%	\$4,122	13.1%
International	\$35,648	17%	\$332	0.9%	\$3,727	13.4%
Fixed Income	\$70,197	34%	\$2,044	3.0%	\$14,640	27.0%
Commodities	\$951	0%	\$20	2.2%	\$149	22.4%
Multi-Asset	\$5,806	3%	\$228	4.1%	\$2,408	79.9%
Inverse / Levered	\$1,318	1%	\$50	3.9%	\$405	48.1%
Total	\$204,833	100%	\$4,468	2.2%	\$27,894	17.8%

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

The majority of ETF providers enjoyed positive ETF asset growth in 2019. BMO, Vanguard and CI First Asset took up the top three spots among the top ten providers. Smaller and newer issuers outside of the top ten, such as TD Asset Management, Fidelity, CIBC and AGF all had sizable inflows north of \$300 million.

Flows by Category and Product: (Tables 4 to 11): 2019 started off with some lurching market shocks, so “defense” was a key theme among ETF inflows, especially for the first part of the year. The top two products are **XBB** and **ZAG**, the bellwether Canadian aggregate universe bond ETFs from BMO and iShares respectively. After that comes the new “cash-like” ETF from CI First Asset **CSAV**, which simply holds cash deposited at main Canadian banks. At \$1.4 billion in assets, CSAV is now the best-selling new ETF in recent Canadian history, beating the record set by **ZPR** in 2013, when it accumulated \$967 million within a year of launch. Other notable appearances in the top 20 ETFs are active fixed income ETFs (**ZCPB**, **PMIF**, **FGO**) and BMO’s low volatility Canadian equity ETF **ZLB**. Outflows are relatively muted, with one observable trend being the repeat appearance of various out-of-favour sector ETFs like bank/financials, gold miners, energy and materials. In addition, sub-investment grade bonds lost some shine in 2019 with \$1.2 billion in outflows, the only Fixed Income category that shed assets - perhaps an echo to the defensive theme from most of the year. **ZJK**, **ZFH** and **MFT** all show up in Table 5 with outflows.

Table 3 - ETF Flows by Provider - Full Year 2019

Provider	AUM (\$M)	Mkt Shr (%)	December 2019		Full Year 2019	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
1 RBC iShares	\$72,466	35.4%	\$550	1%	\$2,604	4%
2 BMO	\$62,747	30.6%	\$683	1%	\$8,005	16%
3 Vanguard	\$24,770	12.1%	\$533	2%	\$5,105	30%
4 Horizons	\$10,423	5.1%	\$202	2%	\$345	4%
5 CI First Asset	\$8,637	4.2%	\$481	6%	\$3,511	79%
6 Mackenzie	\$4,740	2.3%	\$421	10%	\$1,554	53%
7 Invesco	\$4,238	2.1%	\$27	1%	-\$57	-1%
8 Purpose	\$4,088	2.0%	\$75	2%	\$891	29%
9 Franklin Templeton	\$1,869	0.9%	\$135	8%	\$999	138%
10 PIMCO	\$1,787	0.9%	\$13	1%	\$921	110%
11 TDAM	\$1,297	0.6%	\$965	300%	\$1,126	775%
12 AGF	\$1,197	0.6%	\$12	1%	\$377	53%
13 Fidelity	\$1,108	0.5%	\$179	19%	\$874	511%
14 WisdomTree	\$1,008	0.5%	\$14	1%	\$173	23%
15 Harvest	\$751	0.4%	\$4	1%	\$138	25%
16 Desjardins	\$612	0.3%	\$0	0%	\$249	72%
17 Evolve Funds	\$548	0.3%	-\$4	-1%	\$166	44%
18 CIBC	\$469	0.2%	\$82	21%	\$464	NA
19 Manulife	\$337	0.2%	\$6	2%	\$6	2%
20 First Trust	\$285	0.1%	-\$50	-15%	-\$109	-31%
21 Brompton Funds	\$253	0.1%	\$3	1%	\$64	54%
22 Hamilton	\$240	0.1%	-\$6	-2%	\$3	1%
23 Middlefield	\$234	0.1%	\$3	1%	-\$5	NA
24 NBI	\$208	0.1%	\$22	12%	\$203	NA
25 Bristol Gate	\$192	0.1%	\$92	92%	\$149	483%
26 Lysander	\$84	0.0%	-\$6	-6%	-\$10	-10%
27 Picton Mahoney	\$81	0.0%	\$9	13%	\$80	NA
28 IA Clarington	\$79	0.0%	\$22	38%	\$67	558%
29 SmartBe	\$33	0.0%	\$1	3%	\$32	NA
30 Arrow Capital	\$15	0.0%	-\$1	-3%	\$8	109%
31 Starlight	\$10	0.0%	\$0	0%	\$3	55%
32 Emerge	\$10	0.0%	\$0	0%	\$10	NA
33 Scotia Bank	\$9	0.0%	\$0	0%	\$0	6%
34 Auspice	\$4	0.0%	\$0	0%	-\$40	-197%
35 Accelerate	\$3	0.0%	\$0	0%	\$0	NA
Total	\$204,833	100.0%	\$4,468	2.2%	\$27,906	17.8%

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

Table 4 - Top ETF Inflows - Full Year 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1 ZAG	BMO Aggregate Bond Index ETF	\$1,619	46%
2 XBB	iShares Core Canadian Universe Bond Index ETF	\$1,441	61%
3 CSAV	CI First Asset High Interest Savings ETF	\$1,436	NA
4 ZFL	BMO Long Federal Bond Index ETF	\$1,288	471%
5 ZSP	BMO S&P 500 Index ETF	\$1,191	25%
6 ZSP/U	BMO S&P 500 Index ETF	\$1,156	210%
7 ZLB	BMO Low Volatility Canadian Equity ETF	\$1,046	94%
8 XIC	iShares Core S&P/TSX Capped Composite Index	\$1,031	24%
9 VAB	Vanguard Canadian Aggregate Bond Index ETF	\$1,020	64%
10 PSA	Purpose High Interest Savings ETF	\$951	67%
11 ZCPB	BMO Core Plus Bond Fund ETF	\$907	NA
12 XEF	iShares Core MSCI EAFE IMI Index ETF	\$863	43%
13 ZEA	BMO MSCI EAFE Index ETF	\$769	34%
14 PMIF	PIMCO Monthly Income Fund	\$721	91%
15 ZLU	BMO Low Volatility US Equity ETF	\$721	102%
16 ZEM	BMO MSCI Emerging Markets Index ETF	\$649	132%
17 VIU	Vanguard FTSE Developed All Cap ex-North Am	\$555	82%
18 FQC	CI First Asset MSCI Canada Quality Index Class	\$541	NA
19 VBAL	Vanguard Balanced ETF Portfolio	\$522	153%
20 FGO	CI First Asset Enhanced Government Bond ETF	\$519	1001%

Source: National Bank of Canada, Bloomberg;

*Structural inflows due to RBC iShares mergers were taken out

Table 5 - Top ETF Outflows - Full Year 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1 XIU	iShares S&P/TSX 60 Index ETF	-\$1,503	-17%
2 ZDY	BMO US Dividend ETF	-\$603	-43%
3 ZCN	BMO S&P/TSX Capped Composite Index ETF	-\$511	-13%
4 XUU	iShares Core S&P US Total Market Index ETF	-\$453	-35%
5 RWW/BCI	CI First Asset MSCI World Low Risk Weighted ETF	-\$407	-61%
6 ZJK	BMO High Yield US Corporate Bond Index ETF	-\$396	-36%
7 ZHY	BMO High Yield US Corporate Bond CAD-H	-\$352	-36%
8 ZEB	BMO Equal Weight Banks Index ETF	-\$347	-27%
9 ZBK	BMO Equal Weight US Banks Index ETF	-\$320	-40%
10 ZCS	BMO Short Corporate Bond Index ETF	-\$253	-18%
11 ZFH	BMO Floating Rate High Yield ETF	-\$230	-64%
12 XIN	iShares MSCI EAFE Index ETF CAD-Hedged	-\$218	-17%
13 ZFS	BMO Short Federal Bond Index ETF	-\$216	-22%
14 ZUB	BMO Equal Weight US Banks CAD-H	-\$207	-42%
15 XGD	iShares S&P/TSX Global Gold Index ETF	-\$203	-25%
16 XEG	iShares S&P/TSX Capped Energy Index ETF	-\$189	-24%
17 PGL	Invesco Long Term Government Bond Index ETF	-\$183	-34%
18 MFT	Mackenzie Floating Rate Income ETF	-\$179	-25%
19 ZPL	BMO Long Provincial Bond Index ETF	-\$161	-30%
20 XSH	iShares Core Canadian ST Corporate + Maple	-\$160	-18%

Source: National Bank of Canada, Bloomberg;

*Structural outflows due to RBC iShares mergers were taken out

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$126,560	62%	\$10,292	11%
Fixed Income	\$70,197	34%	\$14,640	27%
Commodities	\$951	0%	\$149	22%
Multi-Asset	\$5,806	3%	\$2,408	80%
Inverse / Leveraged	\$1,318	1%	\$405	48%
Total	\$204,833	100%	\$27,894	18%

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

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$48,065	38%	\$2,444	6%
United States	\$42,846	34%	\$4,122	13%
DM: Broad	\$15,365	12%	\$2,530	23%
DM: Regional & Country	\$5,329	4%	-\$497	-9%
Emerging Markets	\$4,484	4%	\$804	24%
Global	\$10,471	8%	\$890	11%
Total	\$126,560	100%	\$10,292	11%

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

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,372	40%	-\$945	-15%
Real Estate	\$3,346	21%	\$481	20%
Basic Materials	\$1,472	9%	-\$148	-12%
Health Care	\$1,462	9%	\$4	0%
Utilities	\$1,359	8%	\$186	19%
Energy	\$983	6%	-\$249	-22%
Technology	\$766	5%	\$116	24%
Other	\$348	2%	-\$6	-2%
Total	\$16,108	100%	-\$561	-4%

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

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$74,338	59%	\$6,594	12%
Dividend / Income	\$16,697	13%	-\$87	-1%
Factor: Low Vol	\$9,019	7%	\$2,467	44%
Factor: Multi-factor	\$2,424	2%	\$100	5%
Factor: Fundamental	\$3,259	3%	\$722	35%
Sector	\$16,108	13%	-\$561	-4%
Thematic	\$2,629	2%	\$351	16%
Other	\$2,086	2%	\$706	66%
Total	\$126,560	100%	\$10,292	11%

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

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$21,194	30%	\$6,897	50%
Canada Government	\$8,038	11%	\$696	10%
Canada Corporate	\$12,323	18%	\$922	8%
U.S. / North America	\$7,045	10%	\$1,306	24%
Foreign	\$5,756	8%	\$3,193	130%
Sub-Investment Grade	\$4,099	6%	-\$1,191	-23%
Preferred/Convertible	\$7,623	11%	\$227	3%
Cash Alternative	\$4,120	6%	\$2,591	168%
Total	\$70,197	100%	\$14,640	27%

Source: National Bank of Canada, Bloomberg

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$35,397	50%	\$10,130	41%
Ultra Short Term	\$8,209	12%	\$2,868	54%
Short Term	\$15,672	22%	-\$107	-1%
Mid Term	\$5,650	8%	\$37	1%
Long Term	\$3,643	5%	\$1,213	54%
Real Return	\$942	1%	\$372	69%
Target Maturity	\$685	1%	\$127	23%
Total	\$70,197	100%	\$14,640	27%

Source: National Bank of Canada, Bloomberg

December 2019 ETF Flows:

\$4 billion flowed into Canadian ETFs in December 2019, evenly split between Equity and Fixed Income. Within Equity, the U.S. region led the pack with \$1.2 billion inflow, perhaps a sign of a shifting risk-on attitude among investors. The top inflows went to low-cost broad-market U.S. ETFs. In fact, the top two spots were Mackenzie (QUU) and TD (TPU) low-cost index ETF for U.S. equity exposure. Canadian equity took in \$632 million, also predominantly into broad market low-cost index ETF TTP and XIC. Both Developed and Emerging Markets had inflows in December. Fixed Income ETFs had \$2 billion in flow, and Canadian aggregate bond and cash-alternative categories took up 70% of that figure.

Due to the large inflow into TTP, TPU and TDB, TD Asset Management quickly climbed the leaderboard to become the 11th largest ETF provider in Canada. Bristol Gate also attracted a sizable amount of subscription in December into BGU and BGU/U.

Rank	Ticker	Name	Flow (\$M)	Flow/AUM
1	CSAV	CI First Asset High Interest Savings ETF	\$493	52%
2	TTP	TD Canadian Equity Index ETF	\$408	2141%
3	XIC	iShares Core S&P/TSX Capped Composite Index ETF	\$349	6%
4	QUU	Mackenzie US Large Cap Equity Index ETF	\$341	158%
5	TPU	TD US Equity Index ETF	\$283	623%
6	TDB	TD Canadian Aggregate Bond Index ETF	\$257	1226%
7	ZSP	BMO S&P 500 Index ETF	\$191	3%
8	ZAG	BMO Aggregate Bond Index ETF	\$175	3%
9	XBB	iShares Core Canadian Universe Bond Index ETF	\$140	4%
10	XSP	iShares Core S&P 500 Index ETF CAD-Hedged	\$127	3%
11	ZEA	BMO MSCI EAFE Index ETF	\$121	4%
12	FCGB	Fidelity Global Core Plus Bond ETF	\$102	70%
13	FLGA	Franklin Liberty Global Aggregate Bond ETF Cad-H	\$98	19%
14	ZFL	BMO Long Federal Bond Index ETF	\$97	6%
15	XEF	iShares Core MSCI EAFE IMI Index ETF	\$89	3%
16	VAB	Vanguard Canadian Aggregate Bond Index ETF	\$88	3%
17	ZLB	BMO Low Volatility Canadian Equity ETF	\$84	4%
18	VCN	Vanguard FTSE Canada All Cap Index ETF	\$80	4%
19	ZPR	BMO Laddered Preferred Share Index ETF	\$75	4%
20	RQN	RBC Target 2025 Corporate Bond Index Etf	\$74	1431%

Source: National Bank of Canada, Bloomberg;

Rank	Ticker	Name	Flow (\$M)	Flow/AUM
1	XIU	iShares S&P/TSX 60 Index ETF	-\$385	-4%
2	RQH	RBC Target 2020 Corporate Bond Index ETF	-\$79	-75%
3	ZFS	BMO Short Federal Bond Index ETF	-\$78	-9%
4	ZCN	BMO S&P/TSX Capped Composite Index ETF	-\$66	-2%
5	XEG	iShares S&P/TSX Capped Energy Index ETF	-\$59	-9%
6	ZDY	BMO US Dividend ETF	-\$54	-5%
7	RWW/BCI	First Asset MSCI World Low Risk Weighted ETF	-\$54	-13%
8	ZST/L	BMO Ultra Short-Term Bond ETF	-\$42	-11%
9	ZST	BMO Ultra Short-Term Bond ETF	-\$36	-5%
10	PMNT	Pimco Global Short Maturity Fund Canada	-\$35	-20%
11	ZCM	BMO Mid Corporate Bond Index ETF	-\$35	-3%
12	XWD	iShares MSCI World Index ETF	-\$33	-5%
13	FHM	First Trust AlphaDEX US Materials Sector Index ETF	-\$33	-95%
14	CPD	iShares S&P/TSX Canadian Preferred Share	-\$28	-2%
15	PFL	Invesco 1-3 Year Laddered Floating Rate Note	-\$27	-27%
16	MFT	Mackenzie Floating Rate Income ETF	-\$26	-5%
17	ZPS	BMO Short Provincial Bond Index ETF	-\$24	-6%
18	ZEB	BMO Equal Weight Banks Index ETF	-\$20	-2%
19	RPF	RBC Canadian Preferred Share ETF	-\$18	-3%
20	XFR	iShares Floating Rate Index ETF	-\$16	-2%

Source: National Bank of Canada, Bloomberg;

Table 14 - ETF Flows by Category - December 2019

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$126,560	62%	\$2,125	1.7%
Fixed Income	\$70,197	34%	\$2,044	3.0%
Commodities	\$951	0%	\$20	2.2%
Multi-Asset	\$5,806	3%	\$228	4.1%
Inverse / Levered	\$1,318	1%	\$50	3.9%
Total	\$204,833	100%	\$4,468	2.2%

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

Table 15 - Equity ETF Flows by Geography - December 2019

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$48,065	38%	\$632	1.3%
United States	\$42,846	34%	\$1,161	2.8%
DM: Broad	\$15,365	12%	\$309	2.1%
DM: Regional & Country	\$5,329	4%	\$4	0.1%
Emerging Markets	\$4,484	4%	\$38	0.9%
Global	\$10,471	8%	-\$19	-0.2%
Total	\$126,560	100%	\$2,125	1.7%

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

Table 16 - Equity ETF Flows by Sector* - December 2019

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,372	40%	\$10	0.2%
Real Estate	\$3,346	21%	\$57	1.7%
Basic Materials	\$1,472	9%	-\$33	-2.4%
Health Care	\$1,462	9%	-\$1	0.0%
Utilities	\$1,359	8%	-\$20	-1.5%
Energy	\$983	6%	-\$49	-5.2%
Technology	\$766	5%	\$9	1.2%
Other	\$348	2%	-\$11	-2.9%
Total	\$16,108	100%	-\$36	-0.2%

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

Table 17 - Equity ETF Flows by Focus - December 2019

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$74,338	59%	\$1,786	2.5%
Dividend / Income	\$16,697	13%	\$54	0.3%
Factor: Low Vol	\$9,019	7%	\$105	1.2%
Factor: Multi-factor	\$2,424	2%	\$39	1.6%
Factor: Fundamental	\$3,259	3%	\$36	1.1%
Sector	\$16,108	13%	-\$36	-0.2%
Thematic	\$2,629	2%	\$36	1.4%
Other	\$2,086	2%	\$104	5.3%
Total	\$126,560	100%	\$2,125	1.7%

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

Table 18 - Fixed Income ETF Flows by Type - December 2019

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$21,194	30%	\$861	4.2%
Canada Government	\$8,038	11%	\$66	0.8%
Canada Corporate	\$12,323	18%	\$12	0.1%
U.S. / North America	\$7,045	10%	\$191	2.8%
Foreign	\$5,756	8%	\$290	5.3%
Sub-Investment Grade	\$4,099	6%	-\$25	-0.6%
Preferred/Convertible	\$7,623	11%	\$103	1.4%
Cash Alternative	\$4,120	6%	\$547	15.3%
Total	\$70,197	100%	\$2,044	3.0%

Source: National Bank of Canada, Bloomberg

Table 19 - Fixed Income ETF Flows by Maturity - December 2019

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$35,397	50%	\$1,294	3.8%
Ultra Short Term	\$8,209	12%	\$385	4.9%
Short Term	\$15,672	22%	\$134	0.9%
Mid Term	\$5,650	8%	\$54	1.0%
Long Term	\$3,643	5%	\$158	4.4%
Real Return	\$942	1%	\$30	3.3%
Target Maturity	\$685	1%	-\$11	-1.6%
Total	\$70,197	100%	\$2,044	3.0%

Source: National Bank of Canada, Bloomberg

Appendix 1 - A note on double-counting

The figures presented in this report follow a “quoted market value” approach to counting flows and assets under management. Some ETFs, however, hold *other* ETFs listed on the Canadian market, and this can cause apparent slight distortions in the figures. In the past, this phenomenon has been marginal as the largest products in the marketplace hold their underlying assets directly. However, some discrete changes to the product landscape have caused the effect of “double-counting” to increase relative to past years.

Table 20 shows the Canadian ETFs that have the largest positions in other ETFs. In all, we estimate that \$16 billion out of the \$205 billion in AUM is “double-counted” in this way, or \$2 billion in flows from 2019. The growing popularity of multi-asset portfolio ETFs like **VGRO** and **VBAL** means that this effect might become more pronounced in the future, but in our analysis, double-counting does not yet distort the overall economic picture of ETF flows in Canada outside of one-off structural events such as products launches or wrappings. It should be emphasized that “double-counting” in no way impacts end investors or ETF returns. If anything, the practice may in fact improve the liquidity profile of the affected ETFs, because it allows the benefits of scale and volume in one set of products to “flow through” to the bid-ask spreads and market quotes of related funds via the market-making mechanism.

Table 20: ETFs with the largest allocation to other Canadian ETFs

Ticker	Exposure in Canada-listed ETFs (\$M)	Comments on Underlyings
1 ZUE	1,792	ZSP
2 ZAG*	1,573	30% in 9 BMO ETFs, 70% in direct investments
3 ZMU	1,296	ZIC
4 VGRO	1,045	7 Canada-listed Vanguard ETFs
5 VBAL	926	7 Canada-listed Vanguard ETFs
6 ZWE	852	ZWP
7 ZHY	701	ZJK
8 XTR	633	8 Canada-listed iShares ETFs
9 ZDM	585	ZEA
10 ZWB	529	29% in BMO ZEB

Source: NBF ETF Research, Bloomberg. *ZAG only double counts outflows

Appendix 2 - 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 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 3 - 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 the 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.

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.

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