

### July 2017 – Foreign Equity and Fixed Income Flows Dominate

- U.S.-listed ETFs saw inflow of \$28 billion in July. The space is growing rapidly at \$274 billion year-to-date, or 10.7%
- Total ETF assets now stand steadily above the \$3 trillion milestone, supported by over 2,000 products from 80+ issuers
- We also provide statistics and analysis on the Equity ETF asset ownership and trading impact over the past five years

**U.S.-listed ETFs** total assets have stood steadily above the \$3 trillion marker since mid-July. ETFs collected \$28 billion in new money this month, or 0.9% of month-starting assets. Year-to-date, U.S.-listed ETFs continue to grow at a fast pace, attracting \$274 billion or 10.7% in flow. For context, U.S. ETFs had inflows of \$280 billion in 2016.

In July, U.S. Broad/Large-Cap, Foreign Equity and Bonds were the categories in demand, each taking in \$7-12 billion in creations. Multi-Asset ETFs also had high percentage growth of 2.7% in flow. Commodity ETFs saw \$3.1 billion in withdrawals despite the rising commodity prices.

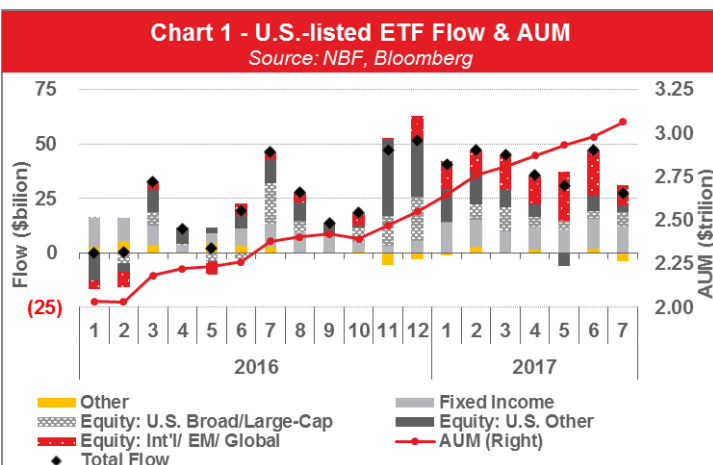
**Equity ETFs** saw \$19 billion worth of inflows in July. U.S. Broad/Large Cap ETFs attracted the most, adding \$6.7 billion. Top inflows went to iShares S&P 500 (IVV), SPDR S&P 500 (SPY) and PowerShares S&P 500 High Dividend Low Volatility (SPHD). Foreign Equity continued to appeal to investors as the greenback traded lower. The U.S. Dollar Index (DXY), which indicates the U.S. dollar's strength against major world currencies, declined 2.9% in July and 9.1% year-to-date. Top inflows in the Foreign Equity category were Developed Markets ETFs like iShares IEFA, Vanguard VEA, and also Emerging Markets ETFs like iShares IEMG, iShares EEM and Vanguard VWO.

**Sector ETFs** experienced rotations out of commodity sectors like Energy and Materials despite strengthened commodity prices. There was buying demand among Financials sector equity ETFs, which might potentially benefit from U.S. rate hikes. The Technology sector, the best performing sector year-to-date, also had strong inflows.

**Fixed Income ETFs** attracted \$12 billion in inflow this month, or 2.3% of the month's starting assets. Investment Grade ETFs led the pack with \$3.1 billion in creations. Sub-investment Grade ETFs also attracted a large inflow (\$2.8 billion), with a big chunk of money going to iShares HY Corp (HYG) and SPDR HY (JNK). By Maturity buckets, many subgroups had high relative growth. Among all, Broad/Mix ETFs and Short Term ETFs had the highest dollar inflows.

**Gold Equity and Commodity ETFs** both saw redemptions despite the gold spot price rising 2.2% in the month. Gold Equity ETFs lost \$0.9 billion in outflows, while Gold Commodity ETFs had net outflows of \$2.4 billion, predominantly from SPDR Gold ETF GLD.

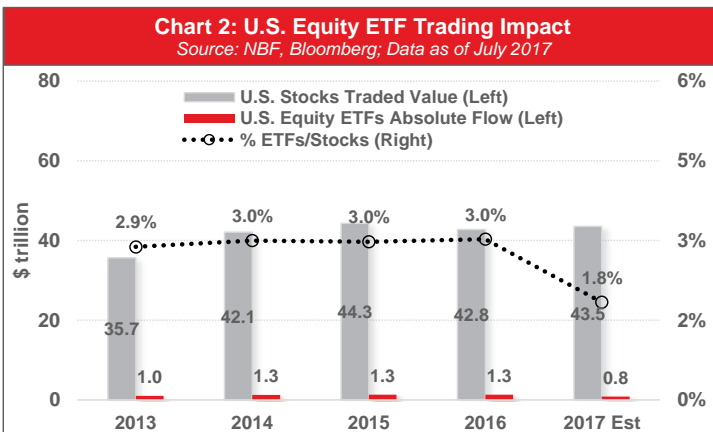
**Other:** we take a look at Equity ETF asset ownership and trading impact in Chart 2 and Appendix 1.



**Table 1 - ETF Flows by Category**

Asset Class	AUM (\$B)	July 2017		YTD 2017	
		Flow (\$B)	% Flow	Flow (\$B)	% Flow
Equity	\$2,400	\$19.0	0.8%	\$189.8	9.5%
U.S. Broad/Large-Cap	\$647	\$6.7	1.1%	\$37.5	6.9%
U.S. Other	\$1,053	\$3.0	0.3%	\$47.4	5.1%
Int'l / EM / Global	\$700	\$9.2	1.4%	\$104.9	20.7%
Fixed Income	\$543	\$12.2	2.3%	\$82.8	18.4%
Commodity	\$62	-\$3.1	-4.9%	-\$1.3	-2.2%
Multi-Asset	\$15	\$0.4	2.7%	\$1.0	7.1%
Levered Long	\$29	-\$0.8	-2.7%	\$1.1	4.6%
Inverse	\$16	-\$0.2	-1.5%	\$0.1	0.6%
<b>Total</b>	<b>\$3,064</b>	<b>\$27.5</b>	<b>0.9%</b>	<b>\$273.5</b>	<b>10.7%</b>

Source: NBF, Bloomberg



**2017 July ETF Flows: Tables 2 - 8**

**Table 2 - Equity ETF Flows by Geography - July 2017**

Geography	AUM (\$B)	AUM (%)	Flow (\$B)	% Flow
<b>U.S.</b>	<b>\$1,700</b>		<b>\$9.7</b>	<b>0.6%</b>
Broad/Large Cap	\$647	27.0%	\$6.7	1.1%
Small/Mid Cap	\$199	8.3%	-\$1.3	-0.7%
Sector	\$328	13.7%	\$1.2	0.4%
Factor	\$382	15.9%	\$2.4	0.6%
Income	\$117	4.9%	\$1.2	1.1%
Thematic/Other	\$25	1.1%	-\$0.5	-2.1%
<b>International Developed</b>	<b>\$371</b>		<b>\$4.3</b>	<b>1.2%</b>
Non-hedged	\$331		\$6.0	1.9%
Currency Hedged	\$39		-\$1.7	-4.1%
Rule-based Dynamic	\$0		\$0.0	0.0%
<b>International Developed</b>				
Broad Int'l Dev	\$242	10.1%	\$3.6	1.5%
Broad Europe	\$59	2.5%	\$0.8	1.5%
Japan	\$29	1.2%	-\$0.9	-2.9%
Germany	\$6	0.3%	-\$0.1	-1.4%
Canada	\$3	0.1%	\$0.0	0.4%
U.K.	\$3	0.1%	\$0.2	5.9%
Other Developed	\$27	1.1%	\$0.7	2.9%
<b>Emerging Markets</b>	<b>\$197</b>		<b>\$3.3</b>	<b>1.8%</b>
Broad Cap Weighted	\$135	5.6%	\$2.6	2.1%
China (A+H)	\$9	0.4%	\$0.2	2.4%
Other EM	\$52	2.2%	\$0.4	0.9%
<b>Global/Regional</b>	<b>\$133</b>	<b>5.5%</b>	<b>\$1.6</b>	<b>1.3%</b>
<b>Total Displayed</b>	<b>\$2,400</b>		<b>\$19.0</b>	<b>0.8%</b>

Source: NBF, Bloomberg

**Table 3 - Fixed Income ETF Flows by Type - July 2017**

Type	AUM (\$B)	AUM (%)	Flow (\$B)	% Flow
Aggregate	\$169	31.1%	\$2.7	1.6%
U.S. Government	\$108	19.9%	\$2.4	2.3%
U.S. Municipals	\$25	4.6%	\$0.4	1.7%
Investment Grade Corporate	\$114	21.1%	\$3.1	2.8%
International Sovereign	\$25	4.6%	-\$0.4	-1.5%
Sub-investment Grade	\$65	12.0%	\$2.8	4.5%
Convertibles and Preferreds	\$36	6.6%	\$1.1	3.3%
<b>Total Displayed</b>	<b>\$543</b>		<b>\$12.2</b>	<b>2.3%</b>

Source: NBF, Bloomberg

**Table 7 - Top Single Long ETF Inflows - July 2017**

Ticker	Name	Flow (\$B)	% Flow
1 <b>IVV</b>	iShares Core S&P 500 ETF	\$3.8	3.3%
2 <b>SPY</b>	SPDR S&P500 ETF Trust	\$3.1	1.3%
3 <b>IEFA</b>	iShares Core MSCI EAFE ETF	\$2.9	10.0%
4 <b>LQD</b>	iShares iBoxx \$ Investment Grade Corporate Bond	\$1.6	4.3%
5 <b>VEA</b>	Vanguard FTSE Developed Markets ETF	\$1.4	2.5%
6 <b>HYG</b>	iShares iBoxx \$ High Yield Corporate Bond ETF	\$1.2	7.1%
7 <b>XLF</b>	Financial Select Sector SPDR Fund	\$1.0	4.0%
8 <b>AGG</b>	iShares Core U.S. Aggregate Bond ETF	\$0.9	2.0%
9 <b>IEMG</b>	iShares Core MSCI Emerging Markets ETF	\$0.8	2.6%
10 <b>SPHD</b>	PowerShares S&P 500 High Dividend Low Volatility	\$0.8	25.6%
11 <b>EEM</b>	iShares MSCI Emerging Markets ETF	\$0.7	2.3%
12 <b>JNK</b>	SPDR Bloomberg Barclays High Yield Bond ETF	\$0.7	5.7%
13 <b>VWO</b>	Vanguard FTSE Emerging Markets ETF	\$0.7	1.2%
14 <b>IJR</b>	iShares Core S&P Small-Cap ETF	\$0.6	2.1%
15 <b>SHV</b>	iShares Short Treasury Bond ETF	\$0.6	11.5%
16 <b>GBIL</b>	Goldman Sachs Treasury Access 0-1 Year ETF	\$0.6	638.7%
17 <b>VCIT</b>	Vanguard Intermediate-Term Corporate Bond ETF	\$0.6	3.6%
18 <b>VCSH</b>	Vanguard Short-Term Corporate Bond ETF	\$0.5	2.6%
19 <b>XLU</b>	Utilities Select Sector SPDR Fund	\$0.4	6.1%
20 <b>IWB</b>	iShares Russell 1000 ETF	\$0.4	2.1%

**Table 4 - Fixed Income ETF Flows by Maturity - July 2017**

Maturity	AUM (\$B)	AUM (%)	Flow (\$B)	% Flow
Broad/Mixed	\$308	56.8%	\$7.0	2.3%
Short Term	\$119	22.0%	\$3.5	3.0%
Mid Term	\$65	11.9%	\$0.5	0.8%
Long Term	\$16	3.0%	\$0.5	3.1%
Floating Rate	\$21	3.8%	\$0.4	2.2%
Target Maturity	\$13	2.4%	\$0.3	2.1%
Rate Hedged	\$1	0.2%	\$0.0	4.1%
<b>Total Displayed</b>	<b>\$543</b>		<b>\$12.2</b>	<b>2.3%</b>

Source: NBF, Bloomberg

**Table 5 - Equity ETF Flows by Sector\* - July 2017**

Sector	AUM (\$B)	AUM (%)	Flow (\$B)	% Flow
Financials	\$52	13.3%	\$1.7	3.3%
Technology	\$58	14.6%	\$0.6	1.1%
Health Care	\$52	13.1%	\$0.4	0.8%
Real Estate	\$67	17.1%	\$0.2	0.4%
Industrials	\$24	6.2%	\$0.2	1.0%
Utilities	\$13	3.3%	\$0.2	1.5%
Multi-sectors	\$17	4.3%	\$0.2	1.0%
Telecom	\$2	0.6%	\$0.0	0.2%
Consumer, cyclicals	\$21	5.2%	\$0.0	-0.1%
Consumer, non-cyclicals	\$16	4.2%	-\$0.2	-1.0%
Energy	\$49	12.6%	-\$0.5	-0.9%
Basic Materials	\$22	5.5%	-\$1.1	-4.7%
<b>Total Displayed</b>	<b>\$393</b>		<b>\$1.8</b>	<b>0.5%</b>

\*Includes all geographic focus; Source: NBF, Bloomberg

**Table 6 - ETF Flows by Selected Themes - July 2017**

Category	AUM (\$B)	Flow (\$B)	% Flow	Largest ETF	Return**
Actively Managed	38	0.9	2.5%	MINT	0.2%
Equity Low Vol Factor*	39	-0.2	-0.5%	USMV	2.0%
Envir., Social and Govern.*	5	0.1	2.9%	DSI	2.3%
Gold Equity*	12	-0.9	-6.8%	GDX	3.6%
Gold Commodity*	42	-2.1	-5.5%	GLD	2.0%
Energy Equity*	49	-0.5	-0.9%	XLE	2.7%
Energy Commodity*	5	-0.9	-17.1%	USO	8.5%
Long & Levered VIX Futures	2	0.4	22.4%	VXX	-13.6%
Inverse VIX Futures	2	-0.6	-19.7%	XIV	14.9%

\*Excluding Inverse and Leveraged; \*\* The Largest ETF's total return for the month;

Source: NBF, Bloomberg

**Table 8 - Top Single Long ETF Outflows - July 2017**

Ticker	Name	Flow (\$B)	% Flow
1	<b>SPDR Gold Shares</b>	-\$2.4	-7.1%
2	<b>IWM</b> iShares Russell 2000 ETF	-\$1.9	-5.1%
3	<b>QQQ</b> PowerShares QQQ Trust Series 1	-\$1.4	-2.8%
4	<b>DBEF</b> Deutsche X-trackers MSCI EAFE Hedged Equity	-\$1.4	-16.3%
5	<b>EWJ</b> iShares MSCI Japan ETF	-\$1.0	-5.9%
6	<b>GDX</b> VanEck Vectors Gold Miners ETF	-\$0.9	-10.9%
7	<b>USO</b> United States Oil Fund LP	-\$0.8	-26.2%
8	<b>EMB</b> iShares JP Morgan USD Emerging Markets Bond	-\$0.7	-5.4%
9	<b>IEF</b> iShares 7-10 Year Treasury Bond ETF	-\$0.5	-6.9%
10	<b>DIA</b> SPDR Dow Jones Industrial Average ETF Trust	-\$0.5	-2.9%
11	<b>XLE</b> Energy Select Sector SPDR Fund	-\$0.4	-2.8%
12	<b>IYR</b> iShares U.S. Real Estate ETF	-\$0.4	-9.3%
13	<b>USMV</b> iShares Edge MSCI Min Vol USA ETF	-\$0.3	-2.4%
14	<b>XLI</b> Industrial Select Sector SPDR Fund	-\$0.3	-2.9%
15	<b>IBB</b> iShares Nasdaq Biotechnology ETF	-\$0.3	-2.7%
16	<b>HEFA</b> iShares Currency Hedged MSCI EAFE ETF	-\$0.2	-5.1%
17	<b>QUAL</b> iShares Edge MSCI USA Quality Factor ETF	-\$0.2	-6.1%
18	<b>IWR</b> iShares Russell Mid-Cap ETF	-\$0.2	-1.4%
19	<b>IJB</b> iShares Core S&P Mid-Cap ETF	-\$0.2	-0.5%
20	<b>IEI</b> iShares 3-7 Year Treasury Bond ETF	-\$0.2	-2.8%

Source: NBF, Bloomberg

## Appendix 1 - U.S. Equity ETF Asset Ownership and Trading Impact

With the ETF assets rapidly expanding, some observers have expressed concern over ETFs' impact to the underlying markets. Here we provide some statistics and analysis on the *U.S. Equity ETF* landscape and the underlying U.S. Equity market.

Table 9 - U.S. Stock Market and U.S. Equity ETFs Statistics									
	U.S. Stock Market* (\$ trln)		U.S. Equity ETFs** (\$ trln)			% ETF/Stocks			
	Mkt Cap EoY	Traded Value	Assets EoY	Traded Value	Abs Flow	Asset	Traded Value	Abs Flow	
<b>2013</b>	22.4	35.7	1.0	9.6	1.0	4.3%	26.9%	<b>2.9%</b>	
<b>2014</b>	25.1	42.1	1.2	11.3	1.3	4.7%	26.7%	<b>3.0%</b>	
<b>2015</b>	24.6	44.3	1.2	12.7	1.3	4.9%	28.6%	<b>3.0%</b>	
<b>2016</b>	26.5	42.8	1.5	12.1	1.3	5.7%	28.3%	<b>3.0%</b>	
<b>Jul-17</b>	28.9	43.5***	1.7	10.9***	0.80***	6.0%	25.0%	<b>1.8%</b>	

\* U.S. Stock Market values are estimated using S&P Total Market (SPTMI) Index constituents; \*\* U.S.-listed Single Long Equity ETFs estimated using U.S. focus ETFs plus 50% of ETFs with Global focus; \*\*\* 2017 Jul Traded Value is a full year estimation based on historical trend and 2017 Jan-Jul value; Source: National Bank Financial, Bloomberg

### Assets Ownership:

- ETFs are expanding rapidly. Assets in U.S.-listed ETF have grown from \$1.7 trillion in 2013 to \$3.0 trillion today. **U.S. Equity-focused** ETFs have grown from \$1.0 trillion to \$1.7 trillion in assets.
- Using the S&P Total Market Index (SPTMI) as a proxy, the U.S. stock market has about \$28.9 trillion in float-adjusted market capitalization at the end of July 2017.
- U.S. equity-focused ETFs have \$1.7 trillion in assets. We also add \$0.036 trillion, which is the amount of U.S. equity assets held by Global-focused equity ETFs, which have about 50% in U.S. weight.
- Overall, \$1.7 trillion in U.S. equity ETF assets still represents a small 6.0% of total stock market cap, which is \$28.9 trillion.**

### Trading Impact

- In the past couple of years, the **U.S. stock market** has been trading a notional value of \$42 - 44 trillion dollars a year. We estimate that in 2017, the U.S. stock market will trade about \$43.5 trillion. This is based on the trading between January and July 2017 in addition to historical trends.
- U.S. Equity ETF trading** has been rising each year. This is not surprising given growing total assets. The traded value of U.S. equity ETF shares has grown from \$9.6 trillion a year in 2013 to \$12.1 trillion in 2016. However, we estimate a slight decline in 2017 to the lower figure of \$10.9 trillion, due to the reduced turnover in the first seven months of the year.
- The percentage of ETF trading as a fraction of underlying equity trading** ranged from 26% to 29% in the past five years. While this number seems high, it does not fairly represent ETF impact to the underlying market.
- An ETF trade may have **intraday** price impact if the investor trades against ETF market makers, who need to hedge their position right away by trading the same amount of underlying stocks, affecting prices.
- In reality, much ETF trading is done in the secondary market between investors. When this occurs, ETF trading would not impact the underlying stock market directly.
- Even if a market maker processes buy orders and sell orders throughout the day, the overall price impact might net to a much smaller amount. This net amount can be evaluated using Absolute Flow.
- Absolute Flow** is a metric that calculates the sum of all the money flow (i.e., daily creation and redemption) in absolute value. Absolute Flow indicates primary market activity, and more closely approximates an ETF's true (i.e., end-of-day) impact to the underlying stock market. **In the past few years, ETF absolute flow has represented 2% to 3% of U.S. stock market trading. In 2017, this number is estimated to be slightly lower at 1.8%. (Chart 2 on page 1)**

### Key Takeaway:

While ETFs are actively traded among market participants, the true gauge of their market impact comes from the end-of-day creation/redemption activity of market makers, who must trade stocks as part of their hedging activity. **This number (ETF absolute flow)** as a percentage of overall stock trading was 3.0% in 2016, much smaller than the raw volume of ETF trading, and smaller still than the 5.7% asset footprint held by U.S. stock ETFs.

**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.

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

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

## DISCLOSURES

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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