

March 2022: Clamouring for Canada and Commodities

- U.S. listed ETF inflows were unscathed by the month-long Ukrainian conflict and the first Fed hike since 2018
- Total Inflows nearly reached \$100 billion in March and \$200 billion in Q1, on track to repeat the 2021 inflows
- Commodity ETF inflows surged to nearly \$10 billion in March, the highest since April 2020's "USO frenzy"
- Certain categories also saw increased uptake: materials equity, Canadian equity, and long term treasury ETFs

Summary: U.S. listed ETFs took in \$98 billion in March, bringing the total inflows for the quarter to nearly \$200 billion (Table 1), an impressive sum despite the volatile market and gloomy economic backdrop. If we simply annualize the quarter's inflows, the full year 2022 projection is just a tad lower than the banner year of 2021 (Chart 1), in which ETF inflows nearly reached \$1 Trillion.

In March and in Q1, U.S. equity ETFs and commodity ETFs garnered great investor interest. Demand for ESG ETFs grew significantly in March, though year-to-date ESG inflow figures still lag 2021 year-over-year.

Equity ETFs by Geography (Table 4): As the war in Ukraine dragged on for another month, ETF investors sought protection in North American equities while divesting from ETFs with Europe exposure. More than 84% of the equity inflows in March went to U.S. equity ETFs, perhaps because of its safe haven status, its perceived distance from the war, and the market's rising comfort level with the Fed's hiking path. Canadian equity ETFs were also very popular thanks to the country's higher exposure to commodities and the TSX's strong recent performance (Chart 2): with inflows of \$844 million, demand for Canadian equity in March was the highest in the past three years. Our Economics and Strategy department notes that Russia and Canada may be different in many respects, "But there's at least one place you'll find some serious overlap. . . in their respective export baskets." (A bear in beaver's clothing, [link](#))

Across the Atlantic, the situation in Europe remains dire despite reports of a pullback in Russian troops around the Kyiv region of Ukraine. ETF investors largely avoided Europe in March and pulled out net assets of \$0.7 billion.

Equity Sector ETFs (Table 5): In March, Materials ETFs claimed the sector inflow top spot, in sync with the month's gangbuster commodity ETF inflows. Investors poured money into First Trust Materials AlphaDEX Fund (FXZ), Global X Uranium ETF (URA), and iShares U.S. Basic Materials ETF (IYM), to name a few. The S&P 500 material sector returned 6.1% in March, outperforming the S&P 500 by 2.4%. On the outflow side, investors withdrew from the Financials sector, the worst performing sector in March.

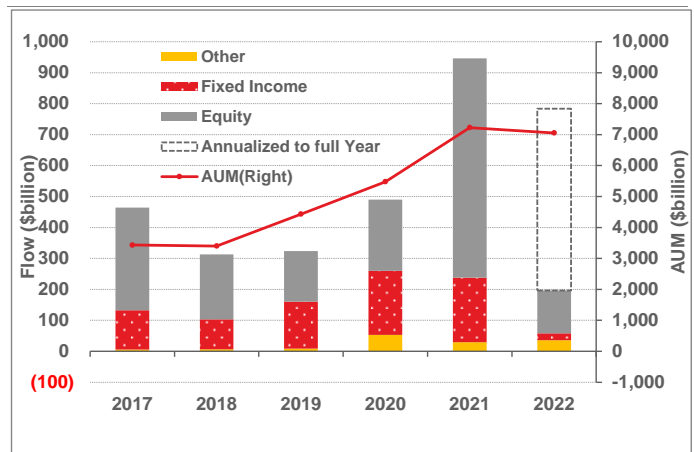
Looking back on the first quarter of 2022, the only sector to return a positive gain was energy, which soared 39% in three months. Energy ETFs had \$4.4 billion in flows for the quarter, the highest among all sectors.

Table 1: ETF Flows by Category

	AUM (\$B)	Mkt Shr	March 2022 Flow (\$B)	March 2022 Flow/AUM	Jan-Mar 2022 Flow (\$B)	Jan-Mar 2022 Flow/AUM
Equity	\$5,511		\$65.1	1.2%	\$139.1	2.5%
U.S. Broad/Large-Cap	\$1,766	25%	\$33.3	2.0%	\$35.1	1.9%
U.S. Other	\$2,479	35%	\$21.9	0.9%	\$57.8	2.3%
Int'l / Global	\$968	14%	\$3.4	0.4%	\$29.2	2.9%
Emerging Markets	\$298	4%	\$6.6	2.2%	\$17.0	5.6%
Fixed Income	\$1,229	17%	\$18.5	1.5%	\$22.5	1.8%
Commodity	\$169	2%	\$9.7	6.3%	\$18.9	13.9%
Multi-Asset	\$59	1%	\$1.7	3.0%	\$6.3	11.6%
Levered Long	\$68	1%	-\$0.4	-0.6%	\$6.0	7.8%
Inverse	\$17	0%	\$2.6	17.1%	\$4.5	38.7%
Crypto-Asset	\$1	0%	\$0.1	9.7%	\$0.1	10.7%
Total	\$7,054	100%	\$97.5	1.4%	\$197.5	2.7%

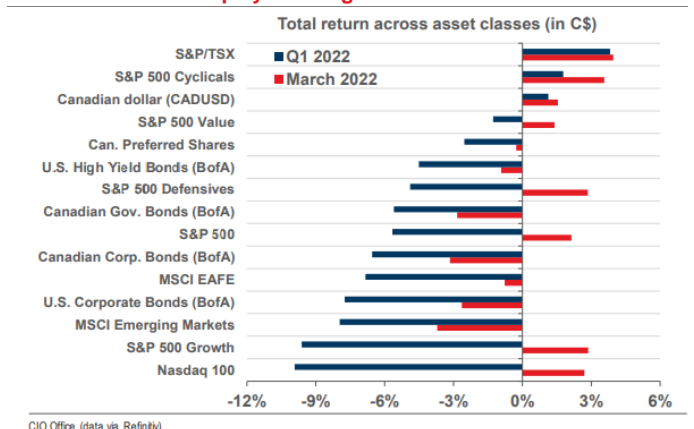
Source: NBF ETF Research, Bloomberg. Data as of March 31, 2022

Chart 1: U.S. Listed ETF Flow and AUM



Source: NBF ETF Research, Bloomberg. Data as of March 31, 2022

Chart 2: Canadian Equity's Strong Performance in 2022



Source: NBF CIO Office, Refinitiv. Data as of March 31, 2022

Equity Factor ETFs (Table 8): Dividend and low volatility factor outperformed in March, a data point that suggests the market is adopting a risk-off sentiment. The S&P 500 Low Volatility Index was up 5.4%, the highest among all factors. S&P 500 Low Volatility High Dividend Index was in the second place with a 5.2% gain. ETF flows were not fully consistent with the corresponding factor performance—instead of low vol, it was income that led the factor flows with \$7.7 billion of creations, while low volatility itself had an outflow of \$0.6 billion.

Fixed Income ETFs (Table 6, 7): During March’s FOMC meeting, the committee voted to increase the fed funds rate by 25 basis points to 0.50% and indicated that they might soon begin the quantitative tightening process. Despite the geopolitical uncertainties, the Fed expressed confidence in the USA’s economic condition, and the majority of committee members signaled least six more rate increases this year (see an in-depth [commentary](#) from NBF Economics and Strategy team). The Fed’s hawkish outlook was met by an immediate flattening of the yield curve (and the 2/10-year treasury spread inverted twice in the last week of March). Despite the diminished return potential for many bond strategies, fixed income ETFs received a decent \$18.5 billion inflow in March, with the majority going into U.S. Government ETFs. Creations were well distributed across different maturities. Long term bond ETFs had the highest inflow of \$5.4 billion, equivalent to 12% of its starting AUM in March. iShares 20+ Year Treasury Bond ETF (TLT) had the highest inflows among individual fixed income ETFs: it welcomed \$4.8 billion, a significant 30% of its starting asset base. Other maturity categories mostly had inflows of around \$3.0 billion. Short term TIPS, such as STIP and VTIP also had significant asset growth.

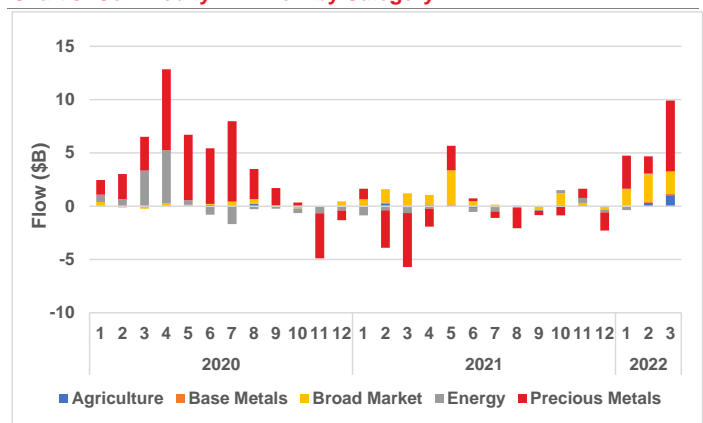
Commodity ETFs: Commodity ETFs took in a whopping \$9.7 billion in March, the highest since April 2020. Gold bullion ETFs such as SPDR Gold Shares (GLD) and iShares Gold Trust (IAU) contributed over 50% of the total inflow, similar to the dynamic in 2020 when gold crossed USD\$2,000/oz that August. Unlike gold’s previous demand surge, which came in the throes of pandemic-induced market selloffs, this time there is a much stronger demand for broad market commodity ETFs (Chart 3).

In terms of performance, commodity gains were still mostly driven by energy: S&P GSCI Energy was up 12.5% in March and 46.1% in the past three months. While uncertainty around global oil and gas supply remains high, ETF investors seemed to be snubbing energy commodity ETFs specifically, instead opting for broader baskets as an inflation hedge. Energy commodity ETFs had inflows of “only” \$100 million in February, and \$66 million in March. In addition, interestingly the *daily inverse oil* ETF SCO (ProShares UltraShort Bloomberg Crude Oil ETF) collected \$270 million in March, notable given its AUM at the start of March was just \$188 million (note: leverage/inverse ETF inflows are not counted in commodity ETF flow).

ESG ETFs (Table 2): U.S. listed ESG ETFs amassed \$2.2 billion in March, 80% higher than February. In the first three months of the year, U.S.-listed ETFs in the ESG category took in \$4 billion in total, lower than the \$13.4 billion sum they amassed in Q1 of last year. The diminution of ESG so far this year may be coming from wider equity market volatility coupled with reduced media attention towards, given bigger geopolitical headlines. In the context of ESG’s natural performance lag from underweighting the energy sector, the inflows to broad score-based ESG and clean energy ETFs is still surprising and significant.

On the outflow side, KraneShares Global Carbon ETF (KRBN) had large redemptions in late February and early March when KRBN plummeted by 34%, perhaps as investors took profits from their outsized 2021 gains and rotated to safe-haven assets instead of still-speculative carbon credit futures markets. Since March 8, however, carbon future prices largely rebounded on the heels of the REPowerEU plan announcement by the European Union, which re-emphasized the region’s climate ambition.

Chart 3: Commodity ETF Flow by Category



Source: NBF ETF Research, BlackRock. Data as of March 31, 2022

Table 2: U.S. Listed ESG ETFs* – March 2022

Category	AUM (\$M)	AUM (%)	Flow (\$M)	Flow/AUM
Equity	\$100,419	92%	\$2,116	2.2%
Broad - U.S.	\$55,389	51%	\$1,251	2.4%
Broad - DM	\$8,395	8%	\$100	1.2%
Broad - EM	\$6,789	6%	\$61	0.9%
Broad - Global	\$3,953	4%	-\$25	-0.6%
Environment	\$7,433	7%	-\$159	-2.1%
Clean Energy	\$15,208	14%	\$754	5.5%
Social	\$2,434	2%	\$31	1.3%
Other	\$619	1%	\$33	5.8%
Commodities	\$1,622	1%	-\$204	-10.6%
Multi-Asset	\$193	0%	-\$1	-0.3%
Fixed Income	\$6,478	6%	\$299	4.7%
Total Displayed	\$108,713	100%	\$2,211	2.1%

Source: NBF ETF Research, Bloomberg. Data as of March 31, 2022

Top Performing ETFs (Table 3): March's top performers are mostly commodity ETFs (nickel, natural gas), of which the underlyings are currently short in supply, and equity ETFs of related industries. For example, in Europe, natural gas futures prices (Dutch TTF Natural Gas Front Month Futures) hit a record high of 270 euros a megawatt-hour, jumping 146% since the start of Russia's invasion of Ukraine (and western sanctions) on February 24th, though the price has fallen to 123 euros a megawatt-hour since then.

Table 3: Best Performing ETFs* – March 2022

Ticker	Name	Total Return (%)	AUM (\$M)	Flow (\$M)
1 JJN	iPath Series B Bloomberg Nickel Subindex ETN	27.3	64	-6
2 GAZ	iPath Series B Bloomberg Natural Gas ETN	22.7	21	5
3 UNG	United States Natural Gas Fund LP	22.3	388	-31
4 UNL	United States 12 Month Natural Gas Fund LP	21.0	23	-8
5 XES	SPDR S&P Oil & Gas Equipment & Services ETF	19.0	335	57
6 IEZ	iShares U.S. Oil Equipment & Services ETF	18.7	284	33
7 EWZS	iShares MSCI Brazil Small-Cap ETF	17.9	123	-7
8 PXJ	Invesco Dynamic Oil & Gas Services ETF	17.3	67	31
9 BRF	VanEck Brazil Small-Cap ETF	17.1	37	-2
10 OIH	VanEck Oil Services ETF	17.1	3,871	525

*Excluding leveraged/inverse ETFs. Source: NBF ETF Research, Bloomberg. Data as of March 31, 2022

March 2022 ETF Flows: Tables 4 - 10

Table 4 - Equity ETF Flows by Geography - March 2022

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,245		\$55.2	1.4%
Broad/Large Cap	\$1,766	32%	\$33.3	2.0%
U.S. Other	\$2,479	45%	\$21.9	0.9%
International Developed	\$572		\$1.2	0.2%
Broad Int'l Dev	\$431	8%	-\$0.8	-0.2%
Broad Europe	\$53	1%	-\$0.7	-1.4%
Japan	\$22	0%	-\$0.2	-0.8%
Canada	\$12	0%	\$0.8	7.9%
Other Developed	\$55	1%	\$2.1	4.0%
Emerging Markets	\$298		\$6.6	2.2%
Broad Cap Weighted	\$200	4%	\$5.3	2.7%
China (A+H)	\$26	0%	\$0.4	1.4%
Other EM	\$72	1%	\$0.8	1.2%
Global/Regional	\$395	7%	\$2.2	0.6%
Total Displayed	\$5,511	100%	\$65.1	1.2%

Source: National Bank of Canada, Bloomberg

Table 5 - Equity ETF Flows by Sector and Themes* - March 2022

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Materials	\$57	6%	\$2.6	5.2%
Technology	\$184	20%	\$2.2	1.2%
Health Care	\$101	11%	\$1.8	1.9%
Utilities	\$24	3%	\$0.7	3.4%
Energy	\$84	9%	\$0.1	0.1%
Communication Services	\$35	4%	\$0.0	-0.1%
Industrials	\$39	4%	-\$0.2	-0.4%
Consumer Staples	\$26	3%	\$0.2	-0.9%
Consumer Discretionary	\$39	4%	-\$1.0	-2.5%
Real Estate	\$94	10%	-\$2.1	-2.3%
Financials	\$84	9%	-\$3.4	-3.8%
ESG	\$99	11%	\$2.0	2.1%
Thematic	\$71	8%	\$1.1	1.6%
Total Displayed	\$939	100%	\$3.7	0.4%

*Includes all geographic focus; Source: National Bank of Canada, Bloomberg
QQQ is classified as a broad market ETF and does not belong to technology sector

Table 6 - Fixed Income ETF Flows by Type - March 2022

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$291	24%	\$3.8	1.3%
U.S. Government	\$332	27%	\$12.9	3.9%
U.S. Municipals	\$79	6%	\$2.6	3.4%
U.S. I.G. Corporate	\$216	18%	\$0.5	0.2%
Developed Markets&Global	\$138	11%	\$0.4	0.3%
Emerging Markets	\$30	2%	\$0.5	1.8%
Sub-investment Grade	\$94	8%	-\$1.7	-1.7%
Convertibles and Preferreds	\$49	4%	-\$0.5	-1.0%
Total Displayed	\$1,229	100%	\$18.5	1.5%

Source: National Bank of Canada, Bloomberg

Table 7 - Fixed Income ETF Flows by Maturity - March 2022

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$648	53%	\$3.1	0.5%
Ultra Short Term	\$129	10%	\$4.0	3.2%
Short Term	\$244	20%	\$3.1	1.3%
Mid Term	\$133	11%	\$2.8	2.1%
Long Term	\$49	4%	\$5.4	11.9%
Target Maturity	\$24	2%	\$0.6	2.4%
Rate Hedged	\$3	0%	-\$0.3	-9.6%
Total Displayed	\$1,229	100%	\$18.5	1.5%

Source: National Bank of Canada, Bloomberg

Table 8 - Equity ETF Flows by Factor* - March 2022

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Income	\$338	18%	\$7.7	2.4%
Growth	\$363	20%	\$3.5	1.0%
Value	\$415	22%	\$2.5	0.6%
Small/Mid Cap	\$468	25%	\$2.2	0.5%
Quality	\$38	2%	\$0.3	0.9%
Momentum	\$24	1%	-\$0.2	-0.7%
Low Vol	\$62	3%	-\$0.6	-1.0%
Multi-Factor and Other	\$146	8%	\$1.4	1.0%
Total Displayed	\$1,854	100%	\$16.9	0.9%

*Includes all geographic focus, excluding sector ETFs; Source: NBC, Bloomberg

Table 9 - Top Single Long ETF Inflows - March 2022

Ticker	Name	Flow (\$B)	Flow/AUM
1	SPY SPDR S&P 500 ETF Trust	\$9.5	2.4%
2	QQQ Invesco QQQ Trust Series 1	\$9.1	5.0%
3	TLT iShares 20+ Year Treasury Bond ETF	\$4.8	29.8%
4	IVV iShares Core S&P 500 ETF	\$4.6	1.4%
5	VOO Vanguard S&P 500 ETF	\$4.4	1.6%
6	GLD SPDR Gold Shares	\$3.9	6.2%
7	VTI Vanguard Total Stock Market ETF	\$3.4	1.2%
8	BND Vanguard Total Bond Market ETF	\$3.1	3.8%
9	IEMG iShares Core MSCI Emerging Markets ETF	\$2.3	3.1%
10	BBEU JPMorgan BetaBuilders Europe ETF	\$1.8	19.4%
11	EEM iShares MSCI Emerging Markets ETF	\$1.7	6.3%
12	XLV Health Care Select Sector SPDR Fund	\$1.5	4.6%
13	SHV iShares Short Treasury Bond ETF	\$1.5	9.6%
14	STIP iShares 0-5 Year TIPS Bond ETF	\$1.5	15.4%
15	VUG Vanguard Growth ETF	\$1.4	1.7%
16	IVW iShares S&P 500 Growth ETF	\$1.3	3.9%
17	VTIP Vanguard Short-Term Inflation-Protected Securities	\$1.3	6.8%
18	VTV Vanguard Value ETF	\$1.2	1.2%
19	IEF iShares 7-10 Year Treasury Bond ETF	\$1.2	6.7%
20	IAU iShares Gold Trust	\$1.2	3.8%

Source: National Bank of Canada, Bloomberg

Table 10 - Top Single Long ETF Outflows - March 2022

Ticker	Name	Flow (\$B)	Flow/AUM
1	XLE Energy Select Sector SPDR Fund	-\$2.1	-5.9%
2	HYG iShares iBoxx High Yield Corporate Bond ETF	-\$1.3	-7.7%
3	EFG iShares MSCI EAFE Growth ETF	-\$1.2	-11.4%
4	IYR iShares U.S. Real Estate ETF	-\$1.2	-18.6%
5	IXG iShares Global Financials ETF	-\$1.1	-48.7%
6	EFV iShares MSCI EAFE Value ETF	-\$1.0	-5.8%
7	BSV Vanguard Short-Term Bond ETF	-\$0.9	-2.2%
8	FTXR First Trust Nasdaq Transportation ETF	-\$0.8	-70.8%
9	ASHR Xtrackers Harvest CSI 300 China A-Shares ETF	-\$0.7	-23.5%
10	MINT PIMCO Enhanced Short Maturity Active ETF	-\$0.7	-5.2%
11	QTEC First Trust NASDAQ-100 Technology Index Fund	-\$0.7	-21.3%
12	LQD iShares iBoxx \$ Investment Grade Corporate Bond	-\$0.7	-2.0%
13	VGK Vanguard FTSE Europe ETF	-\$0.6	-3.1%
14	JPHY JPMorgan High Yield Research Enhanced ETF	-\$0.6	-43.0%
15	XLI Industrial Select Sector SPDR Fund	-\$0.6	-3.7%
16	SCZ iShares MSCI EAFE Small-Cap ETF	-\$0.6	-4.1%
17	SMH VanEck Semiconductor ETF	-\$0.6	-6.3%
18	VBR Vanguard Small-Cap Value ETF	-\$0.6	-2.1%
19	KBE SPDR S&P Bank ETF	-\$0.5	-14.6%
20	EFAV iShares MSCI EAFE Min Vol Factor ETF	-\$0.5	-7.1%

Source: National Bank of Canada, Bloomberg

January - March 2022 ETF Flows: Tables 11 - 17

Table 11 - Equity ETF Flows by Geography - Jan-Mar 2022

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,245		\$92.9	2.1%
Broad/Large Cap	\$1,766	32%	\$35.1	1.9%
U.S. Other	\$2,479	45%	\$57.8	2.3%
International Developed	\$572		\$17.1	2.9%
Broad Int'l Dev	\$431	8%	\$11.3	2.5%
Broad Europe	\$53	1%	\$1.3	2.2%
Japan	\$22	0%	-\$0.3	-1.1%
Canada	\$12	0%	\$1.5	14.7%
Other Developed	\$55	1%	\$3.4	6.2%
Emerging Markets	\$298		\$17.0	5.6%
Broad Cap Weighted	\$200	4%	\$8.7	4.2%
China (A+H)	\$26	0%	\$4.2	15.1%
Other EM	\$72	1%	\$4.1	5.8%
Global/Regional	\$395	7%	\$12.0	3.0%
Total Displayed	\$5,511	100%	\$139.1	2.5%

Source: National Bank of Canada, Bloomberg

Table 12 - Equity ETF Flows by Sector and Themes* - Jan-Mar 2022

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Energy	\$84	9%	\$4.4	7.6%
Health Care	\$101	11%	\$3.1	2.9%
Consumer Staples	\$26	3%	\$2.9	12.1%
Materials	\$57	6%	\$2.8	5.6%
Financials	\$84	9%	\$2.1	2.5%
Utilities	\$24	3%	\$2.0	9.4%
Technology	\$184	20%	\$1.3	0.6%
Industrials	\$39	4%	\$0.0	0.0%
Communication Services	\$35	4%	-\$1.2	-2.8%
Real Estate	\$94	10%	-\$1.3	-1.3%
Consumer Discretionary	\$39	4%	-\$4.3	-8.7%
ESG	\$99	11%	\$3.3	3.3%
Thematic	\$71	8%	\$1.7	2.2%
Total Displayed	\$939	100%	\$16.8	1.8%

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Table 13 - Fixed Income ETF Flows by Type - Jan-Mar 2022

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$291	24%	\$2.8	0.9%
U.S. Government	\$332	27%	\$17.4	5.3%
U.S. Municipals	\$79	6%	\$4.8	6.1%
U.S. I.G. Corporate	\$216	18%	\$3.3	1.5%
Developed Markets&Global	\$138	11%	\$7.8	5.7%
Emerging Markets	\$30	2%	-\$0.8	-2.4%
Sub-investment Grade	\$94	8%	-\$10.1	-9.3%
Convertibles and Preferreds	\$49	4%	-\$2.6	-4.7%
Total Displayed	\$1,229	100%	\$22.5	1.8%

Source: National Bank of Canada, Bloomberg

Table 14 - Fixed Income ETF Flows by Maturity - Jan-Mar 2022

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$648	53%	-\$7.2	-1.0%
Ultra Short Term	\$129	10%	\$13.8	11.9%
Short Term	\$244	20%	\$2.6	1.0%
Mid Term	\$133	11%	\$6.3	4.7%
Long Term	\$49	4%	\$5.8	11.9%
Target Maturity	\$24	2%	\$1.6	7.1%
Rate Hedged	\$3	0%	-\$0.4	-10.9%
Total Displayed	\$1,229	100%	\$22.5	1.8%

Source: National Bank of Canada, Bloomberg

Table 15 - Equity ETF Flows by Factor* - Jan-Mar 2022

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Income	\$338	18%	\$25.1	7.9%
Value	\$415	22%	\$17.1	4.3%
Small/Mid Cap	\$468	25%	\$2.8	0.6%
Quality	\$38	2%	\$0.0	0.0%
Low Vol	\$62	3%	-\$1.1	-1.7%
Momentum	\$24	1%	-\$1.6	-5.6%
Growth	\$363	20%	-\$1.8	-0.4%
Multi-Factor and Other	\$146	8%	\$7.6	5.3%
Total Displayed	\$1,854	100%	\$48.2	2.5%

*Includes all geographic focus, excluding sector ETFs; Source: NBC, Bloomberg

Table 16 - Top Single Long ETF Inflows - Jan-Mar 2022

Ticker	Name	Flow (\$B)	Flow/AUM
1	VOO Vanguard S&P 500 ETF	\$24.8	8.9%
2	IVV iShares Core S&P 500 ETF	\$11.9	3.5%
3	VTI Vanguard Value ETF	\$9.4	10.2%
4	VTI Vanguard Total Stock Market ETF	\$8.7	2.9%
5	GLD SPDR Gold Shares	\$7.1	12.5%
6	BND Vanguard Total Bond Market ETF	\$4.4	5.2%
7	SHV iShares Short Treasury Bond ETF	\$4.1	31.4%
8	SCHD Schwab US Dividend Equity ETF	\$4.1	13.0%
9	VEA Vanguard FTSE Developed Markets ETF	\$3.5	3.2%
10	IEFA iShares Core MSCI EAFE ETF	\$3.4	3.2%
11	RSP Invesco S&P 500 Equal Weight ETF	\$3.3	10.3%
12	IUSB iShares Core Total USD Bond Market ETF	\$3.0	17.7%
13	XLF Financial Select Sector SPDR Fund	\$2.9	6.6%
14	ACWI iShares MSCI ACWI ETF	\$2.6	14.8%
15	BNDX Vanguard Total International Bond ETF	\$2.5	5.5%
16	IEMG iShares Core MSCI Emerging Markets ETF	\$2.5	3.2%
17	XLV Health Care Select Sector SPDR Fund	\$2.4	6.8%
18	COWZ Pacer US Cash Cows 100 ETF	\$2.4	188.1%
19	VYM Vanguard High Dividend Yield ETF	\$2.3	5.4%
20	VCIT Vanguard Intermediate-Term Corporate Bond ETF	\$2.3	4.8%

Source: National Bank of Canada, Bloomberg

Table 17 - Top Single Long ETF Outflows - Jan-Mar 2022

Ticker	Name	Flow (\$B)	Flow/AUM
1	SPY SPDR S&P 500 ETF Trust	-\$17.5	-3.8%
2	HYG iShares iBoxx High Yield Corporate Bond ETF	-\$5.5	-25.6%
3	BSV Vanguard Short-Term Bond ETF	-\$3.3	-7.9%
4	TIP iShares TIPS Bond ETF	-\$2.9	-7.6%
5	VLUE iShares MSCI USA Value Factor ETF	-\$2.5	-15.7%
6	EFG iShares MSCI EAFE Growth ETF	-\$2.2	-16.2%
7	IWM iShares Russell 2000 ETF	-\$2.1	-3.0%
8	LQD iShares iBoxx \$ Investment Grade Corporate Bond	-\$1.6	-4.1%
9	IXG iShares Global Financials ETF	-\$1.6	-56.4%
10	HYLB Xtrackers USD High Yield Corporate Bond ETF	-\$1.5	-23.2%
11	JNK SPDR Bloomberg Barclays High Yield Bond ETF	-\$1.5	-15.8%
12	USHY iShares Broad USD High Yield Corporate Bond E1	-\$1.5	-16.7%
13	XLY Consumer Discretionary Select Sector SPDR Fun	-\$1.4	-6.0%
14	MBB iShares MBS ETF	-\$1.4	-5.4%
15	IYR iShares U.S. Real Estate ETF	-\$1.4	-18.6%
16	PFF iShares Preferred & Income Securities ETF	-\$1.4	-6.6%
17	MTUM iShares MSCI USA Momentum Factor ETF	-\$1.3	-8.8%
18	FDN First Trust Dow Jones Internet Index Fund	-\$1.3	-13.0%
19	IWD iShares Russell 1000 Value ETF	-\$1.3	-2.2%
20	EMB iShares JP Morgan USD Emerging Markets Bond	-\$1.3	-6.4%

Source: National Bank of Canada, Bloomberg

Table 18: ETF Provider Table

Provider	AUM (\$B)	Mkt Shr	March 2022		Jan-Mar 2022		
			Flow (\$B)	Flow/AUM	Flow (\$B)	Flow/AUM	
1	BlackRock iShares	\$2,373	34%	\$25.0	1.1%	\$30.6	1.2%
2	Vanguard	\$2,046	29%	\$20.9	1.0%	\$77.4	3.7%
3	State Street SSGA	\$1,091	15%	\$17.7	1.7%	\$11.1	1.0%
4	Invesco	\$396	6%	\$13.5	3.6%	\$14.1	3.4%
5	Charles Schwab	\$269	4%	\$2.0	0.7%	\$9.8	3.6%
6	First Trust	\$147	2%	\$2.4	1.7%	\$5.0	3.3%
7	JPMorgan	\$79	1%	\$3.7	5.0%	\$8.1	11.3%
8	ProShares	\$70	1%	\$2.0	3.1%	\$7.1	9.9%
9	VanEck	\$65	1%	\$0.5	0.9%	\$3.3	5.4%
10	WisdomTree	\$49	1%	\$0.9	1.9%	\$2.3	4.7%
11	Dimensional Holdings	\$48	1%	\$1.8	3.8%	\$4.5	9.8%
12	Global X	\$44	1%	\$1.2	2.9%	\$2.4	5%
13	Fidelity	\$34	0%	\$0.3	0.9%	\$0.9	3%
14	Direxion	\$28	0%	\$0.4	1.6%	\$3.9	12.9%
15	Goldman Sachs	\$27	0%	\$0.5	2.1%	\$1.4	5.2%
16	PIMCO	\$25	0%	-\$1.0	-3.8%	-\$0.7	-2.4%
17	Northern Trust	\$23	0%	\$0.9	4.3%	\$1.5	7.6%
18	ARK	\$22	0%	\$0.0	-0.2%	-\$0.3	-0.9%
19	DWS Xtrackers	\$21	0%	-\$0.7	-3.1%	-\$1.2	-5.1%
20	Pacer Financial	\$13	0%	\$1.1	9.9%	\$3.0	29.2%
Top 20 Total		\$6,869	97%	\$93.1		\$184.1	
Total ETF		\$7,054	100%	\$97.5		\$197.5	

Source: NBF ETF Research, Bloomberg. Data as of March 31, 2022

Appendix 1 - Glossary

Exchange Traded Funds (ETFs) are open-ended mutual funds in continuous distribution. This report also includes other Exchange Traded Products such as notes, grantor trusts, limited partnerships and unit investment trusts.

AUM (Assets Under Management): AUM is expressed in local currency, which is the U.S. dollar for the purpose of this report.

Market Share / AUM (%): AUM as % of category total AUM on the last line of the table.

Flow: The net dollar amount of fund creations and redemptions for the period based on daily NAV and the change in Shares Outstanding. Flows are expressed in local currency, which is the U.S. dollar for the purpose of this report.

Maturity: We categorize fixed income ETFs into the following maturity brackets:

- **Broad/Mixed:** ETF that holds issues from across more than one maturity bucket (short, mid and/or long-term).
- **Floating Rate:** ETF that mainly invests in floating rate issues with periodic interest rate resets.
- **Long-Term:** ETF that mainly invests in long-term issues and has a weighted average maturity greater than 10 years.
- **Mid-Term:** ETF that mainly invests in intermediate-term fixed issues and has a weighted average maturity between three and 10 years.
- **Short-Term:** ETF that mainly invests in short-term issues with weighted average maturity less than three years.
- **Target Maturity:** ETF that has a target maturity, such as a fixed date or year.
- **Rate Hedged:** ETF that uses derivatives to mitigate interest rate risk and to maintain a zero or negative portfolio duration.

NAV (Net Asset Value per share): ETF price is used when NAV is not available.

Flow/AUM (Flow as % AUM): Flow as a percentage of assets under management from the beginning of the period.

Defensive Sectors: We classify Consumer non-cyclicals, Energy, Health Care, Utilities as defensive sectors.

Cyclical Sectors: We classify Consumer Cyclical, Financials, Real Estate, Industrials, Information Technology, Materials, Communication Services as cyclical sectors.

All numbers are as of last month's final business day.

Appendix 2 - Equity ETF by Factor Categories

We group Factor Equity ETFs (exclude cap-weighted ETFs, sector ETFs, and thematic 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.

Small/Mid Cap: A fund with small/mid cap focus.

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.

Value: A fund that invests primarily in the stocks that are considered undervalued using metrics such as price-to-earnings, price-to-book, EV/EBITA, etc.

Growth: A fund that invests primarily in fast-growing stocks using metrics such as earnings growth, sales growth, momentum, etc.

Momentum: A fund that invests primarily in high momentum stocks using metrics such as period returns.

Quality: A fund that invests primarily in high quality stocks using metrics like ROE, debt/equity, and earnings growth.

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.

Other: Any non-cap weighted factor strategy that is not covered by otherwise defined categories. This includes equal-weight, multi-factor, AlphaDEX, and other fundamental-based ETFs.

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