

### August 2024: Staying Resilient

- U.S. ETFs pulled in impressive inflows in August despite recession fears and a correction at the start of the month
- Inflows into equities weakened slightly while fixed income ETFs attracted steady creations
- Defensive and rate-sensitive investments such as value, real estate and treasury bonds boosted in demand
- Bonus section: An exploration of the impact of passive investing on the stock market

**Summary (Table 1, Chart 1):** August was another month of strong inflows for U.S.-listed ETFs despite volatile market conditions. The trending increase of U.S. unemployment figures triggered the so-called “Sahm rule” (a proposed recession indicator), which sent panic-shocks through the stock market at the start of the month. U.S. equities quickly rebounded after the market rout and the U.S. ETF industry pulled in an impressive sum of inflows. Though inflows to equity ETFs fell a bit short of the average level of the last three months (Chart 1), fixed income ETF inflows remained steady in August. We observed an increased appetite for rate-sensitive investments such as real estate sector ETFs and mid/long-term U.S. government bonds. Inflows into crypto-asset ETFs were flat and demand waned for commodity ETFs and the multi-assets category (mostly covered call and buffer ETFs). *At the end of this report, we also include a bonus section on the impact of passive investing on the stock market to offer some evidence and thoughts as related to this old topic that periodically resurfaces.*

**Equity ETFs by Geography (Table 6):** Global financial markets experienced significant volatility in late July and early August. A surprising rate hike by the Bank of Japan (coupled with the weak U.S. job data) threatened to narrow the gap between Japan and the U.S. interest rates. This triggered an unwinding of the yen carry trade, and when taken together with recession fears in the U.S., the result was a global equity selloff on August 5.

Emerging Market and Japan ETFs are perhaps still feeling the aftershocks of these dynamics, finishing the month with outflows. On the other hand, U.S. equity ETFs took in close to \$34 billion of inflows, with the bulk going into ETFs tracking the S&P 500, the Nasdaq 100, the total stock market and technology sector indices. As has happened in countless market crises and selloffs before, ETFs become among the few vehicles that investors buy when they’re selling everything else.

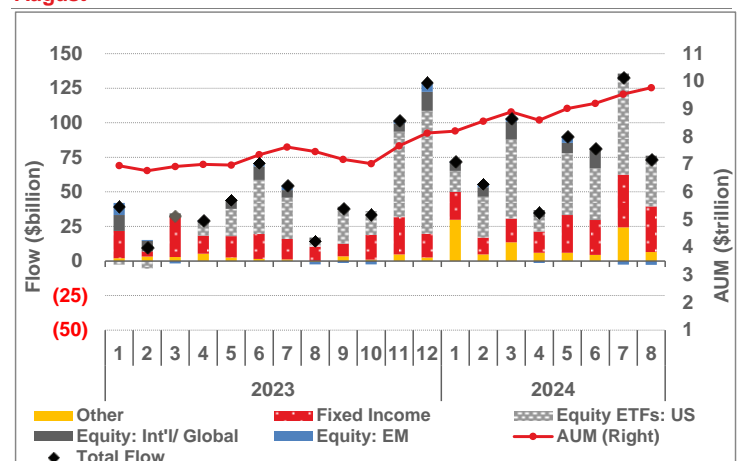
**Equity Sector ETFs (Tables 7, 14):** The rate-sensitive Real Estate sector gained momentum in August. Encouraging inflation data and Chair Powell’s dovish tone at the Jackson Hole Symposium strengthened investor confidence that a potential rate

**Table 1: ETF Flows by Category**

	AUM (\$B)	Mkt Shr	Aug 2024 Flow (\$B)	Flow/AUM	YTD Aug 2024 Flow (\$B)	Flow/AUM
Equity	\$7,521		\$33.7	0.5%	\$359.4	5.8%
U.S. Broad/Large-Cap	\$2,689	28%	\$14.3	0.5%	\$154.9	7.3%
U.S. Other	\$3,267	33%	\$19.6	0.6%	\$141.6	5.2%
Int'l / Global	\$1,240	13%	\$2.7	0.2%	\$59.8	5.6%
Emerging Markets	\$326	3%	-\$2.8	-0.9%	\$3.2	1.1%
Fixed Income	\$1,729	18%	\$33.1	2.0%	\$188.6	12.4%
Commodity	\$151	2%	\$0.5	0.3%	-\$2.1	-1.6%
Multi-Asset	\$183	2%	\$3.8	2.2%	\$40.5	30.4%
Levered Long	\$104	1%	\$1.5	1.4%	-\$0.1	-0.1%
Inverse	\$13	0%	\$0.5	4.0%	\$0.8	5.4%
Crypto-Asset	\$63	1%	\$0.1	0.1%	\$56.4	3020.3%
<b>Total</b>	<b>\$9,764</b>	<b>100%</b>	<b>\$73.2</b>	<b>0.8%</b>	<b>\$643.5</b>	<b>7.9%</b>

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

**Chart 1: U.S.- Listed ETF Flow and AUM by month - \$73 billion in August**



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

cut would be announced at the FOMC meeting in September. This has benefited certain rate-sensitive sectors such as Real Estate and Utilities, which are among the top performing sectors in August. The Real Estate ETF category also saw solid demand, taking in \$2.4 billion.

Investors also maintained their strong optimism in the technology sector through ETFs. The technology category attracted inflows of \$5.6 billion in August, alongside \$3.1 billion of flows into tech-heavy Nasdaq ETFs like **QQQ** and **QQQM**. Solid earnings from major companies such as Nvidia (in addition to the increasing likelihood of a Fed rate cut in September) may have fueled demand in this ETF category.

**Equity Factor ETFs (Tables 10, 17):** On the factor side, investors are gravitating toward factors like value and income but remain overall risk-on, as growth and small/mid-cap ETFs continue to receive inflows. For small/mid-cap investors, August has been a roller-coaster ride. The small-cap benchmark Russell 2000 Index lost nearly all its July gains in the first few days of August, closing the month at barely breakeven levels. Despite the volatility, ETF investors expressed unwavering commitment to the category, adding another \$1.8 billion of fresh assets into the small size factor.

**Private Asset ETFs:** For nearly as long as ETFs have existed (and that’s over 30 years), ETF issuers have sought the “holy grail” of private assets packaged somehow into publicly listed ETFs. At present, several ETFs exist that do in fact offer indirect exposure to private assets by holding publicly traded business development companies (BDCs) or private equity firms, such as the Canada-listed NBI Global Private Equity ETF **NGPE** or Accelerate Diversified Credit Income FUND (**INCM**). However, no ETF has directly held private assets. The category’s general lack of daily liquidity and pricing transparency complicates the ETF creation and redemption process. However, ERShares, a U.S.-based ETF issuer, recently made an experimental move by launching the Entrepreneur Private-Public Crossover ETF (**XOVR**), which could hold up to 15% in private equities. The ETF looks to invest in private equities that have a highly active secondary market by PE standards (a few trades per week) with daily pricing based on the latest transaction, calibrated using their historical bid/ask spreads. While this ETF launch appears groundbreaking, an important caveat is that **XOVR** is quite new and doesn’t have sufficient trade data to validate the robustness of its strategy. Given **XOVR**’s NAV pricing is largely dependent on historical data from its PE holdings, it is uncertain how the ETF would perform if the underlying PE spreads were to widen unexpectedly.

**Fixed Income ETFs (Tables 8, 9, 15, 16):** In August, fixed income ETFs saw robust inflows, with significant investments across aggregate bonds, U.S. investment-grade bonds and U.S. Treasury securities. As the prospect of a Federal Reserve rate cut solidified in August, investors increased their allocations to longer-term U.S. Treasury bond ETFs. Alongside the popular **TLT**, which is a long-duration play, mid-term ETFs such as **IEF** (iShares 7-10 Year Treasury Bond ETF) also attracted significant interest, pulling in their highest monthly inflows in a year and a half.

**ESG ETFs (Table 21):** In August, U.S.-listed ESG ETFs enjoyed a robust inflow of \$733 million, extending their positive streak to four months. Both U.S. equity and fixed income ESG ETFs were major recipients of new investor dollars. Within the U.S. equity category, inflows occurred across various ETFs, including Vanguard’s ESG U.S. Stock ETF (**ESGV**), SPDR and Xtrackers’ S&P 500 ESG ETFs (**EFIV** and **SNPE**) as well as clean energy ETFs like **GRID** and **TAN**. However, it’s worth noting that substantial inflows into Nuveen’s ETFs were largely structural – the creations that took place in the last week of August were reversed by equivalent outflows in the first week of September. In the fixed income asset class, the newly launched cash-like ESG ETF **KCSH** attracted nearly \$100 million, doubling the ETF’s AUM to \$200 million at the end of August.

### Top Performing ETFs (Table 2):

Several Emerging country ETFs are among the best performing ETFs in August, especially ETFs investing in the Southeast Asian countries like the Philippines (**EPHE**), Indonesia (**IDX**) and Malaysia (**EWM**). In addition to the three names in the top 10 table,

**Table 2: Best Performing ETFs\* – August 2024**

Ticker	Name	Total Return (%)	AUM (\$M)	Flow (\$M)
1	<b>ARGT</b> Global X MSCI Argentina ETF	13.3	336	1
2	<b>FBY</b> Yieldmax Meta Option Income Strategy Etf	12.1	97	-3
3	<b>PYPY</b> YieldMax PYPL Option Income Strategy ETF	10.8	26	-5
4	<b>SQY</b> YieldMax SQ Option Income Strategy ETF	10.2	36	-2
5	<b>EPHE</b> iShares MSCI Philippines ETF	10.1	108	3
6	<b>CRSH</b> YieldMax Short TSLA Option Income Strategy	10.0	14	3
7	<b>IDX</b> VanEck Indonesia Index ETF	9.9	36	5
8	<b>EWM</b> iShares MSCI Malaysia ETF	9.7	322	0
9	<b>REZ</b> iShares Residential and Multisector Real Estate	9.5	924	206
10	<b>HAUS</b> Residential REIT ETF	9.1	6	3

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

iShares' Indonesia ETF (EIDO), Thailand ETF (THD) and Global X FTSE Southeast Asia ETF (ASEA) all posted over 8% gains in August. Southeast Asian equities overall enjoyed a strong rally in August, boosted by rosy economic outlook and growing expectations of a Fed rate cut, which have narrowed the interest rate gap between the U.S. and Southeast Asian countries, strengthening those countries' currencies against the dollar.

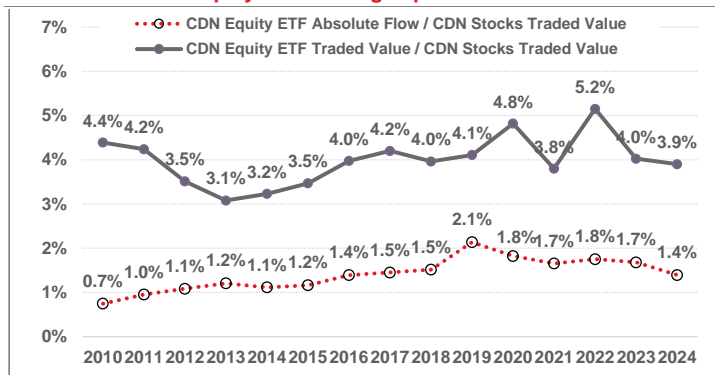
**Bonus Discussion: Impact of Passive Investing on the Stock Market**

The debate over passive investing's influence on stock market dynamics has gained renewed attention recently. Some critics and academics have argued that indexing distorts market behaviour. This discussion was further fueled by a recent study titled "Passive Investing and the Rise of Mega-Firms" authored by Hao Jiang from Michigan State University, Dimitri Vayanos from the London School of Economics and Lu Zheng from the University of California-Irvine. Their research suggests that passive investing disproportionately inflates the stock prices of the largest firms, particularly those that may be overvalued by the market. This raises concerns about how passive strategies might affect market efficiency and valuation.

To provide context, it is crucial to understand the role of ETFs and indexing within current market stats and size metrics. As of 2020, U.S. index mutual funds and ETFs represented 14% of total equity market capitalization, according to the Investment Company Institute and Factor Research. Despite the growth in passive investments, market ownership is still dominated by pension funds, hedge funds, insurance companies, family offices and retail investors, which together still collectively own 72% of all U.S. stocks by market cap. Furthermore, while ETFs play a significant role in providing liquidity, they are not the primary drivers of market movements. For example, in Canada, ETFs account for 3.9% of stock trading and their creation and redemption activities contribute to only 1.4% of stock market dollar turnover (Chart 2). In the U.S., ETFs trade 26% of equities, but their absolute flow constitutes just 3.5% of the total underlying stock turnover (Chart 3).

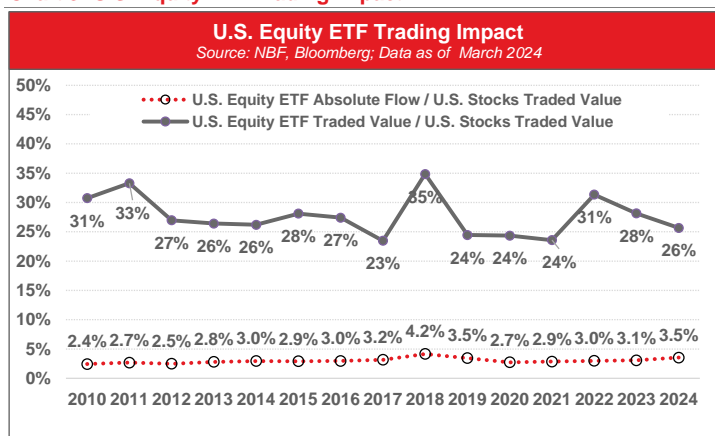
Additional empirical evidence could further clarify the role of passive investing. If passive flows were the primary driver of stock prices, we would expect stocks to move with more synchronicity than they do. The Cboe

**Chart 2: Canadian Equity ETF Trading Impact**



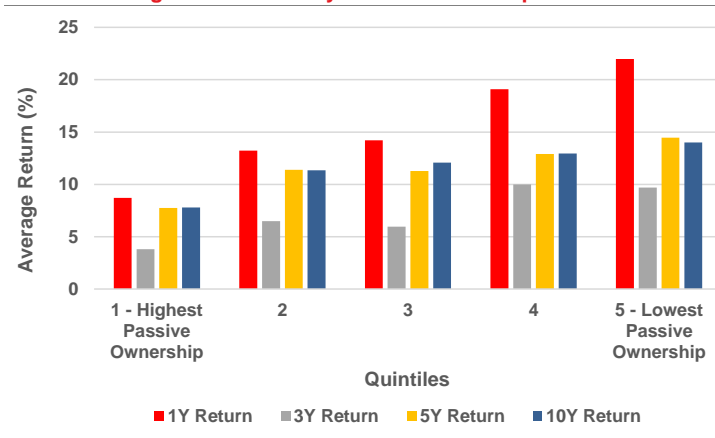
Source: NBF ETF Research, Bloomberg. Data as of March 31, 2024.

**Chart 3: U.S. Equity ETF Trading Impact**



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

**Chart 4: Average Performance by Passive Ownership**



Source: NBF ETF Research, Bloomberg. Return data as of June 2024.

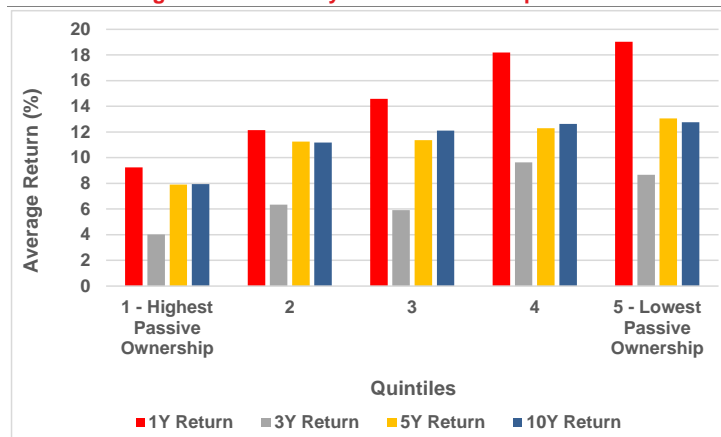
Dataset contains 468 stocks

S&P 500 Dispersion Index, which measures idiosyncratic performance, is currently at a multi-year high, indicating significant variance in stock performance. Additionally, notable shifts in market capitalization, such as Nvidia's rise from #371 to #3 in the S&P 500 within a decade and GE's fall from the top 10, underscore the fact that active traders and portfolio managers still play a crucial role in the dynamics of market-clearing pricing. Moreover, if passive ETFs and mutual funds did artificially inflate stock prices, then we would expect stocks with higher passive ownership to outperform as passive share increased (as it has been doing over time, see next section). However, the opposite is true when you segment S&P 500 stocks by passive ownership. Charts 4 and 5 shows that stocks with the highest current levels of passive ownership (as a percentage of their

market cap) actually underperformed relative to those with lower levels of passive ownership over all time windows encompassing the past one, three, five and 10 years. This pattern persists even when excluding the FAANG companies.

An examination of the companies with highest/lowest passive ownership might provide some insight into the return divergence. Table 3 shows the companies with the highest passive ownership are typically smaller-cap and low valuation companies that happen to be included in both large and small-cap indices, in addition to dividend/value factor indices. On the opposite end of the spectrum, the low passive ownership group includes blue chip companies like Walmart, T-Mobile and Oracle (Table 4). As shown on Table 5, Mega-cap companies typically have moderate passive ownership (20% or so) and often have significant retail trader involvement, which can introduce large swings to stock prices. In our opinion, retail traders and other active managers' participation more likely contributed to the rise of mega caps, at least more so than passive investment.

**Chart 5: Average Performance by Passive Ownership ex-FAANG stocks**



Source: NBF ETF Research, Bloomberg. Return data as of June 2024.

Dataset contains 461 stocks, excluding AAPL, AMZN, GOOGL, GOOG, META, MSFT, NVDA

**Table 3: Top 10 Stocks with the Highest Passive Ownership**

Ticker	Name	Sector	Market Cap (\$B)	Passive Ownership (%)	Returns (%)		
					1Y	3Y	5Y
CHRW	CH Robinson Worldwide Inc.	Industrial	8.9	38.9	-6.80	-0.19	3.02
FRT	Federal Realty Investment Trust	Financial	8.5	35.7	9.83	-0.91	-1.63
ESS	Essex Property Trust Inc.	Financial	15.7	34.7	24.73	1.50	2.20
IPG	Interpublic Group of Companies Inc.	Communications	12.4	34.5	-23.10	1.48	10.20
APA	APA Corp.	Energy	10.4	33.4	-16.08	12.97	1.58
PNR	Pentair PLC	Industrial	14.2	32.9	32.09	9.07	18.86
HST	Host Hotels & Resorts Inc.	Financial	14.6	32.7	10.85	4.74	2.18
CMA	Comerica Inc.	Financial	7.3	32.4	17.42	-7.24	-3.07
CPT	Camden Property Trust	Financial	10.5	32.0	0.90	-3.13	3.84
BXP	BXP Inc.	Financial	10.2	31.8	20.03	-14.86	-10.56

Source: NBF ETF Research, Bloomberg. Return data as of June 30, 2024. Market Cap and Passive Ownership as of Q1 2024

**Table 4: Top 10 Stocks with the Lowest Passive Ownership**

Ticker	Name	Sector	Market Cap (\$B)	Passive Ownership (%)	Returns (%)		
					1Y	3Y	5Y
NWS	News Corp.	Communications	15.1	9.2	40.76	6.16	17.24
LVS	Las Vegas Sands Corp.	Consumer, Cyclical	39.0	9.7	-22.99	-5.33	-4.61
WMT	Walmart Inc.	Consumer, Cyclical	484.9	10.1	31.90	16.16	14.85
TMUS	T-Mobile US Inc.	Communications	193.7	11.1	36.92	7.41	18.62
ORCL	Oracle Corp.	Technology	345.2	11.4	16.95	25.71	24.23
HCA	HCA Healthcare Inc.	Consumer, Non-cyclical	88.2	14.2	18.58	20.26	22.44
ROL	Rollins Inc.	Consumer, Non-cyclical	22.4	14.3	22.39	15.99	15.98
MS	Morgan Stanley	Financial	154.0	14.5	14.96	8.73	21.34
RSG	Republic Services Inc.	Industrial	60.2	14.7	32.97	23.28	19.12
SCHW	Schwab Charles Corp.	Financial	132.0	14.8	35.34	2.63	13.76

Source: NBF ETF Research, Bloomberg. Return data as of June 30, 2024. Market Cap and Passive Ownership as of Q1 2024

The above discusses how passive ownership among large-cap stocks does not appear to be driving their prices, at least when large caps are compared to each other as a group. What about the relative balance of passive ownership between large caps and small caps? To investigate this, we studied the difference in returns between large- and small-cap indices in parallel with changes in passive vs. active ownership. The U.S. Large

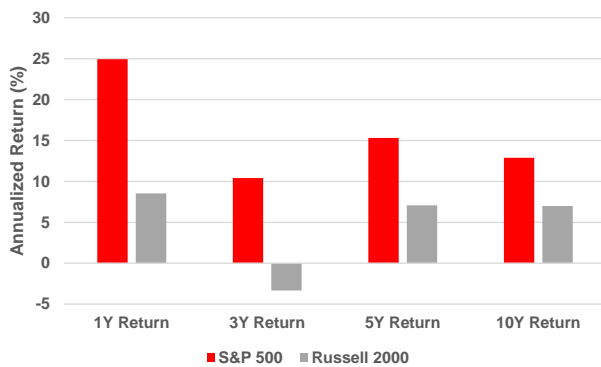
cap benchmark (S&P 500 index) has outperformed the small-cap benchmark (Russel 2000 index) in the past one, three, five, and 10 years (Chart 6). Could this be driven by greater passive ownership of large cap companies? The data actually shows somewhat conflicting evidence: according to Bloomberg, the weighted average passive ownership level of the Russell 2000 index has been gradually increasing and it surpassed that of the S&P 500 in 2016 (Chart 7).

**Table 5: Top 10 U.S. Stocks by Market Cap**

Ticker	Name	Sector	Market Cap (\$B)	Passive Ownership (%)
MSFT	Microsoft Corp.	Technology	3126	19.7
AAPL	Apple Inc.	Technology	2648	18.4
NVDA	Nvidia Corp.	Technology	2259	18.9
GOOG	Alphabet Inc. Class C	Communications	1885	16.3
GOOGL	Alphabet Inc. Class A	Communications	1885	18.7
AMZN	Amazon.com Inc.	Communications	1874	16.1
META	Meta Platforms Inc. Class A	Communications	1238	19.4
BRK/B	Berkshire Hathaway Inc. Class B	Financial	909	23.0
LLY	Eli Lilly and Co.	Consumer, Non-cyclical	740	16.1
AVGO	Broadcom Inc.	Technology	614	22.5

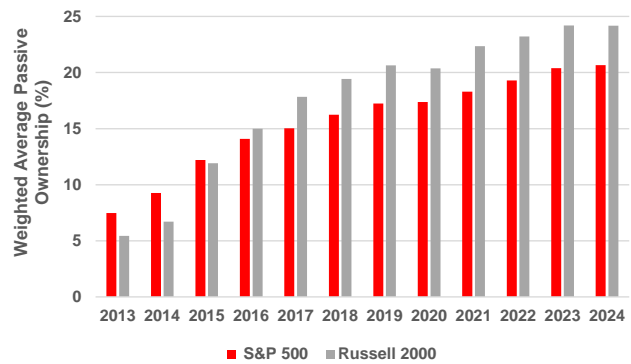
Source: NBF ETF Research, Bloomberg. Return data as of June 30, 2024. Market Cap and Passive Ownership as of Q1 2024

**Chart 6: Index Annualized Returns**



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

**Chart 7: Weighted Average Passive Ownership by Index**



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

In conclusion, while the rise of passive investing has undoubtedly impacted market dynamics, it is only one of many factors influencing stock prices. The timing of stock returns might have shifted, but the fundamental principles of investing remain unchanged. The market is a complex system driven by various forces, including the Fed's policy actions, dealer positioning and active trading behaviour. While passive investing may have indeed "played along" with the implicit pricing of the wider market, exacerbating non-intrinsic valuations for longer periods of time than the pre-passive past, ultimately, prices tend to revert to fair values based on fundamentals. The math of investing remains a critical determinant of long-term outcomes.

August 2024 ETF Flows: Tables 6 - 12

**Table 6 - Equity ETF Flows by Geography - Aug 2024**

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$5,955		\$33.8	0.6%
Broad/Large Cap	\$2,689	36%	\$14.3	0.5%
U.S. Other	\$3,267	43%	\$19.6	0.6%
International Developed	\$763		\$0.3	0.0%
Broad Int'l Dev	\$600	8%	\$3.1	0.5%
Broad Europe	\$52	1%	-\$1.0	-1.9%
Japan	\$37	0%	-\$1.1	-3.0%
Canada	\$10	0%	\$0.0	-0.2%
Other Developed	\$65	1%	-\$0.6	-1.0%
Emerging Markets	\$326		-\$2.8	-0.9%
Broad Cap Weighted	\$219	3%	-\$1.0	-0.5%
China (A+H)	\$16	0%	-\$1.3	-7.4%
Other EM	\$91	1%	-\$0.4	-0.5%
Global/Regional	\$476	6%	\$2.3	0.5%
<b>Total Displayed</b>	<b>\$7,521</b>	<b>100%</b>	<b>\$33.7</b>	<b>0.5%</b>

Source: National Bank of Canada, Bloomberg

**Table 7 - Equity ETF Flows by Sector and Themes\* - Aug 2024**

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Technology	\$272	27%	\$5.9	2.2%
Real Estate	\$84	8%	\$2.2	2.8%
Financials	\$79	8%	\$1.3	1.7%
Consumer Staples	\$29	3%	\$0.7	2.6%
Utilities	\$28	3%	\$0.7	2.5%
Industrials	\$49	5%	-\$0.5	-1.1%
Consumer Discretionary	\$37	4%	-\$0.5	-1.4%
Health Care	\$104	10%	-\$0.9	-0.9%
Materials	\$45	4%	-\$0.9	-2.0%
Communication Services	\$37	4%	-\$1.2	-3.2%
Energy	\$78	8%	-\$2.4	-2.9%
ESG	\$94	9%	\$0.5	0.5%
Thematic	\$69	7%	-\$0.7	-1.0%
<b>Total Displayed</b>	<b>\$1,005</b>	<b>100%</b>	<b>\$4.1</b>	<b>0.4%</b>

\*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 11 - Top Single Long ETF Inflows - Aug 2024**

Ticker	Name	Flow (\$B)	Flow/AUM
1	VOO Vanguard S&P 500 ETF	\$7.9	1.6%
2	IVV iShares Core S&P 500 ETF	\$5.9	1.2%
3	VGT Vanguard Information Technology ETF	\$4.0	5.4%
4	TLT iShares 20+ Year Treasury Bond ETF	\$3.6	6.2%
5	VTI Vanguard Total Stock Market ETF	\$2.7	0.6%
6	AGG iShares Core U.S. Aggregate Bond ETF	\$2.3	2.1%
7	BND Vanguard Total Bond Market ETF	\$2.0	1.8%
8	IEF iShares 7-10 Year Treasury Bond ETF	\$1.7	5.8%
9	SCHR Schwab Intermediate-Term U.S. Treasury ETF	\$1.5	17.7%
10	VCLT Vanguard Long-Term Corporate Bond ETF	\$1.5	13.1%
11	SMH VanEck Semiconductor ETF	\$1.5	6.6%
12	VCIT Vanguard Intermediate-Term Corporate Bond ETF	\$1.5	3.0%
13	SPLG SPDR Portfolio S&P 500 ETF	\$1.4	3.3%
14	XLF Financial Select Sector SPDR Fund	\$1.4	3.2%
15	QQQM Invesco Nasdaq 100 ETF	\$1.4	4.5%
16	GLD SPDR Gold Shares	\$1.4	2.0%
17	SCHF Schwab International Equity ETF	\$1.3	3.3%
18	SGOV iShares 0-3 Month Treasury Bond ETF	\$1.2	5.2%
19	IJR iShares Core S&P Small-Cap ETF	\$1.2	1.4%
20	BIL SPDR Bloomberg 1-3 Month T-Bill ETF	\$1.2	3.6%

Source: National Bank of Canada, Bloomberg

**Table 8 - Fixed Income ETF Flows by Type - Aug 2024**

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$423	24%	\$8.6	2.1%
U.S. Government	\$544	31%	\$13.2	2.5%
U.S. Municipals	\$126	7%	\$1.8	1.4%
U.S. I.G. Corporate	\$264	15%	\$5.8	2.3%
Developed Markets&Global	\$169	10%	\$4.1	2.5%
Emerging Markets	\$31	2%	\$0.5	1.6%
Sub-investment Grade	\$129	7%	-\$1.2	-0.9%
Convertibles and Preferreds	\$43	2%	\$0.4	1.0%
<b>Total Displayed</b>	<b>\$1,729</b>	<b>100%</b>	<b>\$33.1</b>	<b>2.0%</b>

Source: National Bank of Canada, Bloomberg

**Table 9 - Fixed Income ETF Flows by Maturity - Aug 2024**

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$850	49%	\$15.0	1.8%
Ultra Short Term	\$245	14%	\$1.7	0.7%
Short Term	\$232	13%	\$1.2	0.5%
Mid Term	\$218	13%	\$7.4	3.6%
Long Term	\$129	7%	\$6.4	5.3%
Target Maturity	\$54	3%	\$1.5	2.8%
Rate Hedged	\$1	0%	-\$0.2	-9.7%
<b>Total Displayed</b>	<b>\$1,729</b>	<b>100%</b>	<b>\$33.1</b>	<b>2.0%</b>

Source: National Bank of Canada, Bloomberg

**Table 10 - Equity ETF Flows by Factor\* - Aug 2024**

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Value	\$573	22%	\$4.2	0.7%
Income	\$430	17%	\$3.0	0.7%
Growth	\$580	23%	\$2.6	0.5%
Small/Mid Cap	\$574	22%	\$1.7	0.3%
Quality	\$92	4%	\$1.1	1.3%
Momentum	\$30	1%	-\$0.1	-0.3%
Low Vol	\$58	2%	-\$0.9	-1.6%
Multi-Factor and Other	\$236	9%	\$0.8	0.3%
<b>Total Displayed</b>	<b>\$2,573</b>	<b>100%</b>	<b>\$12.4</b>	<b>0.5%</b>

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

**Table 12 - Top Single Long ETF Outflows - Aug 2024**

Ticker	Name	Flow (\$B)	Flow/AUM
1	SPY SPDR S&P 500 ETF Trust	-\$7.2	-1.3%
2	BKLN Invesco Senior Loan ETF	-\$1.7	-20.3%
3	XLE Energy Select Sector SPDR Fund	-\$1.6	-4.1%
4	EEM iShares MSCI Emerging Markets ETF	-\$1.5	-8.0%
5	IWM iShares Russell 2000 ETF	-\$1.3	-1.8%
6	IAU iShares Gold Trust	-\$1.2	-3.9%
7	EWJ iShares MSCI Japan ETF	-\$1.0	-6.1%
8	LQD iShares iBoxx \$ Investment Grade Corporate Bond	-\$1.0	-3.0%
9	SHY iShares 1-3 Year Treasury Bond ETF	-\$1.0	-3.9%
10	GBTC Grayscale Bitcoin Trust BTC	-\$0.9	-5.8%
11	DXJ WisdomTree Japan Hedged Equity Fund	-\$0.9	-16.8%
12	SRLN SPDR Blackstone Senior Loan ETF	-\$0.8	-12.0%
13	JNK SPDR Bloomberg High Yield Bond ETF	-\$0.7	-8.6%
14	XLV Health Care Select Sector SPDR Fund	-\$0.7	-1.7%
15	XLC Communication Services Select Sector SPDR	-\$0.7	-3.5%
16	SCZ iShares MSCI EAFE Small-Cap ETF	-\$0.6	-6.6%
17	VGK Vanguard FTSE Europe ETF	-\$0.6	-3.0%
18	USMV iShares MSCI USA Min Vol Factor ETF	-\$0.6	-2.4%
19	DIA SPDR Dow Jones Industrial Average ETF Trust	-\$0.6	-1.7%
20	IWY iShares Russell Top 200 Growth ETF	-\$0.6	-5.0%

Source: National Bank of Canada, Bloomberg

**Appendix 1: 2024 January - August ETF Flow Tables**

**Table 13 - Equity ETF Flows by Geography - YTD Aug 2024**

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
<b>U.S.</b>	\$5,955		\$296.4	6.1%
Broad/Large Cap	\$2,689	36%	\$154.9	7.3%
U.S. Other	\$3,267	43%	\$141.6	5.2%
<b>International Developed</b>	\$763		\$37.8	5.7%
Broad Int'l Dev	\$600	8%	\$33.9	6.6%
Broad Europe	\$52	1%	\$1.2	2.5%
Japan	\$37	0%	\$2.8	9.3%
Canada	\$10	0%	-\$1.0	-10.0%
Other Developed	\$65	1%	\$0.9	1.6%
<b>Emerging Markets</b>	\$326		\$3.2	1.1%
Broad Cap Weighted	\$219	3%	\$3.3	1.7%
China (A+H)	\$16	0%	-\$4.9	-23.4%
Other EM	\$91	1%	\$4.7	5.8%
<b>Global/Regional</b>	\$476	6%	\$22.0	5.4%
<b>Total Displayed</b>	<b>\$7,521</b>	<b>100%</b>	<b>\$359.4</b>	<b>5.8%</b>

Source: National Bank of Canada, Bloomberg

**Table 14 - Equity ETF Flows by Sector and Themes\* - YTD Aug 2024**

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Technology	\$272	27%	\$22.3	10.5%
Financials	\$79	8%	\$4.3	7.0%
Real Estate	\$84	8%	\$3.2	4.2%
Industrials	\$49	5%	\$3.1	7.7%
Utilities	\$28	3%	\$1.4	6.5%
Consumer Staples	\$29	3%	-\$0.7	-2.5%
Materials	\$45	4%	-\$1.1	-2.7%
Consumer Discretionary	\$37	4%	-\$1.2	-3.4%
Communication Services	\$37	4%	-\$3.4	-9.8%
Health Care	\$104	10%	-\$3.6	-3.8%
Energy	\$78	8%	-\$5.6	-7.2%
ESG	\$94	9%	-\$2.9	-3.3%
Thematic	\$69	7%	-\$1.8	-2.7%
<b>Total Displayed</b>	<b>\$1,005</b>	<b>100%</b>	<b>\$13.9</b>	<b>1.6%</b>

\*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 15 - Fixed Income ETF Flows by Type - YTD Aug 2024**

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$423	24%	\$48.2	13.0%
U.S. Government	\$544	31%	\$50.8	10.4%
U.S. Municipals	\$126	7%	\$8.6	7.3%
U.S. I.G. Corporate	\$264	15%	\$29.6	12.8%
Developed Markets&Global	\$169	10%	\$23.5	16.3%
Emerging Markets	\$31	2%	\$0.7	2.3%
Sub-investment Grade	\$129	7%	\$25.8	25.6%
Convertibles and Preferreds	\$43	2%	\$1.4	3.7%
<b>Total Displayed</b>	<b>\$1,729</b>	<b>100%</b>	<b>\$188.6</b>	<b>12.4%</b>

Source: National Bank of Canada, Bloomberg

**Table 16 - Fixed Income ETF Flows by Maturity - YTD Aug 2024**

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$850	49%	\$91.6	12.2%
Ultra Short Term	\$245	14%	\$27.3	12.6%
Short Term	\$232	13%	-\$1.9	-0.8%
Mid Term	\$218	13%	\$32.8	18.0%
Long Term	\$129	7%	\$26.6	25.8%
Target Maturity	\$54	3%	\$12.0	28.9%
Rate Hedged	\$1	0%	\$0.2	15.5%
<b>Total Displayed</b>	<b>\$1,729</b>	<b>100%</b>	<b>\$188.6</b>	<b>12.4%</b>

Source: National Bank of Canada, Bloomberg

**Table 17 - Equity ETF Flows by Factor\* - YTD Aug 2024**

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Growth	\$580	23%	\$41.1	9.1%
Value	\$573	22%	\$26.8	5.5%
Small/Mid Cap	\$574	22%	\$19.7	3.9%
Quality	\$92	4%	\$12.3	18.5%
Income	\$430	17%	\$5.5	1.5%
Momentum	\$30	1%	\$3.2	14.4%
Low Vol	\$58	2%	-\$8.8	-15.0%
Multi-Factor and Other	\$236	9%	\$25.2	13.5%
<b>Total Displayed</b>	<b>\$2,573</b>	<b>100%</b>	<b>\$124.8</b>	<b>5.8%</b>

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

**Table 18 - Top Single Long ETF Inflows - YTD Aug 2024**

Ticker	Name	Flow (\$B)	Flow/AUM
1	VOO Vanguard S&P 500 ETF	\$60.7	16.3%
2	IVV iShares Core S&P 500 ETF	\$43.3	10.8%
3	VTI Vanguard Total Stock Market ETF	\$21.1	6.1%
4	IBIT iShares Bitcoin Trust	\$20.9	NA
5	QQQ Invesco QQQ Trust Series 1	\$17.4	7.6%
6	AGG iShares Core U.S. Aggregate Bond ETF	\$14.8	14.6%
7	SPLG SPDR Portfolio S&P 500 ETF	\$12.7	49.1%
8	TLT iShares 20+ Year Treasury Bond ETF	\$11.0	21.4%
9	FBTC Fidelity Wise Origin Bitcoin Fund	\$9.8	NA
10	DYFN BlackRock U.S. Equity Factor Rotation ETF	\$9.8	19394.6%
11	QQQM Invesco Nasdaq 100 ETF	\$9.7	52.5%
12	VUG Vanguard Growth ETF	\$9.5	9.0%
13	BND Vanguard Total Bond Market ETF	\$8.7	8.3%
14	VGT Vanguard Information Technology ETF	\$8.4	14.2%
15	VGIT Vanguard Intermediate-Term Treasury ETF	\$8.1	37.1%
16	VXUS Vanguard Total International Stock ETF	\$7.2	11.4%
17	SGOV iShares 0-3 Month Treasury Bond ETF	\$7.1	40.4%
18	VEA Vanguard FTSE Developed Markets ETF	\$7.0	5.7%
19	GBTC Grayscale Bitcoin Trust BTC	\$7.0	NA
20	IVW iShares S&P 500 Growth ETF	\$6.9	18.7%

Source: National Bank of Canada, Bloomberg

**Table 19 - Top Single Long ETF Outflows - YTD Aug 2024**

Ticker	Name	Flow (\$B)	Flow/AUM
1	SPY SPDR S&P 500 ETF Trust	-\$18.8	-3.8%
2	USMV iShares MSCI USA Min Vol Factor ETF	-\$5.2	-19.3%
3	EFV iShares MSCI EAFE Value ETF	-\$3.4	-19.6%
4	AMJ JPMorgan Alerian MLP Index ETN	-\$3.4	-111.8%
5	TFLO iShares Treasury Floating Rate Bond ETF	-\$3.2	-30.8%
6	ACWI iShares MSCI ACWI ETF	-\$3.0	-15.5%
7	ESGU iShares ESG Aware MSCI USA ETF	-\$2.6	-19.2%
8	IWD iShares Russell 1000 Value ETF	-\$2.5	-4.5%
9	ARKK ARK Innovation ETF	-\$2.4	-25.8%
10	VVO Vanguard FTSE Emerging Markets ETF	-\$2.3	-3.1%
11	HYG iShares iBoxx \$ High Yield Corporate Bond ETF	-\$2.3	-12.3%
12	VGSH Vanguard Short-Term Treasury ETF	-\$2.3	-10.4%
13	IAU iShares Gold Trust	-\$2.3	-8.5%
14	SUSA iShares MSCI USA ESG Select ETF	-\$2.2	-42.1%
15	SHY iShares 1-3 Year Treasury Bond ETF	-\$2.1	-8.3%
16	FVD First Trust Value Line Dividend Index Fund	-\$2.0	-18.6%
17	IWF iShares Russell 1000 Growth ETF	-\$1.9	-2.4%
18	SDY SPDR S&P Dividend ETF	-\$1.8	-8.6%
19	XLE Energy Select Sector SPDR Fund	-\$1.7	-4.7%
20	IWM iShares Russell 2000 ETF	-\$1.6	-2.4%

Source: National Bank of Canada, Bloomberg

**Table 20: ETF Provider Table**

Provider	AUM (\$B)	Mkt Shr	Aug 2024		YTD Aug 2024	
			Flow (\$B)	Flow/AUM	Flow (\$B)	Flow/AUM
1 BlackRock iShares	\$3,047	31%	\$16.5	0.6%	\$161.1	6.2%
2 Vanguard	\$2,837	29%	\$30.6	1.1%	\$178.8	7.6%
3 State Street SSGA	\$1,403	14%	-\$4.1	-0.3%	\$10.4	0.9%
4 Invesco	\$572	6%	\$2.1	0.4%	\$51.9	11.3%
5 Charles Schwab	\$376	4%	\$5.5	1.5%	\$19.3	6.0%
6 First Trust	\$179	2%	\$1.5	0.8%	\$12.2	8.0%
7 JPMorgan	\$168	2%	\$3.9	2.4%	\$23.6	17.8%
8 Dimensional Holdings	\$157	2%	\$3.2	2.1%	\$24.7	21.0%
9 VanEck	\$86	1%	\$1.3	1.6%	\$7.4	10.9%
10 Fidelity	\$84	1%	\$2.0	2.5%	\$23.4	45.7%
11 WisdomTree	\$81	1%	-\$0.5	-0.6%	\$2.2	3.0%
12 ProShares	\$73	1%	\$0.5	0.7%	-\$6.9	-10.0%
13 American Century	\$52	1%	\$1.4	2.7%	\$10.9	29.7%
14 Global X	\$50	1%	-\$0.4	-0.7%	\$5.5	12.9%
15 Pacer Financial	\$47	0%	\$0.0	0.1%	\$8.7	24.8%
16 Direxion	\$46	0%	\$0.2	0.4%	\$0.9	2.4%
17 Capital Group	\$40	0%	\$2.5	7.0%	\$16.9	89.6%
18 Goldman Sachs	\$37	0%	\$0.4	1.0%	\$0.1	0.4%
19 PIMCO	\$29	0%	\$0.4	1.6%	\$4.8	19.8%
20 DWS Xtrackers	\$22	0%	\$0.2	0.8%	\$0.2	1.2%
<b>Top 20 Total</b>	<b>\$9,385</b>	<b>96%</b>	<b>\$67.3</b>		<b>\$556.1</b>	
<b>Total ETF</b>	<b>\$9,764</b>	<b>100%</b>	<b>\$73.2</b>		<b>\$643.5</b>	

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

**Table 21: ESG ETF Flows by Categories**

Category	AUM (\$M)	AUM (%)	Aug 2024		YTD Aug 2024	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
Equity	\$96,349	90%	\$506	0.5%	-\$2,838	-3.2%
Broad - U.S.	\$47,103	44%	\$383	0.8%	-\$3,252	-7.5%
Broad - DM	\$10,713	10%	\$38	0.4%	\$281	3.0%
Broad - EM	\$4,920	5%	\$1	0.0%	\$32	0.7%
Broad - Global	\$4,839	4%	-\$6	-0.1%	\$113	2.6%
Environment	\$16,049	15%	\$13	0.1%	\$655	4.9%
Clean Energy	\$6,839	6%	\$23	0.3%	-\$798	-9.2%
Energy Transition	\$259	0%	-\$1	-0.3%	\$0	-0.1%
Social	\$4,315	4%	\$39	0.9%	\$292	8.1%
Other	\$1,313	1%	\$15	1.2%	-\$160	-0.2%
Commodities	\$635	1%	\$11	1.8%	-\$85	-10.2%
Multi-Asset	\$70	0%	\$1	2.0%	-\$5	-7.8%
Fixed Income	\$10,526	10%	\$215	2.1%	\$549	5.6%
<b>Total Displayed</b>	<b>\$107,579</b>	<b>100%</b>	<b>\$733</b>	<b>0.7%</b>	<b>-\$2,381</b>	<b>-2.4%</b>

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



## Appendix 2 - 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 3 - 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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