

January 2024: U.S. Spot Bitcoin Race – the starting gun has fired

- U.S. ETFs gained \$71.9 billion in flows in January, including \$28.5 billion from a CEF conversion (GBTC)
- BlackRock’s model portfolio rebalance resulted in outflows from quality and growth and inflows to value
- Investment Grade corporate bond ETFs continue to welcome new money as credit spreads narrow
- Spot bitcoin ETFs officially launched in the U.S., a smashing success but proportionately “underwhelming” compared with similar Canadian launches three years ago

Summary (Table 1, Chart 1): In January 2024, the world witnessed the landmark approval of U.S.-listed spot bitcoin ETFs (similarly structured ETFs have existed in Canada since early 2021). The crypto asset ETF category thus grew by \$30 billion in new money almost overnight, but if we exclude the assets that converted over from Grayscale’s colossal bitcoin closed-end-fund-turned-ETF GBTC, the net inflows would have been only \$1.6 billion. Although bitcoin may boast being a “new” asset class, it displays price action very similar to a speculative tech stock – after an impressive rally in 2023 in anticipation of new demand from ETF investors, bitcoin’s price suffered a 15% drawdown after the ETFs’ actual approval and listing, before it recovered partially towards the end of the month.

Crypto may be grabbing all the attention and headlines, but traditional equity and bond asset classes continued to gather sizable new ETF investments. U.S. large cap ETFs, and corporate bond ETFs received significant inflows, while small cap factor, ESG and ultra-short-term bond ETFs had some outflows.

Equity ETFs by Geography (Table 3): Out of the \$22 billion inflows into equity in January, \$15 billion went to U.S. equity, \$3.6 billion flowed into international equity and \$0.7 billion was added to Emerging Market equity. Japan’s equity index performed the best among major developed economies in January; the MSCI Japan index returned 4.4% (in USD terms). Inflows into Japan ETFs were strong at \$1.8 billion in January, or 6% of starting assets. Japan’s regional neighbour China, on the other hand, saw some noticeable capital flights from the U.S.-listed ETFs. Government stimulus plans have yet to boost investors’ confidence in the country’s stock market.

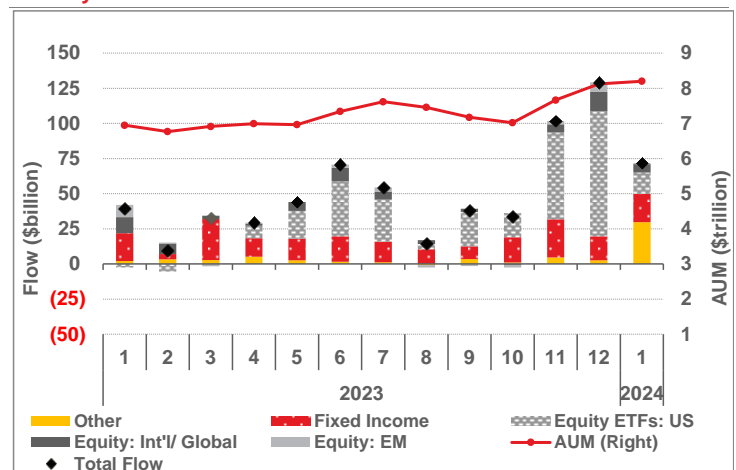
Equity Sector & Factor ETFs (Tables 4, 7): U.S. sector and factor ETF categories each saw near-zero demand in January; sector ETFs had net inflows of \$1.0 billion while factor ETFs suffered outflows of \$2.0 billion, both relatively low figures. Within the sector category, Technology led the pack with \$3.4 billion of creations, mostly towards broad technology ETFs (VGT, XLK) and semiconductor ETFs (SMH, SOXX).

Table 1: ETF Flows by Category

	AUM (\$B)	Mkt Shr	Jan 2024 Flow (\$B)	Jan 2024 Flow/AUM
Equity	\$6,270		\$22.0	0.4%
U.S. Broad/Large-Cap	\$2,187	27%	\$18.4	0.9%
U.S. Other	\$2,731	33%	-\$3.2	-0.1%
Int'l / Global	\$1,063	13%	\$6.0	0.6%
Emerging Markets	\$288	4%	\$0.7	0.2%
Fixed Income	\$1,542	19%	\$20.1	1.3%
Commodity	\$126	2%	-\$3.2	-2.5%
Multi-Asset	\$139	2%	\$5.1	3.9%
Levered Long	\$79	1%	-\$1.3	-1.6%
Inverse	\$14	0%	-\$1.2	-7.9%
Crypto-Asset	\$30	0%	\$30.4	1628.3%
Total	\$8,201	100%	\$71.9	0.9%

Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Chart 1: U.S.-Listed ETF Flow and AUM by month - \$71.9 billion in January



Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Flows into factor ETFs were influenced primarily by a recent BlackRock model portfolio reshuffle (Chart 2): **QUAL** (quality), **IVW** (growth) and **OEF** (tracking the S&P 100 index, not strictly a factor ETF) each had approximately \$2.0 billion of outflows on January 25, while on the same day **IVE** (value) and **DYNF** (factor rotation) received \$2.9 billion and \$1.9 billion, respectively. According to the BlackRock model portfolio team’s latest investment book, their shift in outlook from growth to value reflects “a bullish view on the economy and a soft landing” from the company’s portfolio managers.

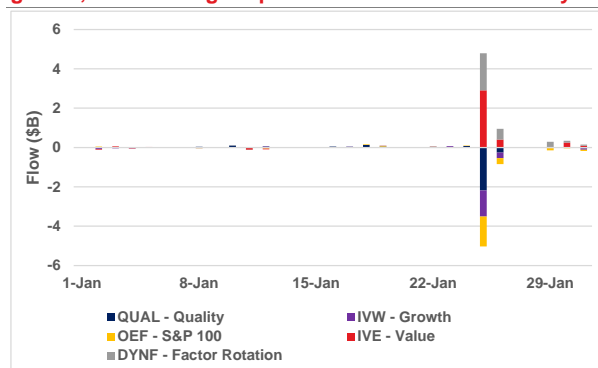
Fixed Income ETFs (Tables 5, 6): Fixed Income ETFs accumulated \$20 billion in flows in January. Anticipating lower short-term interest rates in the near future, ETF investors withdrew from cash-like ETFs to work elsewhere (Chart 3). U.S. Investment Grade corporate bond ETFs, which bear a little more credit and rate risk than shorter-term cash like products, received some of these inflows. The category welcomed \$9 billion in flows in January, their highest monthly haul since June 2020. While all this was taking place, corporate credit was getting more expensive: The ICE BofA U.S. I.G. corporate Index Option-Adjusted Spread has fallen to 1%, after gradually declining from its local peak of 1.7% back in October 2022.

ESG ETFs (Table 11): U.S.-listed ESG ETFs had outflows of \$2.8 billion in January, led by sizable redemptions from a number of iShares ESG ETFs such as **SUSA** (iShares MSCI USA ESG Select ETF) and **ESGU** (iShares ESG Aware MSCI USA ETF). On the inflow side, climate-focused ETFs from iShares and SPDR (in addition to some actively managed sustainable ETFs from Putnam) received some interest. Among the top 10 ESG ETFs by inflows, two ETFs deserve special mention 1) the First Trust Emerging Markets Human Flourishing ETF (**FTHF**); as this ETF follows a screening methodology that takes into account factors related to “freedom of expression and belief,” it refrained from investing in China, side-stepping some recent market turmoil. 2) First Trust NASDAQ Clean Edge Smart Grid Infrastructure Index Fund (**GRID**); according to our ESG Analyst Baltej Sidhu’s [2024 Outlook report](#), in 2024, we could see a growing focus on transforming the electricity grid to satisfy rising energy demand from electric vehicles, the electrification of buildings and the replacement of coal/natural gas fired power supply. **GRID** is a well-established ETF vehicle to play this theme.

Crypto-Asset ETFs:

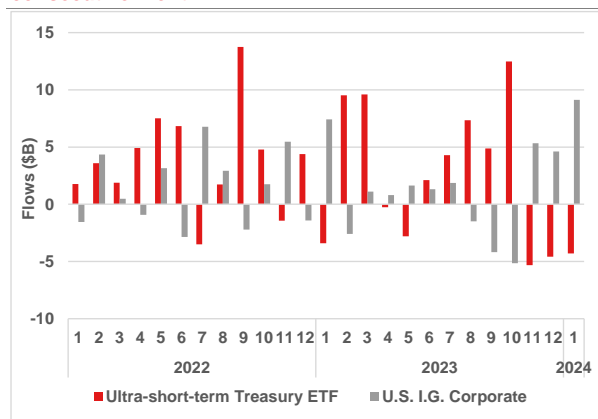
After a decade of attempts by ETF issuers to launch spot bitcoin ETFs in the U.S., the SEC finally approved 11 applications on January 10, 2024. 10 spot bitcoin ETFs left right out of the gate the next day (Chart 4), including nine fresh new products and

Chart 2: BlackRock’s model made a shift from quality, growth, and U.S. large cap to value and factor in January



Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Chart 3: ETF investors are putting cash to work: U.S. I.G. corporate bond ETFs welcomed inflows for the third consecutive month



Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Chart 4: U.S.-listed spot bitcoin ETFs, sorted by AUM

	Ticker	Name	AUM (\$M)	Flow (\$M)	Fee/after waiver (%)	Waiver Details	Custodian
1	GBTC*	Grayscale Bitcoin Trust	20,520	(5,641)	1.50		Coinbase
2	IBIT	iShares Bitcoin Trust	2,837	2,798	0.25 / 0.12	12 Months or AUM reaches \$5 billion	Coinbase
3	FBTC	Fidelity Wise Origin Bitcoin Trust	2,535	2,485	0.25 / 0	Until July 31, 2024	Fidelity
4	ARKB	ARK 21Shares Bitcoin ETF	665	656	0.21 / 0	6 Months or AUM reaches \$1 billion	Coinbase
5	BITB	Bitwise Bitcoin ETP Trust	641	650	0.20 / 0	6 Months or AUM reaches \$1 billion	Coinbase
6	BTCO	Invesco Galaxy Bitcoin ETF	302	299	0.25 / 0	6 Months or AUM reaches \$5 billion	Coinbase
7	HODL	VanEck Bitcoin Trust	129	134	0.25		Gemini
8	BRRR	Valkyrie Bitcoin Fund	114	114	0.25 / 0	3 Months	Coinbase & BitGo
9	EZBC	Franklin Bitcoin ETF	61	65	0.19 / 0	Until Aug 2, 2024 or AUM reaches \$1 billion	Coinbase
10	BTCW	WisdomTree Bitcoin Trust	11	11	0.30 / 0	6 Months or AUM reaches \$1 billion	Coinbase

* ETF flow excludes converted assets

Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

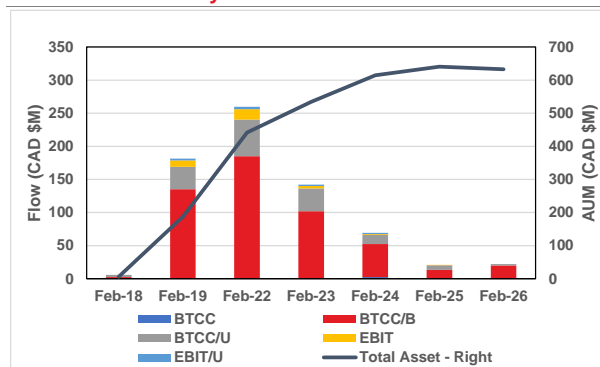
one multi-billion-dollar closed-end fund conversion. The futures-based **DEFI** was granted permission to hold bitcoin directly, but this ETF has yet to implement the change and is thus excluded from discussion. All spot bitcoin ETFs in the U.S. are structured as grantor trusts, a common structure among commodity or currency ETFs that physically hold the underlying assets in trust on behalf of investors. **GLD** and many other precious metal ETFs are also structured as grantor trust. The new bitcoin ETFs have a similar back-end “plumbing” – all but two custody their digital assets at Coinbase. They are also extremely competitive in terms of pricing, having engaged in a high-speed “fee war” during the filing stages, cutting fees before their products even launched, and their MERs are in the neighbourhood of charging 0.25% annually. Below, we discuss some interesting findings around these spot bitcoin ETFs.

Inflows and what happened to Canada-listed bitcoin ETF flows:

Net inflows into U.S.-listed spot bitcoin ETFs (excluding the initial conversion from **GBTC**) were \$1.6 billion in January (Chart 6); this figure is positive, but it’s underwhelming compared with the Canadian experience nearly three years ago, as the U.S. ETF market is 20 times larger than Canada’s. Canadian bitcoin ETFs first launched in February 2021 and received CAD \$700 million in flows that month (Chart 5). If Canadian bitcoin ETFs are any leading indicator for what could happen in the U.S., there may be a period of steady monthly inflows before “adoption” saturates. From that point, demand for bitcoin could wax and wane depending on sentiment conditions around speculative technology and the crypto industry’s development.

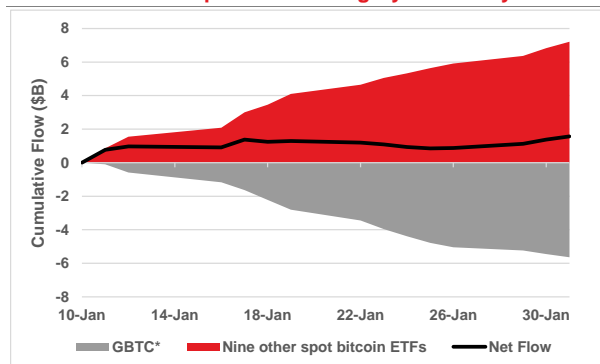
Turning back to the history of spot bitcoin ETFs in Canada, after the initial CAD \$700 million in flow in February 2021, money continued to pile in every month that year, finishing with a net cumulative inflow of CAD \$6.1 billion. However, from the beginning of 2022, Canadian bitcoin ETFs started to bleed assets on the back of negative news, (albeit small in scale relative to what would come later), which resulted in a net outflow of CAD \$100 million that year. In 2023, excited by the possibility of spot bitcoin ETF approval in the U.S., investors shoveled another CAD \$1.1 billion of new money into the category, despite massive asset declines (the price of bitcoin peaked at nearly USD \$70,000 in late 2021). Once the U.S.-based spot bitcoin ETFs were approved in the new year, we noticed some redemptions from Canada-listed bitcoin ETFs, totaling CAD \$447 million in outflow. Some U.S.-based investors who bought Canadian-listed ETFs in 2021 might have switched out for cheaper alternatives in the U.S. (most Canadian bitcoin ETFs charge more than 1% in MER.)

Chart 5: Canada-listed Bitcoin ETF Flows when they first launched in February 2021



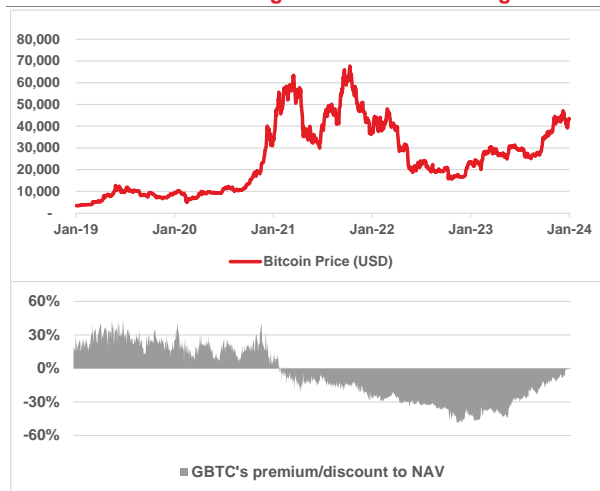
Source: NBF ETF Research, Bloomberg. Data as of February 28, 2021.

Chart 6: Spot bitcoin ETFs (excluding GBTC) have taken in \$7.2 billion of inflows since inception, whereas GBTC* saw a similar scale of outflows, resulting in net \$1.6 billion inflow for the new spot bitcoin category in January



* Converted assets are excluded
Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Chart 7: GBTC was trading at a 50% discount to NAV in late 2022; the gap gradually narrowed as the price of bitcoin recovered and the “arbitrage window” was closing



Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

GBTC’s discount-to-NAV: In addition to the nine new launches, one ETF (Grayscale’s **GBTC**) was a closed-end-fund conversion. The conversion was a welcome development for many of the fund’s unitholders because **GBTC** was trading at a 50% discount to NAV as recently as December 2022, when bitcoin’s price plummeted to around USD \$20,000 amid the FTX scandal (Chart 7). While some investors exited with painful losses, others took advantage of the discount hoping that it would narrow if/when the **GBTC**’s conversion to an ETF was approved, which would allow for daily arbitrage and the elimination of premium/discounts, a key structural selling feature of ETFs. That trade proved successful and the discount gap narrowed to 2% on the first day of the spot bitcoin approval, further narrowing to 0.1% a few days later.

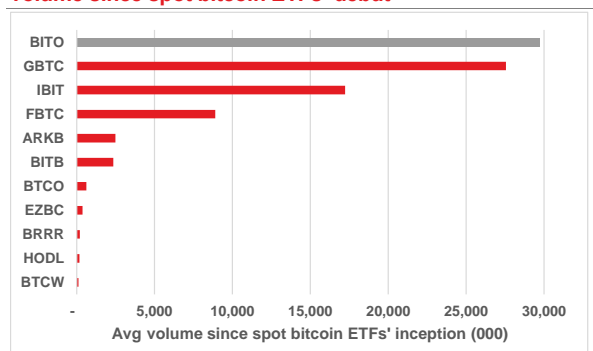
Trading volume: As expected, spot bitcoin ETFs enjoyed enormous trading volume since their debut (Chart 8). Beside the organic demand for spot bitcoin ETFs, a significant portion of the trading volume can be attributed to investors switching to new ETFs from prior exposure in the form of **GBTC/BITO** positions or Canada-listed bitcoin ETFs. The introduction of U.S. spot bitcoin ETFs may eventually reshape the crypto ETF landscape, taking over assets and trades from older futures-based ETFs, but it may not be the end of the world for the predecessors – not for ProShares Bitcoin Strategy ETF (**BITO**) at least, and not immediately. **BITO**’s recent volume indicates that it may now serve as an important trading vehicle for market makers/APs to effectively hedge their spot bitcoin ETF positions.

“Physical” bitcoin under custody: Some people have expressed concerns about whether spot bitcoin ETFs genuinely hold “physical” bitcoins, given that the SEC has only approved for cash creation/redemption instead of the more typical “in-kind” process found most physically-backed ETFs. Bitwise addressed this concern by voluntarily disclosing the wallet address of Bitwise Bitcoin ETF (**BITB**), which allows to trace bitcoin transactions associated with **BITB**’s creation/redemption (Chart 9). We have verified that wallet’s bitcoin amount and its changes align with **BITB**’s flows (we observed that bitcoins are typically sent to the wallet on the trading day after creation). Moreover, the current total USD value of Bitcoin in the wallet corresponds to the total AUM of the ETF. This validates that assets in spot Bitcoin ETFs are actually one-to-one backed by “physical” bitcoins – although it opens the question of what will happen if strangers on the internet send bitcoin transactions to this wallet, which will be recognized by the bitcoin network but are “involuntary” to Bitwise (something that has already started to happen in trace/immaterial amounts.)

Top Performing ETFs (Table 2):

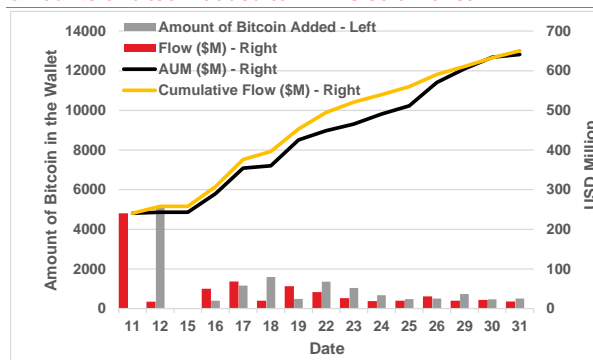
January’s top performing ETFs consist of mostly cannabis ETFs. U.S. cannabis stocks enjoyed a rally after the U.S. Department of Health and Human Services (HHS) publicly disclosed a 250-page

Chart 8: U.S. spot bitcoin ETFs & BITO’s average trading volume since spot bitcoin ETFs’ debut



Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Chart 9: Daily inflows into BITB are consistent with the amounts of bitcoin added to BITB’s cold wallet



Source: NBF ETF Research, Bloomberg, Bitwise, BitInfoCharts. Data as of January 31, 2024.

Table 2: Best Performing ETFs* – January 2024

Ticker	Name	Total Return (%)	AUM (\$M)	Flow (\$M)
1	MSOS AdvisorShares Pure US Cannabis ETF	34.1	892	78
2	WEED Roundhill Cannabis ETF	33.6	4	0
3	MJUS ETFMG US Alternative Harvest ETF	33.1	154	-1
4	LGLZ Subversive Cannabis ETF	26.5	1	0
5	KSET KraneShares Global Carbon Offset Strategy ETF	29.3	1	0
6	YOLO AdvisorShares Pure Cannabis ETF	19.2	47	0
7	URNJ Sprott Junior Uranium Miners ETF	18.5	322	85
8	CNBS Amplify Seymour Cannabis ETF	17.4	33	0
9	NVDY YieldMax NVDA Option Income Strategy ETF	13.1	168	3
10	URNM Sprott Uranium Miners ETF	12.6	1,912	23

*Excluding leveraged/inverse ETFs. Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

document in support of their recommendation to the Drug Enforcement Administration (DEA) for reclassifying cannabis as a less risky drug (Schedule III) back in August 2023. Under current U.S. federal classification standards, cannabis is a Schedule I drug alongside narcotics with a high potential for abuse and no accepted medical use.

January 2024 ETF Flows: Tables 3 - 9

Table 3 - Equity ETF Flows by Geography - Jan 2024

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,918		\$15.2	0.3%
Broad/Large Cap	\$2,187	35%	\$18.4	0.9%
U.S. Other	\$2,731	44%	-\$3.2	-0.1%
International Developed	\$658		\$3.6	0.6%
Broad Int'l Dev	\$513	8%	\$2.3	0.4%
Broad Europe	\$45	1%	-\$0.1	-0.1%
Japan	\$33	1%	\$1.8	6.1%
Canada	\$10	0%	-\$0.1	-1.0%
Other Developed	\$57	1%	-\$0.3	-0.5%
Emerging Markets	\$288		\$0.7	0.2%
Broad Cap Weighted	\$192	3%	\$0.9	0.5%
China (A+H)	\$18	0%	-\$0.6	-2.7%
Other EM	\$79	1%	\$0.4	0.5%
Global/Regional	\$405	6%	\$2.4	0.6%
Total Displayed	\$6,270	100%	\$22.0	0.4%

Source: National Bank of Canada, Bloomberg

Table 4 - Equity ETF Flows by Sector and Themes* - Jan 2024

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Technology	\$221	25%	\$3.4	1.6%
Real Estate	\$72	8%	\$0.4	0.6%
Materials	\$40	5%	\$0.2	0.6%
Health Care	\$97	11%	\$0.1	0.1%
Financials	\$64	7%	\$0.0	0.1%
Industrials	\$39	4%	\$0.0	0.0%
Communication Services	\$36	4%	-\$0.3	-0.9%
Consumer Staples	\$26	3%	-\$0.3	-1.3%
Consumer Discretionary	\$34	4%	-\$0.7	-1.9%
Energy	\$76	9%	-\$0.8	-1.0%
Utilities	\$20	2%	-\$1.0	-4.8%
ESG	\$83	9%	-\$2.9	-3.4%
Thematic	\$65	8%	-\$0.3	-0.5%
Total Displayed	\$871	100%	-\$2.3	-0.3%

*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 5 - Fixed Income ETF Flows by Type - Jan 2024

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$349	23%	\$2.1	0.6%
U.S. Government	\$489	32%	-\$0.5	-0.1%
U.S. Municipals	\$118	8%	\$0.3	0.3%
U.S. I.G. Corporate	\$240	16%	\$9.1	4.0%
Developed Markets&Global	\$171	11%	\$4.9	3.0%
Emerging Markets	\$29	2%	-\$0.3	-1.1%
Sub-investment Grade	\$106	7%	\$4.3	4.3%
Convertibles and Preferreds	\$41	3%	\$0.1	0.4%
Total Displayed	\$1,542	100%	\$20.1	1.3%

Source: National Bank of Canada, Bloomberg

Table 6 - Fixed Income ETF Flows by Maturity - Jan 2024

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$761	49%	\$14.1	1.9%
Ultra Short Term	\$213	14%	-\$3.6	-1.7%
Short Term	\$233	15%	\$1.8	0.8%
Mid Term	\$187	12%	\$5.0	2.8%
Long Term	\$101	7%	-\$0.2	-0.2%
Target Maturity	\$45	3%	\$2.9	7.0%
Rate Hedged	\$1	0%	\$0.0	3.2%
Total Displayed	\$1,542	100%	\$20.1	1.3%

Source: National Bank of Canada, Bloomberg

Table 7 - Equity ETF Flows by Factor* - Jan 2024

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Momentum	\$23	1%	\$0.3	1.4%
Growth	\$458	21%	\$0.1	0.0%
Income	\$402	19%	-\$0.3	-0.1%
Value	\$456	21%	-\$0.8	-0.2%
Quality	\$67	3%	-\$0.9	-1.4%
Low Vol	\$59	3%	-\$1.2	-2.0%
Small/Mid Cap	\$489	23%	-\$3.2	-0.6%
Multi-Factor and Other	\$189	9%	\$3.9	2.1%
Total Displayed	\$2,143	100%	-\$2.0	-0.1%

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

Table 8 - Top Single Long ETF Inflows - Jan 2024

Rank	Ticker	Name	Flow (\$B)	Flow/AUM
1	GBTC	Grayscale Bitcoin Trust BTC	\$23.0	NA
2	IVV	iShares Core S&P 500 ETF	\$12.0	3.0%
3	VOO	Vanguard S&P 500 ETF	\$9.9	2.7%
4	QQQ	Invesco QQQ Trust Series 1	\$7.1	3.1%
5	IVE	iShares S&P 500 Value ETF	\$3.5	12.8%
6	LQD	iShares iBoxx \$ Investment Grade Corporate Bond	\$3.2	10.2%
7	DYFN	BlackRock U.S. Equity Factor Rotation ETF	\$2.9	5647.7%
8	IBIT	iShares Bitcoin Trust	\$2.8	NA
9	VTI	Vanguard Total Stock Market ETF	\$2.7	0.8%
10	IUSB	iShares Core Total USD Bond Market ETF	\$2.6	10.8%
11	FBTC	Fidelity Wise Origin Bitcoin Fund	\$2.5	NA
12	QQQM	Invesco Nasdaq 100 ETF	\$2.1	11.4%
13	VCIT	Vanguard Intermediate-Term Corporate Bond ETF	\$2.0	4.5%
14	SPLG	SPDR Portfolio S&P 500 ETF	\$1.4	5.6%
15	BND	Vanguard Total Bond Market ETF	\$1.2	1.2%
16	XLF	Financial Select Sector SPDR Fund	\$1.1	3.3%
17	CALF	Pacer US Small Cap Cash Cows 100 ETF	\$1.1	16.7%
18	SMH	VanEck Semiconductor ETF	\$1.1	9.1%
19	IJR	iShares Core S&P Small-Cap ETF	\$1.0	1.4%
20	JEPQ	JPMorgan Nasdaq Equity Premium Income ETF	\$1.0	11.7%

Source: National Bank of Canada, Bloomberg

Table 9 - Top Single Long ETF Outflows - Jan 2024

Rank	Ticker	Name	Flow (\$B)	Flow/AUM
1	SPY	SPDR S&P 500 ETF Trust	-\$15.7	-3.2%
2	IWM	iShares Russell 2000 ETF	-\$4.9	-7.2%
3	IWD	iShares Russell 1000 Value ETF	-\$3.3	-5.9%
4	BIL	SPDR Bloomberg Barclays 1-3 Month T-Bill ETF	-\$2.4	-7.3%
5	OEF	iShares S&P 100 ETF	-\$2.0	-15.7%
6	SUSA	iShares MSCI USA ESG Select ETF	-\$1.9	-34.8%
7	QUAL	iShares MSCI USA Quality Factor ETF	-\$1.9	-5.1%
8	IVW	iShares S&P 500 Growth ETF	-\$1.8	-5.0%
9	GLD	SPDR Gold Shares	-\$1.8	-3.1%
10	IWF	iShares Russell 1000 Growth ETF	-\$1.5	-1.8%
11	VIG	Vanguard Dividend Appreciation ETF	-\$1.2	-1.6%
12	XLU	Utilities Select Sector SPDR Fund	-\$1.1	-7.6%
13	USMV	iShares MSCI USA Min Vol Factor ETF	-\$1.0	-3.9%
14	TFLO	iShares Treasury Floating Rate Bond ETF	-\$1.0	-9.7%
15	EMB	iShares J.P. Morgan USD EM Bond ETF	-\$1.0	-6.0%
16	IJS	iShares S&P Small-Cap 600 Value ETF	-\$0.7	-9.1%
17	KRE	SPDR S&P Regional Banking ETF	-\$0.7	-17.4%
18	SHV	iShares Short Treasury Bond ETF	-\$0.7	-3.7%
19	ESGU	iShares ESG Aware MSCI USA ETF	-\$0.6	-4.7%
20	VFH	Vanguard Financials ETF	-\$0.6	-6.5%

Source: National Bank of Canada, Bloomberg

Table 10: ETF Provider Table

	AUM (\$B)	Mkt Shr	Jan 2024	
			Flow (\$B)	Flow/AUM
1 BlackRock iShares	\$2,603	32%	\$8.3	0.3%
2 Vanguard	\$2,379	29%	\$21.6	0.9%
3 State Street SSGA	\$1,209	15%	-\$17.0	-1.4%
4 Invesco	\$473	6%	\$11.3	2.5%
5 Charles Schwab	\$321	4%	\$2.2	0.7%
6 First Trust	\$154	2%	\$1.2	0.8%
7 JPMorgan	\$137	2%	\$3.0	2.3%
8 Dimensional Holdings	\$120	1%	\$3.2	2.7%
9 WisdomTree	\$73	1%	\$0.5	0.7%
10 VanEck	\$67	1%	\$1.3	2.0%
11 ProShares	\$66	1%	-\$3.4	-4.9%
12 Fidelity	\$56	1%	\$3.5	6.8%
13 Global X	\$43	1%	\$0.5	1.1%
14 American Century	\$38	0%	\$1.3	3.5%
15 Pacer Financial	\$37	0%	\$2.2	6.1%
16 Direxion	\$37	0%	\$0.6	1.5%
17 Goldman Sachs	\$33	0%	\$0.1	0.4%
18 PIMCO	\$24	0%	\$0.5	2.0%
19 Capital Group	\$21	0%	\$1.7	9.2%
20 Northern Trust	\$21	0%	-\$0.3	-1.3%
Top 20 Total	\$7,911	96%	\$42.2	
Total ETF	\$8,201	100%	\$71.9	

Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

Table 11: ESG ETF Flows by Categories

Category	AUM (\$M)	AUM (%)	Jan 2023	
			Flow (\$M)	Flow/AUM
Equity	\$84,813	89%	-\$2,940	-3.3%
Broad - U.S.	\$41,654	44%	-\$2,408	-5.5%
Broad - DM	\$9,416	10%	\$35	0.4%
Broad - EM	\$4,311	5%	-\$19	-0.4%
Broad - Global	\$4,234	4%	-\$12	-0.3%
Environment	\$13,214	14%	-\$124	-0.9%
Clean Energy	\$7,071	7%	-\$412	-4.7%
Energy Transition	\$223	0%	-\$3	-1.4%
Social	\$3,569	4%	\$59	1.6%
Other	\$1,123	1%	-\$55	-4.6%
Commodities	\$761	1%	-\$19	-2.3%
Multi-Asset	\$67	0%	-\$1	-2.1%
Fixed Income	\$9,707	10%	-\$124	-1.3%
Total Displayed	\$95,348	100%	-\$3,085	-3.1%

Source: NBF ETF Research, Bloomberg. Data as of January 31, 2024.

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 Cyclicals, 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/EBITDA, 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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Leveraged 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 leveraged 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. Leveraged 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. In addition, please note Bitcoin and other crypto assets are extremely risky and highly speculative investments.

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