

## July 2023: Smaller-Cap Equity, Larger Demand

- U.S.- and Japan-focused equity ETFs welcomed new assets; broad Europe equity ETFs experienced outflows
- Equity sector ETFs saw renewed interests from investors as all sectors posted gains in July
- Equal-weighted S&P 500 and small/mid-cap ETFs continued to receive strong inflows
- Ultra-short-term treasury ETFs remained popular, while longer duration products enjoyed a surge in popularity

**Summary (Table 1, Chart 1):** Bolstered by optimism surrounding stronger-than-expected GDP data and signs that inflation may be softening, the S&P 500 Index finished July with a 3.2% gain. Inflows to U.S. ETFs also reflected this optimism, gathering \$54.5 billion in new assets. Among ETF categories, U.S. equity and U.S. treasury bonds welcomed the majority of fresh inflows. Additionally, defined outcome ETFs and option-writing ETFs continue to see solid demand; this category has experienced nearly 25% inflow year-to-date as a percentage of assets at the start of the year.

### Equity ETFs by Geography (Table 3):

U.S. equity ETFs received \$30 billion in July, spread evenly between broad/large-cap ETFs and active/strategic ETFs (which we group under the “U.S. Other” category). iShares Core S&P 500 ETF (IVV) took the lion’s share with \$9.9 billion inflows, the highest month of inflow for that single product in its 23-year history. Investors also expressed strong interest in smaller-market-cap-focused products, as evidenced by the inflows to iShares Core S&P Mid-Cap ETF (IJH, \$3.7 billion) and Invesco S&P 500 Equity Weight ETF (RSP, \$3.2 billion). Looking globally, JPMorgan BetaBuilders Europe ETF (BBEU), which had been among the most popular ETFs at the beginning of year, suffered over \$1 billion of redemptions in both June and July. Japan ETFs, on the other hand, continued their asset-growth momentum, attracting \$0.8 billion of inflows last month. Action in the Nikkei 225 Index may be contributing to investors’ continued confidence in Japan ETFs, as the index remained resilient while the Bank of Japan raised the upper limit of 10-year government bond yields from 0.5% to 1.0% in July, slightly reversing their accommodative money policy.

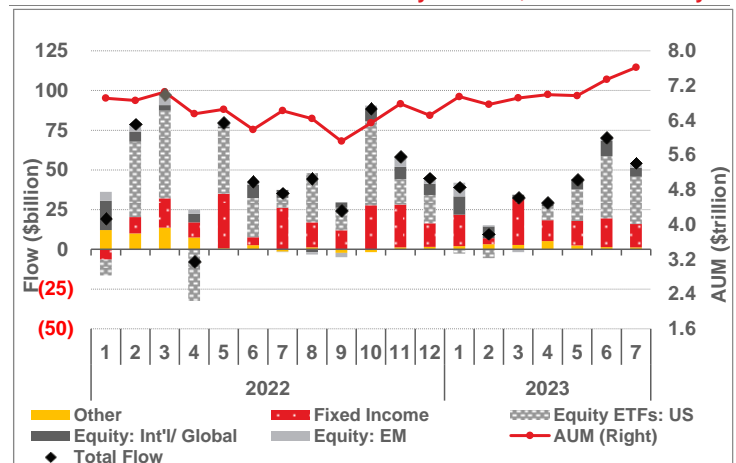
**Equity Sector ETFs (Table 4):** All equity sectors posted gains for the second consecutive month, as measured by the S&P 500 sector indices. In contrast to June, when ETF investors were still hesitant to participate in the rally, sector ETFs finally captured a modest amount of interest in July, with \$7.3 billion of net creations. ETF flow patterns mostly align with the sector performances, with financials, communication services and energy sector ETFs enjoying the highest creations. These are the same sector indices that also posted the highest gains in July. Conversely, investors remained cautious about broad technology sector ETFs such as IYW and VGT, redeeming \$1.6 billion and \$0.8 billion from these two ETFs, respectively.

**Table 1: ETF Flows by Category**

	AUM (\$B)	Mkt Shr	July 2023		Jan-July 2023	
			Flow (\$B)	Flow/AUM	Flow (\$B)	Flow/AUM
Equity	\$5,855		\$38.5	0.7%	\$142.4	2.9%
U.S. Broad/Large-Cap	\$1,927	25%	\$14.7	0.8%	\$62.9	4.1%
U.S. Other	\$2,586	34%	\$15.2	0.6%	\$21.4	0.9%
Int'l / Global	\$1,035	14%	\$5.5	0.5%	\$44.3	5.1%
Emerging Markets	\$308	4%	\$3.2	1.1%	\$13.9	5.2%
Fixed Income	\$1,420	19%	\$14.7	1.0%	\$113.8	8.8%
Commodity	\$134	2%	-\$1.6	-1.2%	-\$4.1	-3.1%
Multi-Asset	\$114	1%	\$3.7	3.4%	\$21.3	24.7%
Levered Long	\$75	1%	-\$0.5	-0.7%	\$0.2	0.4%
Inverse	\$18	0%	-\$0.6	-2.8%	\$5.4	22.7%
Crypto-Asset	\$1	0%	\$0.2	13.6%	\$0.3	58.1%
<b>Total</b>	<b>\$7,618</b>	<b>100%</b>	<b>\$54.5</b>	<b>0.7%</b>	<b>\$279.4</b>	<b>4.3%</b>

Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

**Chart 1: U.S. Listed ETF Flow and AUM by month - \$54.5 billion in July**



Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

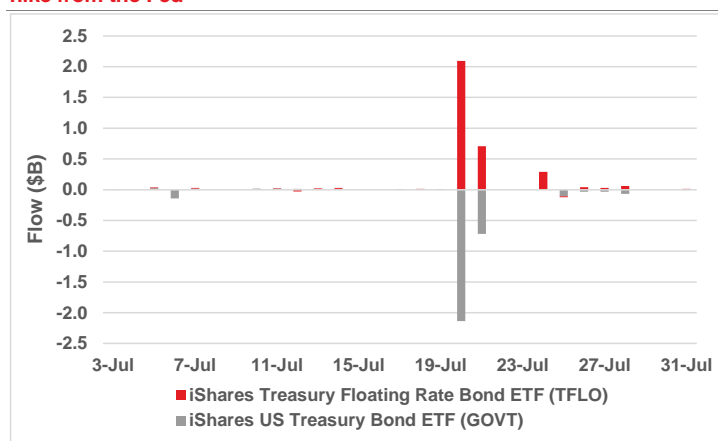
However, VanEck Semiconductor ETF (**SMH**), which we categorize under the technology sector, welcomed an impressive \$0.9 billion influx of investor capital, or 9.6% of its starting AUM in July. This might suggest investors’ persistent bullishness towards the semiconductor industry – this sector received a burst of headline demand in recent months from artificial intelligence developments that require supercomputer clusters to perform machine-learning training runs on large data sets.

**Equity Factor ETFs (Table 7):** U.S. small/mid-caps continued to outpace the S&P 500 in July, with the S&P MidCap 400 Index and the S&P SmallCap 600 Index up 4.1% and 5.5%, respectively. We observed strong demand for smaller-sized equity ETFs as market breadth improves. iShares Core S&P Mid-Cap ETF (**IJH**), for example, enjoyed \$3.7 billion in creations, setting a record high for its monthly flows. Small/Mid-Cap ETFs overall dominated the factor ETF categories in terms of creations, amassing a net \$5.4 billion of new money. Additionally, Invesco S&P 500 Equal Weight ETF (**RSP**) also gained traction, gathering \$3.2 billion of inflows.

On the other hand, we noticed an \$1.4 billion institutional-sized outflow from iShares MSCI USA Quality Factor ETF (**QUAL**), leading to the first monthly outflow for the quality ETF category this year. Performance-wise, S&P 500 Quality index remained robust in July with a 3.8% gain, outperforming other S&P factor indices, such as value, growth and low volatility.

**Fixed Income ETFs (Tables 5, 6):** After a rate pause in June, in July’s FOMC meeting, the Fed announced an increase in the Fed Fund Rate by another 25 bps, bringing the policy rate to a 22-year-high of 5.25%. Chair Powell also emphasized that future rate decisions would be made on a meeting-by-meeting basis, leaving the possibility for another rate increase in September. July’s overall flows displayed a barbell positioning among investors. While ultra-short-term bond ETFs, currently offering essentially “risk-free” yields of over 5%, saw steady inflows, a substantial amount of new fixed income ETF creations were also attributed to mid/long duration bond ETFs, despite the hawkish tone from the Fed. For example, iShares 20+ Year Treasury Bond ETF (**TLT**) led among single long fixed income ETFs in terms of flows, taking in \$4.8 billion. Nevertheless, we’ve noticed some institutional-size trades indicating investors’ risk-off sentiment, such as the one shown in Chart 2, a rotation from the broad-term iShares US Treasury Bond ETF (**GOVT**) to iShares Treasury Floating Rate Bond ETF (**TFLO**), which has a minimal duration.

**Chart 2: Large switches from GOVT (treasuries) to TFLO (floating rate) ahead of July’s FOMC meeting, perhaps in anticipation of another rate hike from the Fed**



Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

**ESG ETFs (Table 18):**

ESG ETFs bled assets in July, primary due to iShares ESG Aware MSCI USA ETF (**ESGU**) having an outflow of \$1.8 billion. Over the past 12 months, **ESGU** has lost over \$10 billion of assets due to withdrawals, driving it to the bottom of the list of all ETFs in terms of flows. However, there were some positive developments in the ESG ETF world. Environment-focused equity ETFs and ESG *fixed income* products stood out as bright spots of demand, continuing to attract new assets in July. We also observed the first mutual-fund-to-ETF-conversion in the fixed income ESG ETF space: JPMorgan Sustainable Municipal Income ETF (**JMSI**), which actively invests in U.S. sustainable municipal bonds.

**Top Performing ETFs (Table 2):**

*Please note that crypto-assets are highly risky and speculative.*

July’s best performing ETF is Defiance Pure Electric Vehicle ETF (**EVXX**), which holds an equal-weighted, highly concentrated portfolio of five electric vehicle manufacturers (Tesla, Rivian, NIO, XPeng, Li Auto). This ETF was up 38.2% in July, due to

prevailing optimism in the electric vehicle sector, driven by remarkable Q2 sales reporting by those five companies. Despite their strong underlying stock returns in July, along a slightly longer time horizon (since the beginning of 2022), only Li Auto is in the green (and three out of EVXX's five holdings are still down by over 50%). This demonstrates the high degree of volatility associated with investing in EV companies.

Additionally, July's top-performing leaderboard

was dominated by crypto-related equity ETFs, each with over 20% of gains. This upswing may be related to Ripple Labs' partial victory in their SEC Case, fostering some positive sentiment towards the prospects of the crypto market. However, these crypto-related equity ETFs are still deeply below their 2022 starting levels.

**Table 2: Best Performing ETFs\* – July 2023**

Ticker	Name	Total Return (%)	AUM (\$M)	Flow (\$M)
1 <b>EVXX</b>	Defiance Pure Electric Vehicle ETF	38.2	7	5
2 <b>CRPT</b>	FT SkyBridge Crypto Industry and Digital Econ	26.2	26	0
4 <b>BKCH</b>	Global X Blockchain ETF	25.2	109	3
3 <b>BITQ</b>	Bitwise Crypto Industry Innovators ETF	24.9	112	4
6 <b>DAPP</b>	VanEck Digital Transformation ETF	24.4	64	7
7 <b>WGM1</b>	Valkyrie Bitcoin Miners ETF	24.0	24	7
9 <b>FDIG</b>	Fidelity Crypto Industry And Digital Payments	24.0	55	9
5 <b>SATO</b>	Invesco Alerian Galaxy Crypto Economy ETF	23.7	6	0
8 <b>GFOF</b>	Grayscale Future of Finance ETF	23.5	7	0
10 <b>IBLC</b>	iShares Blockchain And Tech ETF	22.7	9	0

\*Excluding leveraged/inverse ETFs. Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

July 2023 ETF Flows: Tables 3 - 9

**Table 3 - Equity ETF Flows by Geography - July 2023**

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,512		\$29.9	0.7%
Broad/Large Cap	\$1,927	33%	\$14.7	0.8%
U.S. Other	\$2,586	44%	\$15.2	0.6%
International Developed	\$637		\$2.7	0.4%
Broad Int'l Dev	\$493	8%	\$3.2	0.7%
Broad Europe	\$49	1%	-\$1.6	-3.3%
Japan	\$29	0%	\$0.8	3.1%
Canada	\$10	0%	\$0.0	-0.2%
Other Developed	\$58	1%	\$0.3	0.6%
Emerging Markets	\$308		\$3.2	1.1%
Broad Cap Weighted	\$205	3%	\$1.0	0.5%
China (A+H)	\$27	0%	\$0.2	0.7%
Other EM	\$76	1%	\$2.0	2.9%
Global/Regional	\$398	7%	\$2.7	0.7%
<b>Total Displayed</b>	<b>\$5,855</b>	<b>100%</b>	<b>\$38.5</b>	<b>0.7%</b>

Source: National Bank of Canada, Bloomberg

**Table 4 - Equity ETF Flows by Sector and Themes\* - July 2023**

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Financials	\$63	7%	\$2.6	4.6%
Communication Services	\$35	4%	\$1.7	5.5%
Energy	\$78	9%	\$1.5	2.1%
Industrials	\$39	5%	\$1.4	3.8%
Real Estate	\$70	8%	\$0.9	1.3%
Materials	\$44	5%	\$0.8	2.0%
Consumer Staples	\$33	4%	\$0.6	1.9%
Consumer Discretionary	\$34	4%	\$0.5	1.5%
Utilities	\$25	3%	-\$0.2	-0.8%
Health Care	\$100	12%	-\$1.3	-1.2%
Technology	\$191	22%	-\$1.3	-0.7%
ESG	\$88	10%	-\$1.4	-1.7%
Thematic	\$68	8%	\$1.0	1.6%
<b>Total Displayed</b>	<b>\$868</b>	<b>100%</b>	<b>\$6.9</b>	<b>0.8%</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 5 - Fixed Income ETF Flows by Type - July 2023**

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$322	23%	\$1.2	0.4%
U.S. Government	\$460	32%	\$6.6	1.4%
U.S. Municipals	\$105	7%	\$1.7	1.6%
U.S. I.G. Corporate	\$227	16%	\$1.9	0.8%
Developed Markets&Global	\$151	11%	\$0.7	0.5%
Emerging Markets	\$29	2%	\$0.6	2.2%
Sub-investment Grade	\$86	6%	\$1.3	1.5%
Convertibles and Preferreds	\$40	3%	\$0.7	1.7%
<b>Total Displayed</b>	<b>\$1,420</b>	<b>100%</b>	<b>\$14.7</b>	<b>1.0%</b>

Source: National Bank of Canada, Bloomberg

**Table 6 - Fixed Income ETF Flows by Maturity - July 2023**

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$693	49%	\$6.9	1.0%
Ultra Short Term	\$185	13%	\$4.0	2.2%
Short Term	\$250	18%	-\$5.7	-2.2%
Mid Term	\$165	12%	\$3.6	2.2%
Long Term	\$86	6%	\$5.5	6.7%
Target Maturity	\$40	3%	\$0.4	0.9%
Rate Hedged	\$1	0%	\$0.0	1.0%
<b>Total Displayed</b>	<b>\$1,420</b>	<b>100%</b>	<b>\$14.7</b>	<b>1.0%</b>

Source: National Bank of Canada, Bloomberg

**Table 7 - Equity ETF Flows by Factor\* - July 2023**

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Small/Mid Cap	\$479	24%	\$5.4	1.2%
Value	\$431	21%	\$2.8	0.7%
Income	\$388	19%	\$0.0	0.0%
Momentum	\$23	1%	-\$0.2	-0.8%
Growth	\$406	20%	-\$0.7	-0.2%
Low Vol	\$63	3%	-\$0.7	-1.1%
Quality	\$57	3%	-\$0.9	-1.6%
Multi-Factor and Other	\$172	8%	\$4.7	2.9%
<b>Total Displayed</b>	<b>\$2,019</b>	<b>100%</b>	<b>\$10.4</b>	<b>0.5%</b>

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

**Table 8 - Top Single Long ETF Inflows - July 2023**

Rank	Ticker	Name	Flow (\$B)	Flow/AUM
1	IVV	iShares Core S&P 500 ETF	\$9.9	3.0%
2	TLT	iShares 20+ Year Treasury Bond ETF	\$4.8	12.2%
3	VOO	Vanguard S&P 500 ETF	\$4.0	1.2%
4	IJH	iShares Core S&P Mid-Cap ETF	\$3.7	5.3%
5	TFLO	iShares Treasury Floating Rate Bond ETF	\$3.3	52.3%
6	RSP	Invesco S&P 500 Equal Weight ETF	\$3.2	8.2%
7	AGG	iShares Core U.S. Aggregate Bond ETF	\$2.3	2.5%
8	XLF	Financial Select Sector SPDR Fund	\$1.9	5.7%
9	VGIT	Vanguard Intermediate-Term Treasury ETF	\$1.7	12.2%
10	EFV	iShares MSCI EAFE Value ETF	\$1.6	11.0%
11	IVW	iShares S&P 500 Growth ETF	\$1.6	4.7%
12	VCSH	Vanguard Short-Term Corporate Bond ETF	\$1.5	4.2%
13	VGLT	Vanguard Long-Term Treasury ETF	\$1.4	21.9%
14	BND	Vanguard Total Bond Market ETF	\$1.2	1.3%
15	QQQ	Invesco QQQ Trust Series 1	\$1.2	0.6%
16	XLE	Energy Select Sector SPDR Fund	\$1.1	3.3%
17	VGT	Vanguard Total Stock Market ETF	\$1.1	0.4%
18	SGOV	iShares 0-3 Month Treasury Bond ETF	\$1.1	10.1%
19	BNDX	Vanguard Total International Bond ETF	\$1.0	2.0%
20	SMH	VanEck Semiconductor ETF	\$0.9	9.6%

Source: National Bank of Canada, Bloomberg

**Table 9 - Top Single Long ETF Outflows - July 2023**

Rank	Ticker	Name	Flow (\$B)	Flow/AUM
1	GOVT	iShares US Treasury Bond ETF	-\$3.1	-11.4%
2	BSV	Vanguard Short-Term Bond ETF	-\$3.1	-8.3%
3	SPY	SPDR S&P 500 ETF Trust	-\$3.0	-0.7%
4	SCHO	Schwab Short-Term U.S. Treasury ETF	-\$2.0	-13.6%
5	ESGU	iShares ESG Aware MSCI USA ETF	-\$1.8	-12.3%
6	IYW	iShares US Technology ETF	-\$1.6	-12.7%
7	BBEU	JPMorgan BetaBuilders Europe ETF	-\$1.4	-18.8%
8	QUAL	iShares MSCI USA Quality Factor ETF	-\$1.4	-4.4%
9	XLV	Health Care Select Sector SPDR Fund	-\$1.3	-3.3%
10	IWF	iShares Russell 1000 Growth ETF	-\$1.3	-1.8%
11	TLH	iShares 10-20 Year Treasury Bond ETF	-\$1.2	-14.6%
12	EFG	iShares MSCI EAFE Growth ETF	-\$1.1	-7.8%
13	VUG	Vanguard Growth ETF	-\$1.0	-1.0%
14	VGT	Vanguard Information Technology ETF	-\$0.8	-1.5%
15	USMV	iShares MSCI USA Min Vol Factor ETF	-\$0.7	-2.5%
16	BIL	SPDR Bloomberg Barclays 1-3 Month T-Bill ETF	-\$0.7	-2.6%
17	LQD	iShares iBoxx \$ Investment Grade Corporate Bond	-\$0.7	-1.9%
18	SHY	iShares 1-3 Year Treasury Bond ETF	-\$0.7	-2.6%
19	IUSB	iShares Core Total USD Bond Market ETF	-\$0.6	-2.8%
20	IWD	iShares Russell 1000 Value ETF	-\$0.6	-1.2%

Source: National Bank of Canada, Bloomberg

January - July 2023 ETF Flows: Tables 10 - 16

**Table 10 - Equity ETF Flows by Geography - Jan-July 2023**

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,512		\$84.3	2.2%
Broad/Large Cap	\$1,927	33%	\$62.9	4.1%
U.S. Other	\$2,586	44%	\$21.4	0.9%
International Developed	\$637		\$38.0	7.2%
Broad Int'l Dev	\$493	8%	\$25.2	6.1%
Broad Europe	\$49	1%	\$6.4	17.9%
Japan	\$29	0%	\$5.4	27.4%
Canada	\$10	0%	-\$0.7	-7.5%
Other Developed	\$58	1%	\$1.7	3.5%
Emerging Markets	\$308		\$13.9	5.2%
Broad Cap Weighted	\$205	3%	\$10.4	5.9%
China (A+H)	\$27	0%	\$0.3	1.0%
Other EM	\$76	1%	\$3.2	5.0%
Global/Regional	\$398	7%	\$6.3	1.8%
<b>Total Displayed</b>	<b>\$5,855</b>	<b>100%</b>	<b>\$142.4</b>	<b>2.9%</b>

Source: National Bank of Canada, Bloomberg

**Table 11 - Equity ETF Flows by Sector and Themes\* - Jan-July 2023**

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Financials	\$63	7%	\$4.3	7.4%
Communication Services	\$35	4%	\$3.2	13.2%
Consumer Discretionary	\$34	4%	\$2.8	12.1%
Industrials	\$39	5%	\$2.2	7.0%
Consumer Staples	\$33	4%	\$0.6	1.8%
Utilities	\$25	3%	-\$0.2	-0.8%
Materials	\$44	5%	-\$0.8	-2.0%
Technology	\$191	22%	-\$2.5	-1.8%
Real Estate	\$70	8%	-\$2.5	-3.6%
Health Care	\$100	12%	-\$5.4	-5.2%
Energy	\$78	9%	-\$9.7	-11.3%
ESG	\$88	10%	-\$7.0	-8.4%
Thematic	\$68	8%	\$2.5	4.5%
<b>Total Displayed</b>	<b>\$688</b>	<b>100%</b>	<b>-\$12.5</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 12 - Fixed Income ETF Flows by Type - Jan-July 2023**

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$322	23%	\$25.1	8.5%
U.S. Government	\$460	32%	\$62.2	15.7%
U.S. Municipals	\$105	7%	\$4.4	4.4%
U.S. I.G. Corporate	\$227	16%	\$11.5	5.4%
Developed Markets&Global	\$151	11%	\$12.6	9.2%
Emerging Markets	\$29	2%	\$1.5	5.7%
Sub-investment Grade	\$86	6%	-\$3.3	-3.8%
Convertibles and Preferreds	\$40	3%	-\$0.2	-0.4%
<b>Total Displayed</b>	<b>\$1,420</b>	<b>100%</b>	<b>\$113.8</b>	<b>8.8%</b>

Source: National Bank of Canada, Bloomberg

**Table 13 - Fixed Income ETF Flows by Maturity - Jan-July 2023**

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$693	49%	\$52.7	8.4%
Ultra Short Term	\$185	13%	\$15.9	9.5%
Short Term	\$250	18%	-\$11.2	-4.3%
Mid Term	\$165	12%	\$21.2	14.9%
Long Term	\$86	6%	\$27.5	47.3%
Target Maturity	\$40	3%	\$8.2	25.4%
Rate Hedged	\$1	0%	-\$0.5	-29.9%
<b>Total Displayed</b>	<b>\$1,420</b>	<b>100%</b>	<b>\$113.8</b>	<b>8.8%</b>

Source: National Bank of Canada, Bloomberg

**Table 14 - Equity ETF Flows by Factor\* - Jan-July 2023**

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Quality	\$57	3%	\$13.7	38.1%
Small/Mid Cap	\$479	24%	\$13.0	3.1%
Growth	\$406	20%	\$6.8	2.2%
Income	\$388	19%	\$4.7	1.3%
Momentum	\$23	1%	-\$2.0	-8.4%
Value	\$431	21%	-\$7.4	-1.8%
Low Vol	\$63	3%	-\$8.1	-11.9%
Multi-Factor and Other	\$172	8%	\$17.5	12.9%
<b>Total Displayed</b>	<b>\$2,019</b>	<b>100%</b>	<b>\$38.1</b>	<b>2.2%</b>

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

**Table 15 - Top Single Long ETF Inflows - Jan-July 2023**

Ticker	Name	Flow (\$B)	Flow/AUM
1	VOO Vanguard S&P 500 ETF	\$24.9	9.5%
2	TLT iShares 20+ Year Treasury Bond ETF	\$16.4	61.0%
3	JEPI JPMorgan Equity Premium Income ETF	\$10.9	62.2%
4	AGG iShares Core U.S. Aggregate Bond ETF	\$10.8	13.0%
5	IVV iShares Core S&P 500 ETF	\$10.3	3.6%
6	VNI Vanguard Total Stock Market ETF	\$10.0	3.8%
7	BND Vanguard Total Bond Market ETF	\$9.8	11.6%
8	SPY SPDR S&P 500 ETF Trust	\$8.6	2.4%
9	QUAL iShares MSCI USA Quality Factor ETF	\$8.5	48.5%
10	RSP Invesco S&P 500 Equal Weight ETF	\$8.1	24.8%
11	IEF iShares 7-10 Year Treasury Bond ETF	\$6.3	27.7%
12	QQQM Invesco Nasdaq 100 ETF	\$5.6	98.3%
13	TFLO iShares Treasury Floating Rate Bond ETF	\$5.1	118.7%
14	BNDX Vanguard Total International Bond ETF	\$5.1	11.6%
15	SCHD Schwab US Dividend Equity ETF	\$5.0	11.1%
16	IEMG iShares Core MSCI Emerging Markets ETF	\$4.9	7.7%
17	SCHI Schwab 5-10 Year Corporate Bond ETF	\$4.8	1465.9%
18	SGOV iShares 0-3 Month Treasury Bond ETF	\$4.5	60.5%
19	IJH iShares Core S&P Mid-Cap ETF	\$4.3	6.8%
20	VGSH Vanguard Short-Term Treasury ETF	\$4.1	NA

Source: National Bank of Canada, Bloomberg

**Table 16 - Top Single Long ETF Outflows - Jan-July 2023**

Ticker	Name	Flow (\$B)	Flow/AUM
1	ESGU iShares ESG Aware MSCI USA ETF	-\$8.8	-45.1%
2	IWD iShares Russell 1000 Value ETF	-\$5.9	-10.9%
3	IWF iShares Russell 1000 Growth ETF	-\$5.1	-8.6%
4	VCSH Vanguard Short-Term Corporate Bond ETF	-\$4.6	-11.2%
5	BSV Vanguard Short-Term Bond ETF	-\$4.0	-10.7%
6	EEMV iShares MSCI EM Min Vol Factor ETF	-\$3.9	-47.8%
7	XLE Energy Select Sector SPDR Fund	-\$3.2	-7.8%
8	MTUM iShares MSCI USA Momentum Factor ETF	-\$2.8	-23.1%
9	ACWI iShares MSCI ACWI ETF	-\$2.6	-14.1%
10	VTIP Vanguard ST Inflation-Protected Securities ETF	-\$2.5	-15.4%
11	SCHP Schwab US TIPS ETF	-\$2.4	-17.1%
12	HDV iShares Core High Dividend ETF	-\$2.3	-17.8%
13	XLK Technology Select Sector SPDR Fund	-\$2.3	-6.1%
14	DVY iShares Select Dividend ETF	-\$2.3	-10.1%
15	USMV iShares MSCI USA Min Vol Factor ETF	-\$2.2	-7.5%
16	SUSL iShares ESG MSCI USA Leaders ETF	-\$2.2	-76.7%
17	USSG Xtrackers MSCI USA ESG Leaders Equity ETF	-\$2.0	-69.1%
18	IVE iShares S&P 500 Value ETF	-\$1.9	-7.8%
19	STIP iShares 0-5 Year TIPS Bond ETF	-\$1.7	-13.0%
20	SHYG iShares 0-5 Year High Yield Corporate Bond ETF	-\$1.7	-23.9%

Source: National Bank of Canada, Bloomberg

**Table 17: ETF Provider Table**

Provider	AUM (\$B)	Mkt Shr	July 2023		Jan-July 2023	
			Flow (\$B)	Flow/AUM	Flow (\$B)	Flow/AUM
1 BlackRock iShares	\$2,487	33%	\$16.6	0.7%	\$42.9	1.9%
2 Vanguard	\$2,215	29%	\$14.7	0.7%	\$79.1	4.2%
3 State Street SSGA	\$1,128	15%	\$2.6	0.2%	\$22.8	2.3%
4 Invesco	\$422	6%	\$5.9	1.5%	\$15.1	4.7%
5 Charles Schwab	\$303	4%	-\$0.1	-0.1%	\$14.1	5.4%
6 First Trust	\$147	2%	\$1.1	0.7%	\$3.2	2.4%
7 JPMorgan	\$120	2%	\$0.6	0.5%	\$23.1	26.3%
8 Dimensional Holdings	\$100	1%	\$2.1	2.2%	\$16.8	23.3%
9 ProShares	\$70	1%	-\$1.0	-1.5%	\$2.3	4.0%
10 WisdomTree	\$69	1%	\$0.9	1.4%	\$8.2	14.6%
11 VanEck	\$64	1%	\$2.3	3.9%	\$3.1	5.9%
12 Global X	\$44	1%	\$0.4	0.9%	\$3.0	8%
13 Fidelity	\$38	0%	\$0.4	1.1%	\$2.7	9%
14 Direxion	\$34	0%	\$0.2	0.7%	\$2.7	12.1%
15 Goldman Sachs	\$31	0%	\$0.4	1.4%	\$1.2	4.5%
16 American Century	\$29	0%	\$1.0	3.8%	\$6.8	35.7%
17 Pacer Financial	\$27	0%	\$0.5	2.1%	\$4.7	24.0%
18 PIMCO	\$22	0%	\$0.2	0.7%	\$0.6	3.0%
19 Northern Trust	\$22	0%	\$0.1	0.3%	\$0.1	0.3%
20 DWS Xtrackers	\$20	0%	\$0.0	0.3%	\$0.4	1.9%
<b>Top 20 Total</b>	<b>\$7,391</b>	<b>97%</b>	<b>\$48.8</b>		<b>\$252.9</b>	
<b>Total ETF</b>	<b>\$7,618</b>	<b>100%</b>	<b>\$54.5</b>		<b>\$279.4</b>	

Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

**Table 18: ESG ETF Flows by Categories**

Category	AUM (\$M)	AUM (%)	July 2023		July YTD 2023	
			Flow (\$M)	Flow/AUM	Flow (\$M)	Flow/AUM
Equity	\$90,023	90%	-\$1,376	-1.6%	-\$6,658	-7.9%
Broad - U.S.	\$41,194	41%	-\$1,571	-3.8%	-\$12,191	-26.5%
Broad - DM	\$9,176	9%	-\$36	-1.0%	\$209	2.7%
Broad - EM	\$5,228	5%	\$10	0.2%	\$549	13.2%
Broad - Global	\$4,295	4%	-\$7	-0.2%	\$113	3.0%
Environment	\$14,153	14%	\$204	1.5%	\$5,039	69.2%
Clean Energy	\$11,585	12%	\$65	0.6%	-\$399	-7.2%
Energy Transition	\$202	0%	\$5	2.4%	\$64	53.3%
Social	\$3,433	3%	-\$37	-1.1%	\$365	13.9%
Other	\$637	1%	\$32	5.4%	\$85	18.6%
Commodities	\$999	1%	-\$31	-3.2%	-\$112	-12.1%
Multi-Asset	\$69	0%	\$0	0.2%	\$9	16.1%
Fixed Income	\$8,839	9%	\$417	5.0%	\$1,380	27.3%
<b>Total Displayed</b>	<b>\$99,929</b>	<b>100%</b>	<b>-\$990</b>	<b>-1.0%</b>	<b>-\$4,882</b>	<b>-5.3%</b>

Source: NBF ETF Research, Bloomberg. Data as of July 31, 2023.

## 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/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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Levered and Inverse Exchange-Traded Funds are very different from most ETFs. They pursue leveraged investment goals, and they are riskier than alternatives that do not use leverage because they magnify the performance of the benchmark on an investment. These ETFs seek daily leveraged investment results. The return of an inverse or levered ETF for periods longer than a single day, especially in periods of market volatility, may be completely uncorrelated to the return of the benchmark over such longer periods. Levered and inverse ETFs are intended to be used as short-term trading vehicles for investors managing their portfolios on a daily basis. They are not to be used by, and are not appropriate for, investors who intend to hold positions.

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