

March 2019: Fixed Income Flows and ESG Launches

- Canadian ETFs had net inflows of \$1.9 billion in March, led by Fixed Income
- Eight new ETFs launched in March, all of which were in the ESG (Environment, Social & Governance) space
- In 2019 so far, Fixed Income ETF inflows are double that of Equities with Aggregate Bonds in the lead

Summary: Canadian ETFs had another strong month of inflows at \$1.9 billion in March, with U.S.-focused ETFs leading the pack in the Equity category. The U.S. Equity ETFs with the largest inflows came from either the low-cost, broad-based segment of the landscape, or they were low volatility/quality factor based ETFs. Fixed Income ETFs attracted \$1.35 billion in new assets, more than half of which flowed to the aggregate bond category. Percentage inflows were also high within the mid-term and long-term maturity buckets, some of which might be knock-on effects from creations in fund-of-fund

aggregate bonds products, particularly ZAG.

Flows by Provider: (Table 2) RBC iShares had net outflows that skewed slightly negative in March due to XIU's second month of large outflows. Excluding XIU, RBC iShares's product suite had more than \$600 million of in flows, with top creations going to the low-cost core suite of portfolio building block ETFs. BMO had the second largest net inflows in March and year-to-date, followed by Vanguard. First Asset and PIMCO all had sizable inflows in March concentrated in a few products. Please see Flows by Product section for more details. On the outflow side, Equium Capital delisted its only Asset Allocation ETF (ETAC) on the last day of March.

New Launches: (Table 3) The pace of product launches slowed slightly last month, with nine new ETFs from three providers. All of the new ETFs fall into the category known as "ESG investing" which focuses on companies that score highly on criteria of Environmental, Social and Corporate Governance. ESG has long been a potential growth area in the wider investment community, and with the launch of these new products, ETF providers in Canada are signalling their commitment to seeing the space grow. We provide details below and in Table 3.

Horizons added a ladder Canadian Preferred Share Index ETF (HLPR) in its Total Return Index ETF (TRI ETF) suite in late February. The ETF enters into swaps with counterparty banks to gain index exposure. HLPR charges a 40 bps management fee. HLPR was launched just 20 days before the 2019 federal budget was announced, which included potentially major changes and impacts to the way synthetic ETFs such as TRI-swap-based ETFs can treat taxes to market makers and investors. These changes may impact the future tax treatment of HLPR, though much

Table 1 - ETF Flows by Category - March 2019

	AUM (\$M)	Mkt Shr (%)	March 2019		Jan-Mar 2019	
			Flow \$M	Flow/AUM	Flow \$M	Flow/AUM
Equity	\$109,642		\$384	0.4%	\$1,042	1%
Canada	\$42,850	25%	\$42	0.1%	-\$321	-1%
United States	\$35,576	21%	\$289	0.8%	\$760	2%
International	\$31,216	18%	\$53	0.2%	\$603	2%
Fixed Income	\$57,611	33%	\$1,350	2.4%	\$2,169	4%
Commodities	\$697	0%	\$35	5.2%	\$16	2%
Multi-Asset	\$3,792	2%	\$209	5.9%	\$563	19%
Inverse / Levered	\$934	1%	-\$35	-3.6%	\$9	1%
Total	\$172,676	100%	\$1,944	1.2%	\$3,799	2%

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

Table 2 - ETF Flows by Provider - March 2019

Provider	AUM (\$M)	Mkt Shr (%)	March 2019		Jan-Mar 2019	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
1 RBC iShares	\$65,107	37.7%	-\$117	0%	-\$1,465	-2%
2 BMO	\$53,515	31.0%	\$763	1%	\$1,427	3%
3 Vanguard	\$19,632	11.4%	\$482	3%	\$1,226	7%
4 Horizons	\$10,296	6.0%	\$12	0%	-\$12	0%
5 First Asset	\$5,488	3.2%	\$187	4%	\$715	16%
6 Invesco	\$4,079	2.4%	\$3	0%	-\$50	-1%
7 Mackenzie	\$3,330	1.9%	\$83	3%	\$228	8%
8 Purpose	\$3,249	1.9%	\$78	2%	\$88	3%
9 Franklin Templeton	\$1,584	0.9%	\$71	5%	\$802	111%
10 PIMCO	\$1,057	0.6%	\$108	11%	\$192	23%
11 WisdomTree	\$873	0.5%	\$56	7%	\$79	11%
12 AGF	\$833	0.5%	\$0	0%	\$47	7%
13 Harvest	\$636	0.4%	\$16	3%	\$57	10%
14 Fidelity	\$471	0.3%	\$111	31%	\$278	163%
15 Evolve Funds	\$431	0.2%	\$6	1%	\$40	11%
16 First Trust	\$381	0.2%	\$4	1%	\$2	1%
17 Desjardins	\$374	0.2%	\$7	2%	\$10	3%
18 Manulife	\$301	0.2%	\$0	0%	-\$8	-3%
19 Hamilton Capital	\$236	0.1%	-\$2	-1%	\$15	7%
20 TDAM	\$161	0.1%	\$11	7%	\$5	4%
21 MiddleField	\$154	0.1%	\$0	0%	\$0	NA
22 Brompton Group	\$139	0.1%	\$0	0%	\$8	7%
23 Lysander	\$106	0.1%	\$4	4%	\$9	9%
24 CIBC	\$82	0.0%	\$37	82%	\$80	NA
25 Bristol Gate	\$43	0.0%	\$5	13%	\$8	27%
26 NBI	\$43	0.0%	\$24	125%	\$35	NA
27 Arrow Capital	\$15	0.0%	\$2	15%	\$8	117%
28 IA Clarington	\$12	0.0%	\$0	0%	-\$2	-12%
29 SmartBe	\$11	0.0%	\$1	10%	\$11	NA
30 Auspice	\$9	0.0%	-\$4	-36%	-\$28	-134%
31 Scotia Bank	\$8	0.0%	\$0	0%	\$0	0%
32 Starlight	\$7	0.0%	\$0	0%	\$0	0%
33 Coin Capital	\$6	0.0%	\$0	0%	\$0	0%
34 Galileo	\$5	0.0%	\$0	0%	\$0	0%
35 Equium Capital	\$2	0.0%	-\$1	-34%	-\$6	-77%
36 First Block	\$1	0.0%	\$0	0%	\$0	0%
Total	\$172,676	100.0%	\$1,944	1.2%	\$3,799	2.4%

Source: National Bank of Canada, Bloomberg

remains uncertain at this point. For more information, please see our report *2019 Federal Budget Impact on Synthetic ETFs* published March 22 ([link](#)) for further details.

Desjardins expanded its Responsible Investment (RI) ETF lineup with the launch of two products focusing on environmental impact:

- The Desjardins RI Emerging Markets Multifactor - Low CO2 ETF (**DRFE**) avoids companies with the highest carbon intensities and constructs an Emerging Markets equity portfolio out of companies with notably lower carbon footprints compared than traditional indices.
- The Desjardins RI Global Multifactor - Fossil Fuel Reserves Free ETF (**DRFG**) invests in global securities but excludes companies in the fossil energy sector and those that hold fossil fuel reserves.

RBC iShares launched six ESG ETFs with various geographic exposures. Four ETFs invest in equities while the other two track Canadian Bond indices. These ETFs aim to gain ESG characteristics while tracking closely to the broad parent index in terms of risk and return profiles. Currently, the mandates exclude firms that are involved in tobacco, firearms and controversial weapons, with other weighting scores rewarding companies with positive ESG characteristics.

- iShares ESG MSCI Canada Index ETF (**XESG**)
- iShares ESG MSCI USA Index ETF (**XSUS**)
- iShares ESG MSCI EAFE Index ETF (**XSEA**)
- iShares ESG MSCI Emerging Markets Index ETF (**XSEM**)
- iShares ESG Canadian Aggregate Bond Index ETF (**XSAB**)
- iShares ESG Canadian Short Term Bond Index ETF (**XSTB**)

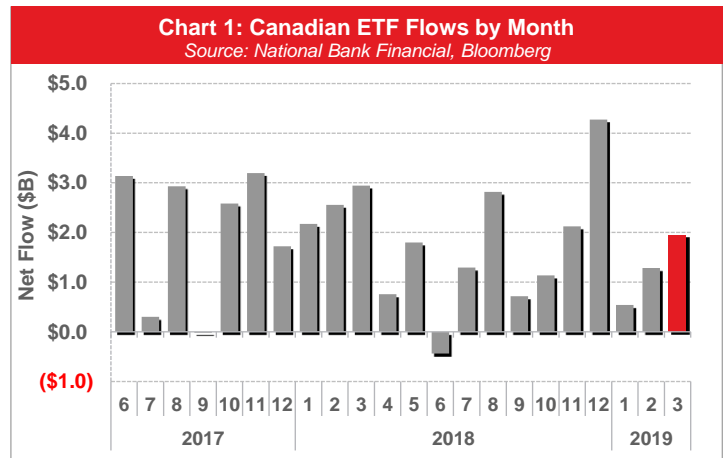


Table 3: New Launches - March 2019

Name	Ticker	Launch Date	Mgmt Fee (%)	Type
1 Horizons Laddered Canadian Preferred	HLPB	2019-02-27	0.40	Fixed Income
2 Desjardins RI EM Multifactor - Low CO2	DRFE	2019-03-07	0.65	Equity
3 Desjardins Gbl Multifactor Fossil Fuel Resv Free	DRFG	2019-03-07	0.60	Equity
4 iShares ESG Canadian Aggregate Bond	XSAB	2019-03-21	0.18	Fixed Income
5 iShares ESG Canadian Short Term Bond	XSTB	2019-03-21	0.18	Fixed Income
6 iShares ESG MSCI Canada Index	XESG	2019-03-21	0.20	Equity
7 iShares ESG MSCI EAFE Index	XSEA	2019-03-21	0.30	Equity
8 iShares ESG MSCI Emerging Markets	XSEM	2019-03-21	0.35	Equity
9 iShares ESG MSCI USA Index	XSUS	2019-03-21	0.25	Equity

Source: National Bank of Canada, SEDAR, Providers

Flow by Product: (Tables 4 and 5) Four out of the 10 inflows in March were core Canadian aggregate bond index ETFs. In the foreign fixed income ETF space, **PMIF** had its largest monthly net inflows since 2018, bringing PIMCO's total assets over \$1 billion milestone. Additionally, preferred share ETF **ZPR** (BMO Rate Reset preferred share ETF) saw some creations after four months of redemptions triggered by the preferred share market sell-off in November and December 2018. On the outflow side, **XIU** had the month's largest net outflows at \$740 million. We observed inflows into currency unhedged ETFs and outflows from currency-hedged ETFs; however, **DLR** (Horizons U.S. dollar Currency ETF) had a 28% outflow in March after two consecutive months of inflows. **ZID** (BMO India Equity ETF) also had large outflows in late February and early March although broad Emerging Market equity index ETFs saw creations.

Table 4 - Top Single Long ETF Inflows - March 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIC iShares Core S&P/TSX Capped Composite Index ETF	\$268	6%
2	ZAG BMO Aggregate Bond Index ETF	\$224	6%
3	XBB iShares Core Canadian Universe Bond Index ETF	\$188	8%
4	HXS Horizons S&P 500 Index ETF	\$130	18%
5	WXM First Asset Mjstar Canada Momentum Index ETF	\$127	24%
6	ZCPB BMO Core Plus Bond Fund ETF	\$125	4096%
7	VAB Vanguard Canadian Aggregate Bond Index ETF	\$112	6%
8	PMIF PIMCO Monthly Income Fund	\$100	11%
9	ZEB BMO Equal Weight Banks Index ETF	\$96	6%
10	ZEM BMO MSCI Emerging Markets Index ETF	\$90	12%
11	PSA Purpose High Interest Savings ETF	\$65	4%
12	ZPR BMO Laddered Preferred Share Index ETF	\$57	3%
13	DGRC Wisdomtree Canada Quality Dividend Growth Index	\$56	50%
14	XSH iShares Core Canadian Short Corp+ Maple Bond	\$56	6%
15	VBAL Vanguard Balanced Etf Portfolio	\$55	12%

Source: National Bank of Canada, Bloomberg

Table 5 - Top Single Long ETF Outflows - March 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIU iShares S&P/TSX 60 Index ETF	-\$740	-8%
2	ZDY BMO US Dividend ETF	-\$106	-7%
3	ZID BMO India Equity Index ETF	-\$105	-38%
4	XGD iShares S&P/TSX Global Gold Index ETF	-\$66	-9%
5	HXT Horizon S&P/TSX 60 Index ETF	-\$58	-3%
6	VEF Vanguard FTSE Developed All Cap Ex US CAD-H	-\$51	-10%
7	XSP iShares Core S&P 500 Index ETF CAD-H	-\$43	-1%
8	ZBK BMO Equal Weight US Banks Index ETF	-\$41	-5%
9	PFL Invesco 1-3 Year Laddered Floating Rate Note	-\$37	-26%
10	XMD iShares S&P/TSX Completion Index ETF	-\$35	-15%
11	RPSB RBC PH&N Short Term Canadian Bond ETF	-\$31	-43%
12	DLR Horizons US Dollar Currency ETF	-\$30	-28%
13	RWW/B First Asset MSCI World Low Risk Weighted ETF	-\$30	-4%
14	ZUB BMO Equal Weight US Banks CAD-H Index ETF	-\$29	-5%
15	XEG iShares S&P/TSX Capped Energy Index ETF	-\$28	-4%

Source: National Bank of Canada, Bloomberg

Table 6 - ETF Flows by Category - March 2019

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$109,642	63%	\$384	0.4%
Fixed Income	\$57,611	33%	\$1,350	2.4%
Commodities	\$697	0%	\$35	5.2%
Multi-Asset	\$3,792	2%	\$209	5.9%
Inverse / Levered	\$934	1%	-\$35	-3.6%
Total	\$172,676	100%	\$1,944	1.2%

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

Table 7 - Equity ETF Flows by Geography - March 2019

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$42,850	39%	\$42	0.1%
United States	\$35,576	32%	\$289	0.8%
DM: Broad	\$12,228	11%	\$50	0.4%
DM: Regional & Country	\$6,168	6%	-\$42	-0.7%
Emerging Markets	\$3,997	4%	\$40	1.0%
Global	\$8,845	8%	\$7	0.1%
Total	\$109,664	100%	\$386	0.4%

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

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

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,888	44%	\$62	0.9%
Real Estate	\$2,978	19%	\$95	3.4%
Health Care	\$1,360	9%	\$31	2.3%
Basic Materials	\$1,204	8%	-\$78	-6.2%
Utilities	\$1,140	7%	\$13	1.2%
Energy	\$1,091	7%	-\$12	-1.1%
Technology	\$620	4%	\$6	1.0%
Other	\$320	2%	-\$2	-0.8%
Total	\$15,601	100%	\$114	0.7%

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

Table 9 - Equity ETF Flows by Focus - March 2019

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$62,579	57%	-\$33	-0.1%
Dividend / Income	\$16,138	15%	-\$55	-0.3%
Factor: Low Vol	\$6,516	6%	\$104	1.7%
Factor: Multi-factor	\$2,165	2%	\$60	2.9%
Factor: Fundamental	\$2,311	2%	\$23	1.0%
Sector	\$15,604	14%	\$114	0.7%
Thematic	\$2,731	2%	\$34	1.3%
Other	\$1,598	1%	-\$137	9.4%
Total	\$109,642	100%	\$384	0.4%

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

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

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$15,429	27%	\$791	5.5%
Canada Government	\$7,385	13%	\$88	1.2%
Canada Corporate	\$13,305	23%	\$220	1.7%
U.S. / North America	\$5,937	10%	\$77	1.3%
Foreign	\$3,203	6%	\$187	6.3%
Sub-Investment Grade	\$4,991	9%	-\$79	-1.6%
Preferred/Convertible	\$7,360	13%	\$66	0.9%
Total	\$57,611	100%	\$1,350	2.4%

Source: National Bank of Canada, Bloomberg

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

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$27,043	47%	\$950	3.7%
Ultra Short Term	\$5,671	10%	\$87	1.6%
Short Term	\$15,695	27%	\$145	0.9%
Mid Term	\$5,649	10%	\$88	1.6%
Long Term	\$2,402	4%	\$62	2.7%
Real Return	\$560	1%	\$20	3.9%
Target Maturity	\$590	1%	-\$2	-0.3%
Total	\$57,611	100%	\$1,350	2.4%

Source: National Bank of Canada, Bloomberg

YTD Flows (January - March): Tables 12 - 19

In Q1 2019 so far, a net \$3.8 billion has flowed into Canadian ETFs. More than half of these inflows were in fixed income ETFs. Canadian aggregate bond ETFs saw the most creations, followed by ultra-short Fixed Income ETFs. So far in 2019, Equity inflows have been healthy at \$1 billion, though half the level of fixed income flows. Year-to-date, the bestselling equity categories have been Low Volatility, Dividend/Income and Momentum strategies.

(Table 12 to 19 on the next page)

Table 12 - Top ETF Inflows - Jan-Mar 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	ZAG BMO Aggregate Bond Index ETF	\$471	13%
2	ZST BMO Ultra Short-Term Bond ETF	\$401	231%
3	WXM First Asset Morningstar Canada Momentum	\$355	142%
4	XIC iShares Core S&P/TSX Capped Composite	\$351	8%
5	ZEM BMO MSCI Emerging Markets Index ETF	\$319	65%
6	FLAM Franklin FTSE US Index ETF	\$305	NA
7	FGO First Asset Enhanced Government Bond Etf CAD-H	\$272	524%
8	VAB Vanguard Canadian Aggregate Bond Index ETF	\$265	17%
9	FLCD Franklin FTSE Canada All Cap Index ETF	\$254	NA
10	PMIF PIMCO Monthly Income Fund CAD-H	\$175	22%
11	ZEAA BMO MSCI EAFE Index ETF	\$175	8%
12	XBB iShares Core Canadian Universe Bond Index ETF	\$173	7%
13	ZEB BMO Equal Weight Banks Index ETF	\$168	13%
14	VGRO Vanguard Growth ETF Portfolio	\$159	32%
15	FLUR Franklin FTSE Europe EX UK Index ETF	\$152	NA

Source: National Bank of Canada, Bloomberg

Table 13 - Top ETF Outflows - Jan-Mar 2019

Ticker	Name	Flow (\$M)	Flow/AUM
1	XIU iShares S&P/TSX 60 Index ETF	-\$1,352	-15%
2	ZCN BMO S&P/TSX Capped Composite Index ETF	-\$254	-7%
3	ZSP/U BMO S&P 500 Index ETF (US\$)	-\$212	-39%
4	XEG iShares S&P/TSX Capped Energy Index ETF	-\$184	-23%
5	XSB iShares Core Canadian Short Term Bond Index ETF	-\$147	-7%
6	XFN iShares S&P/TSX Capped Financials Index ETF	-\$146	-14%
7	ZFH BMO Floating Rate High Yield ETF	-\$145	-40%
8	XIN iShares MSCI EAFE Index ETF CAD-H	-\$135	-11%
9	XGD iShares S&P/TSX Global Gold Index ETF	-\$120	-15%
10	ZDY BMO US Dividend ETF	-\$115	-8%
11	ZID BMO India Equity Index ETF	-\$99	-36%
12	PGL Invesco Long Term Government Bond Index ETF	-\$95	-18%
13	HXT Horizon S&P/TSX 60 Index ETF	-\$94	-5%
14	CPD iShares S&P/TSX Canadian Preferred Share	-\$94	-7%
15	HOU BetaPro Crude Oil 2x Daily Bul	-\$85	-53%

Source: National Bank of Canada, Bloomberg

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

Asset Class	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Equity	\$109,642	63%	\$1,042	1%
Fixed Income	\$57,611	33%	\$2,169	4%
Commodities	\$697	0%	\$16	2%
Multi-Asset	\$3,792	2%	\$563	19%
Inverse / Leveraged	\$934	1%	\$9	1%
Total	\$172,676	100%	\$3,799	2%

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

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

Focus	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Cap-weighted	\$61,589	57%	\$31	0%
Dividend / Income	\$15,992	15%	\$232	2%
Factor: Low Vol	\$6,259	6%	\$394	7%
Factor: Multi-factor	\$2,099	2%	-\$49	-2%
Factor: Fundamental	\$2,268	2%	\$9	0%
Sector	\$15,602	14%	\$64	0%
Thematic	\$2,616	2%	-\$37	-2%
Other	\$1,482	1%	\$397	37%
Total	\$107,907	100%	\$1,042	1%

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

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

Geography	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada	\$42,626	40%	-\$321	-1%
United States	\$34,642	32%	\$760	2%
DM: Broad	\$11,991	11%	\$101	1%
DM: Regional & Country	\$6,160	6%	\$16	0%
Emerging Markets	\$3,834	4%	\$348	10%
Global	\$8,653	8%	\$160	2%
Total	\$107,907	100%	\$1,064	1%

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

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

Type	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Canada Aggregate	\$15,429	27%	\$1,147	8%
Canada Government	\$7,385	13%	\$48	1%
Canada Corporate	\$13,305	23%	\$544	4%
U.S. / North America	\$5,937	10%	\$208	4%
Foreign	\$3,203	6%	\$660	27%
Sub-Investment Grade	\$4,991	9%	-\$293	-6%
Preferred/Convertible	\$7,360	13%	-\$146	-2%
Total	\$57,611	100%	\$2,169	4%

Source: National Bank of Canada, Bloomberg

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

Sector	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Financials	\$6,888	44%	\$8	0%
Real Estate	\$2,978	19%	\$189	8%
Health Care	\$1,360	9%	\$72	6%
Basic Materials	\$1,204	8%	-\$107	-9%
Utilities	\$1,140	7%	\$50	5%
Energy	\$1,091	7%	-\$186	-16%
Technology	\$620	4%	\$50	10%
Other	\$320	2%	-\$14	-5%
Total	\$15,601	100%	\$64	0%

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

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

Maturity	AUM (\$M)	Mkt Shr	Flow (\$M)	Flow/AUM
Broad/Mixed	\$27,043	47%	\$1,881	8%
Ultra Short Term	\$5,671	10%	\$313	6%
Short Term	\$15,695	27%	-\$208	-1%
Mid Term	\$5,649	10%	\$122	2%
Long Term	\$2,402	4%	\$31	1%
Real Return	\$560	1%	-\$2	0%
Target Maturity	\$590	1%	\$32	6%
Total	\$57,611	100%	\$2,169	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 2017 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.

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