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THE MAGAZINE FOR ETF INVESTORS

JANUARY 2021

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NASDAQ NEXT  
GEN 100 ETF

**QQQM**

INVESCO  
NASDAQ 100 ETF

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THE MAGAZINE FOR ETF INVESTORS

JANUARY 2021



THE

EDUCATION

ISSUE

Back To ETF Basics

Know Your ETF Risks

Glossary Of ETF Terms

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ETF Report Editor

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Contributor to ETF.com  
& ETF Report

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**By Cinthia Murphy**  
Managing Editor  
of ETF.com

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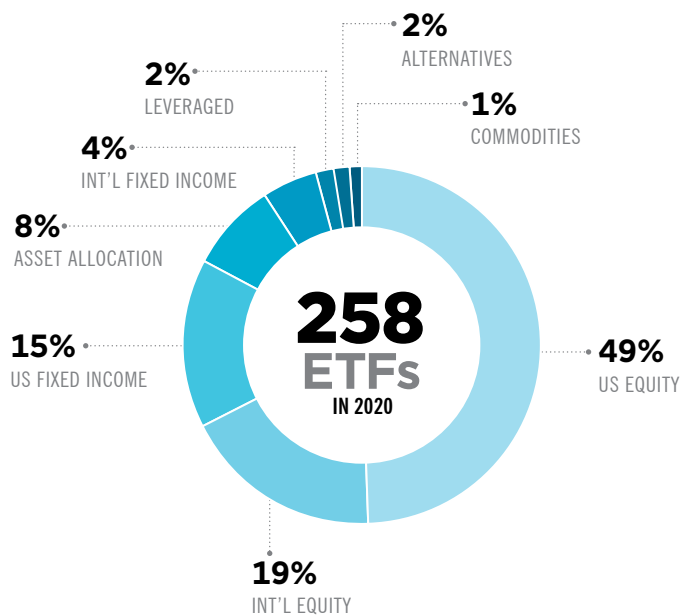
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# ETF Launches



**Featured ETF**

## JOET

### Virtus Terranova U.S. Quality Momentum ETF

In mid-November, Virtus rolled out an ETF targeting the two best-performing factors of 2020. The **Virtus Terranova U.S. Quality Momentum ETF (JOET)** draws its securities from the largest 500 stocks listed on U.S. markets and evaluates them based on their exposure to the quality and momentum factors.

JOET comes with an expense ratio of 0.29% and lists on the Nasdaq stock exchange.

The fund tracks an index provided by Indxx that starts with the 500 largest stocks in the U.S. From there it scores those companies based on quality and momentum, selecting the top 250 securities based on the momentum criteria of the last 12 months' total return.

Quality is evaluated using return on equity, debt-to-equity ratio and sales growth rate, with the highest-scoring 125 securities selected from the momentum-screened pool to create the final index, the prospectus says.

Components are equally weighted, and rebalances and reconstitutions occur quarterly, according to the document.

Virtus Senior Managing Director and Chief Market Strategist Joe Terranova is the driving force behind the fund, which represents strategies he's used in his lengthy career as a financial professional.

Virtus Investment Partners currently has 13 ETFs trading on U.S. markets, but JOET appears to be its first factor-driven fund.

**JOET Quick View**

ISSUER	SEGMENT	EXPENSE RATIO	STRUCTURE	INCEPTION
Virtus Investment Partners	Equity: U.S. - Large Cap	0.29%	Open-Ended Fund	11/17/20

**ETF LAUNCH ACTIVITY**

**LAUNCHES**

**U.S. EQUITY**

- 2ndVote Life Neutral Plus
- 2ndVote Society Defended
- Changebridge Capital Sustainable
- DEMZ Political Contributions
- Dimensional US Core Equity Market
- Direxion Moonshot Innovators
- JPMorgan BetaBuilders US Small Cap
- KFA Value Line Dynamic Core
- TrueShares Structured Outcome - Nov
- VictoryShares Protect America
- VictoryShares Top Veteran Employers
- Virtus Terranova US Qual Momentum

**INT'L EQUITY**

- Dimensional International Core
- Emles Luxury Goods
- Global X EM Internet & E-commerce
- Goldman Sachs Innovate Equity
- KraneShares CICC China 5G/Semicon
- SmartETFs Sustainable Energy II

**U.S. FIXED INCOME**

- iShares iBonds 2026 Term HiYld/Inc
- SPDR Bloomberg SASB Corp ESG Sel

**ALTERNATIVES**

- Changebridge Capital Long/Short Equity
- Leatherback Long/Short Alt Yield

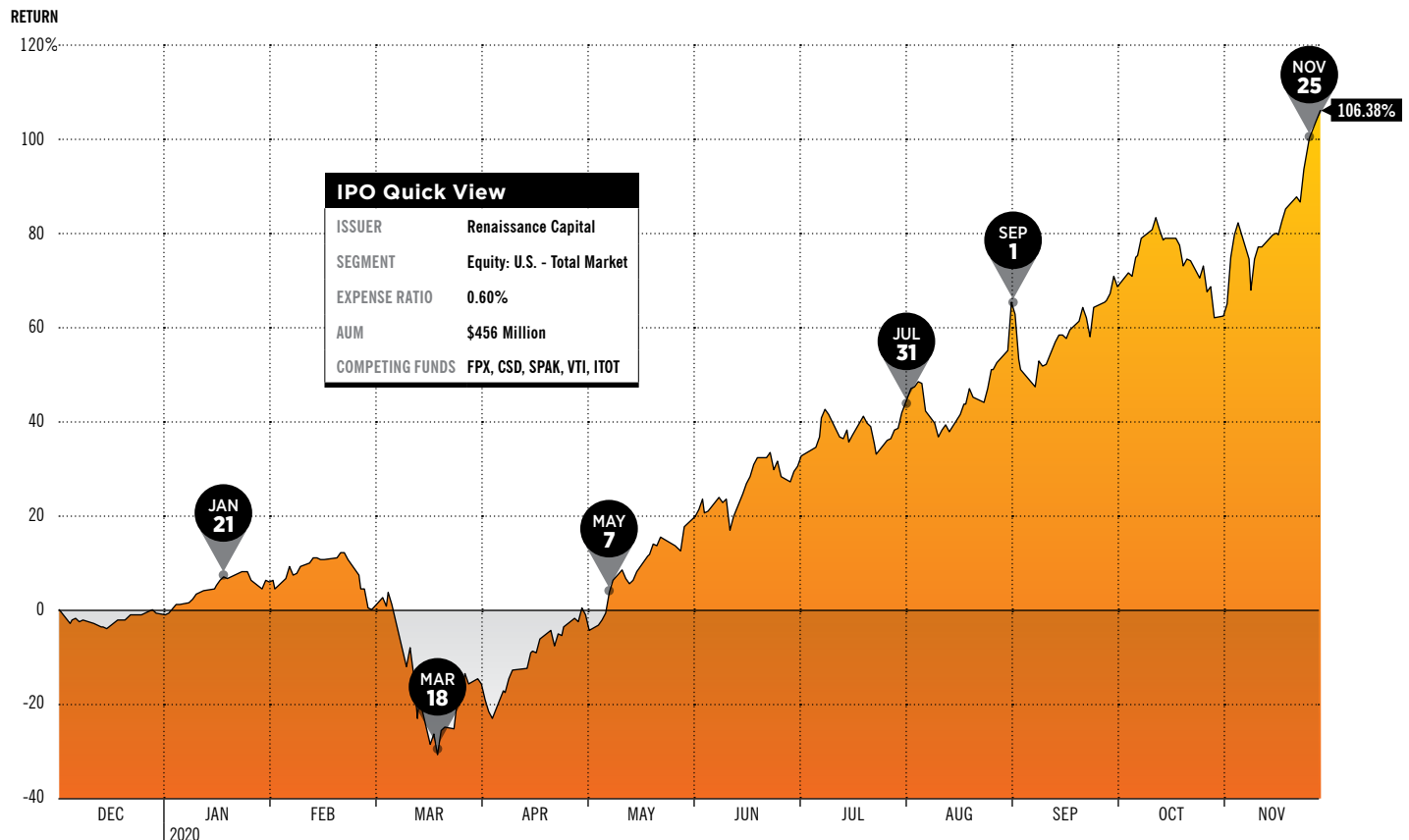
**ASSET ALLOCATION**

- ATAC US Rotation
- Emles Protective Allocation

Source: ETF.com. Data and information as of 11/30/2020. ETF Filings sidebar covers launches and closures for the month of November 2020.

# ETF Explainer

Each month, we look at an ETF selected by ETF.com based on its performance and importance to investors. This month, we consider the performance of the \$456 million **Renaissance IPO ETF (IPO)**, which has outperformed the broad U.S. market significantly during the past year. All the companies mentioned below are holdings in IPO, unless otherwise noted (\*).



**JAN 21** Beyond Meat sees its stock price jump after Starbucks\* sends a letter to shareholders expressing the desire to offer more plant-based options for environmental reasons.

**MAR 18** Uber reports up to 70% declines in rides in major cities as the coronavirus pandemic hits new peaks and the stock market crashes.

**MAY 7** Shares of Peloton rise sharply after the company reports a 66% increase in sales during the third quarter, while its net monthly churn hits a four-year low.

**JUL 31** Pinterest's share price increases nearly 40% after the company reports for the second quarter an acceleration in advertiser growth and a 39% increase in active users year-over-year.

**SEP 1** Zoom sees its stock price spike after reporting a 350% increase in revenue and a 3,300% increase in net profit for the second quarter year-over-year.

**NOV 25** Moderna's stock price rises significantly after it announces the European Commission had approved an initial agreement to purchase 80 million doses of its COVID-19 vaccine.

Source: Bloomberg; data for 11/30/2019-11/30/2020

# Data At A Glance

## Monthly Flows

Below are the ETFs that experienced the top and bottom flows in November, as well as the net flows for major asset classes.

### TOP GAINERS

TICKER	FUND	ISSUER	NET FLOWS (\$M)	AUM (\$M)
SPY	SPDR S&P 500 ETF Trust	SSGA	13,886.75	323,922.33
VTI	Vanguard Total Stock Market ETF	Vanguard	5,267.89	189,796.57
QUAL	iShares MSCI USA Quality Factor ETF	BlackRock	3,237.89	24,473.48
HYG	iShares iBoxx USD High Yield Corporate Bond ETF	BlackRock	2,726.03	27,346.44
IWM	iShares Russell 2000 ETF	BlackRock	2,708.37	52,012.52
VXUS	Vanguard Total International Stock ETF	Vanguard	2,651.19	35,264.93
VOO	Vanguard S&P 500 ETF	Vanguard	2,553.51	178,106.58
XLF	Financial Select Sector SPDR Fund	SSGA	2,231.31	22,782.22
IVV	iShares Core S&P 500 ETF	BlackRock	2,228.11	235,740.05
IJR	iShares Core S&P Small-Cap ETF	BlackRock	1,751.70	52,297.65

### BIGGEST LOSERS

TICKER	FUND	ISSUER	NET FLOWS (\$M)	AUM (\$M)
GLD	SPDR Gold Trust	SSGA	-3,757.11	68,326.90
IEF	iShares 7-10 Year Treasury Bond ETF	BlackRock	-3,265.50	16,363.47
TLT	iShares 20+ Year Treasury Bond ETF	BlackRock	-1,760.34	17,916.50
TQQQ	ProShares UltraPro QQQ	ProShares	-1,423.77	9,281.14
USMV	iShares MSCI USA Min Vol Factor ETF	BlackRock	-1,169.04	33,650.21
SHV	iShares Short Treasury Bond ETF	BlackRock	-1,018.27	18,936.44
SDY	SPDR S&P Dividend ETF	SSGA	-989.76	16,972.44
SHY	iShares 1-3 Year Treasury Bond ETF	BlackRock	-863.48	20,336.89
BIL	SPDR Bloomberg Barclays 1-3 Month T-Bill ETF	SSGA	-640.67	13,220.01
SPYG	SPDR Portfolio S&P 500 Growth ETF	SSGA	-636.46	9,188.10

### ASSET CLASSES

	NET FLOWS (\$M)	AUM (\$M)	% OF AUM
U.S. Equity	61,966.79	2,987,682.39	2.07%
International Equity	20,218.27	993,383.79	2.04%
U.S. Fixed Income	11,273.26	956,995.84	1.18%
International Fixed Income	4,026.63	118,429.44	3.40%
Commodities	-4,523.02	135,820.83	-3.33%
Currency	-105.34	1,841.10	-5.72%
Leveraged	-2,335.07	41,961.90	-5.56%
Inverse	287.3	11,742.61	2.45%
Asset Allocation	217.68	12,907.79	1.69%
Alternatives	186.94	5,166.46	3.62%

## Interesting Charts Of Past 12 Months

The below charts highlight some of the key ETF trends of the past 12 months.

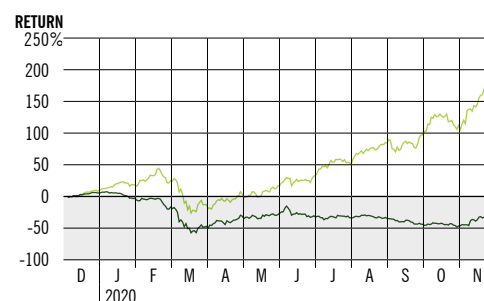
**IWM** iShares Russell 2000 ETF  
**SPY** SPDR S&P 500 ETF Trust

While small caps have underperformed large caps in recent years, they saw a significant boost in November 2020.



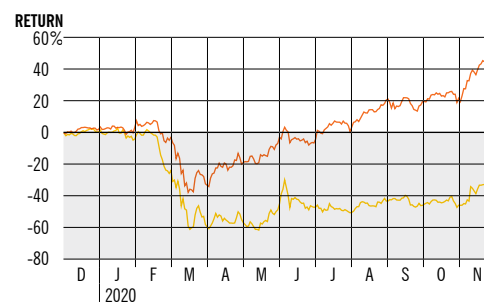
**PBW** Invesco WilderHill Clean Energy ETF  
**XLE** Energy Select Sector SPDR Fund

Clean and alternative energy stocks largely left traditional energy stocks in the dust in terms of performance in 2020.



**JETS** US Global Jets ETF  
**CARZ** First Trust NASDAQ Global Auto Index Fund

JETS saw \$2 billion in inflows in the first 11 months of 2020, but it underperformed automaker ETF CARZ dramatically.

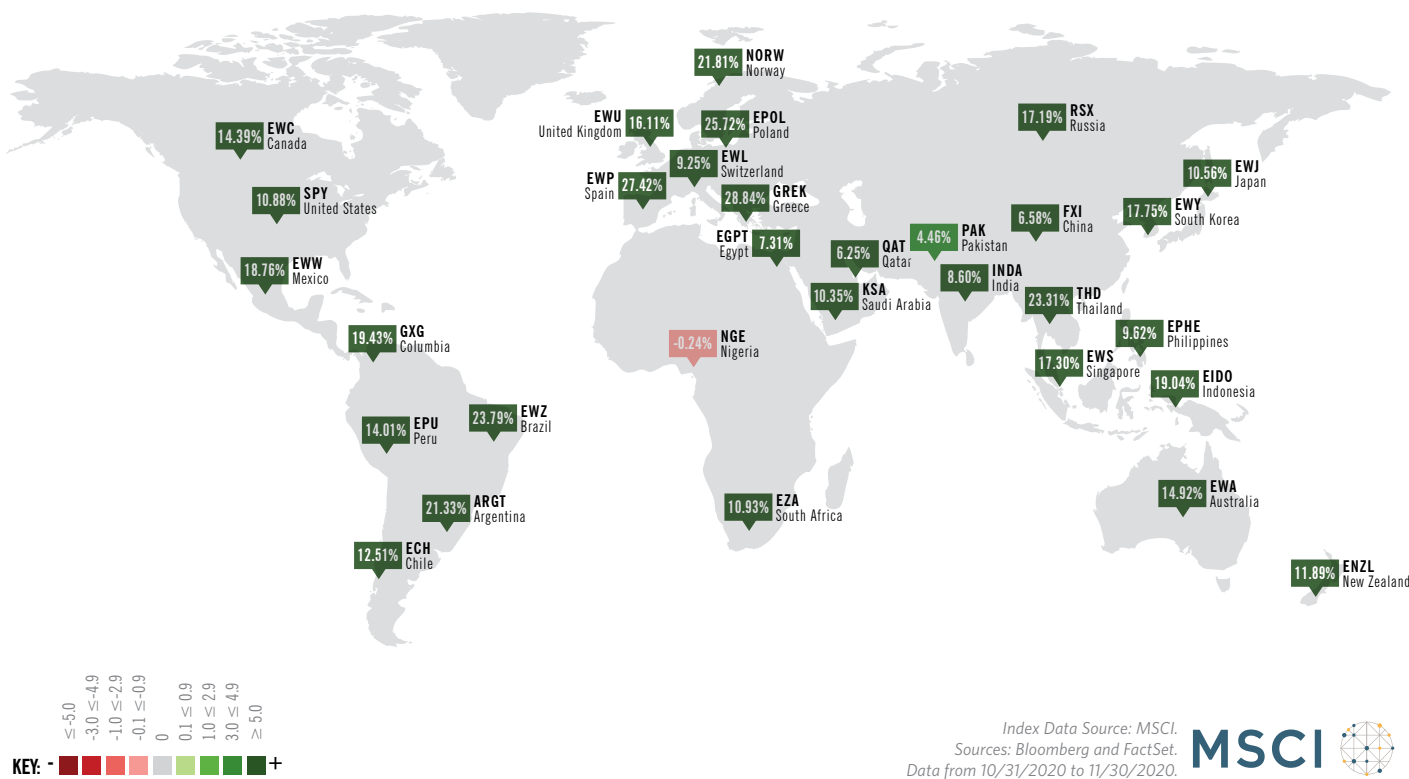




# Countries

November was a wonderful month for country ETFs, with all except one exhibiting strong positive performance. The lone holdout was the [Global X MSCI Nigeria ETF \(NGE\)](#), with a decline of 0.24%. The next-to-worst performer was the [Global X MSCI Pakistan ETF \(PAK\)](#), with a gain of 4.46%. It was followed by the [iShares MSCI Qatar ETF \(QAT\)](#), which was up 6.25%. The top performer was the [Global X MSCI Greece ETF \(GREK\)](#), which was up 28.84%; followed by the [iShares MSCI Spain ETF \(EWP\)](#) and the [iShares MSCI Poland](#)

[ETF \(EPOL\)](#), up 27.42% and 25.72%, respectively. Flows were fairly lopsided, with the [SPDR S&P 500 ETF Trust \(SPY\)](#) pulling in a stunning \$13.9 billion; followed distantly by the [iShares MSCI Japan ETF \(EWJ\)](#), which gained \$1.1 billion; and the [iShares MSCI Large-Cap ETF \(FXI\)](#), which added \$298.9 million. The [iShares MSCI Switzerland ETF \(EWL\)](#) lost \$120.6 million, while the [iShares MSCI Thailand ETF \(THD\)](#) saw \$50 million in outflows and the [iShares MSCI Canada ETF \(EWC\)](#) lost \$48 million.



## TOP INFLOWS

TICKER	FUND	NET FLOWS (\$M)	AUM (\$M)
SPY	SPDR S&P 500	13,886.8	323,899.4
EWJ	iShares MSCI Japan	1,115.6	12,710.6
FXI	iShares China Large-Cap	298.9	3,907.3
EWY	iShares MSCI South Korea	275.7	6,078.4
EWW	iShares MSCI Mexico	275.6	1,222.2

## TOP OUTFLOWS

TICKER	FUND	NET FLOWS (\$M)	AUM (\$M)
EWL	iShares MSCI Switzerland	-120.6	1,683.7
THD	iShares MSCI Thailand	-50.0	414.3
EWC	iShares MSCI Canada	-48.0	2,419.1
EWQ	iShares MSCI France	-41.0	892.7
EDEN	iShares MSCI Denmark	-17.7	138.9

Note: This list intends to capture the returns of most liquid ETFs tracking individual countries around the world. It does not capture every country in the MSCI All Country World Index.

# ETF Comparison Tool

The ETF.com Comparison Tool allows investors to make one-to-one comparisons on a variety of features and metrics between any two ETFs <https://www.etf.com/etfanalytics/etf-comparison-tool>

## Facts & Costs

TICKER	FUND
<b>IBUY</b>	<b>Amplify Online Retail ETF</b>
ISSUER	

### Amplify Investments

AUM	EXPENSE RATIO	AVERAGE DAILY \$ VOLUME	NUMBER OF HOLDINGS
<b>\$1.20B</b>	<b>0.65%</b>	<b>\$21.16M</b>	<b>60</b>
AVERAGE SPREAD (%)	AVERAGE SPREAD (\$)	MEDIAN TRACKING DIFFERENCE (12 MO)	MAX LT/ST CAPITAL GAINS RATE
<b>0.08%</b>	<b>\$0.07</b>	<b>0.07%</b>	<b>20.00%/39.60%</b>

## Performance

1 MONTH	3 MONTHS	YTD	1 YEAR	3 YEARS	5 YEARS
<b>13.43%</b>	<b>18.39%</b>	<b>103.98%</b>	<b>115.23%</b>	<b>40.46%</b>	<b>—</b>

## Facts & Costs

TICKER	FUND
<b>XRT</b>	<b>SPDR S&amp;P Retail ETF</b>
ISSUER	

### State Street Global Advisors

AUM	EXPENSE RATIO	AVERAGE DAILY \$ VOLUME	NUMBER OF HOLDINGS
<b>\$583.44B</b>	<b>0.35%</b>	<b>\$193.07M</b>	<b>85</b>
AVERAGE SPREAD (%)	AVERAGE SPREAD (\$)	MEDIAN TRACKING DIFFERENCE (12 MO)	MAX LT/ST CAPITAL GAINS RATE
<b>0.02%</b>	<b>\$0.01</b>	<b>0.48%</b>	<b>20.00%/39.60%</b>

## Performance

1 MONTH	3 MONTHS	YTD	1 YEAR	3 YEARS	5 YEARS
<b>17.18%</b>	<b>19.91%</b>	<b>35.11%</b>	<b>43.25%</b>	<b>13.91%</b>	<b>8.57%</b>

## RETURN



Source: Bloomberg, 11/30/2019-11/30/2020

## IBUY TOP 10 SECTORS

Internet Services	45.15%
Department Stores	18.90%
Leisure & Recreation	9.01%
Auto Vehicles, Parts & Service Retailers	6.57%
Recreational Products	5.58%
Other Specialty Retailers	4.79%
Software	2.76%
Professional Information Services	2.30%
Drug Retailers	1.60%
Apparel & Accessories Retailers	1.38%

## IBUY TOP 10 HOLDINGS

Qurate Retail, Inc. Class A	3.67%
Groupon, Inc.	3.44%
Lyft Inc Class A	3.36%
TripAdvisor, Inc.	3.34%
Uber Technologies, Inc.	2.85%
Expedia Group, Inc.	2.78%
Lands' End, Inc.	2.74%
Revolve Group, Inc Class A	2.73%
Booking Holdings Inc.	2.64%
Carvana Co. Class A	2.57%

## XRT TOP 10 SECTORS

Apparel & Accessories Retailers	18.78%
Auto Vehicles, Parts & Service Retailers	18.01%
Discount Stores	13.83%
Other Specialty Retailers	13.17%
Department Stores	9.21%
Internet Services	8.27%
Food Retail & Distribution	5.51%
Drug Retailers	3.54%
Computer & Electronics Retailers	3.52%
Leisure & Recreation	2.35%

## XRT TOP 10 HOLDINGS

Magnite, Inc.	3.74%
GameStop Corp. Class A	2.80%
Nordstrom, Inc.	2.19%
Kohl's Corporation	1.93%
Guess?, Inc.	1.69%
Macy's Inc	1.68%
CarParts.com Inc	1.68%
Signet Jewelers Limited	1.66%
Boot Barn Holdings, Inc.	1.54%
Abercrombie & Fitch Co. Class A	1.50%

# HOW DO YOU COMPARE ETFs?

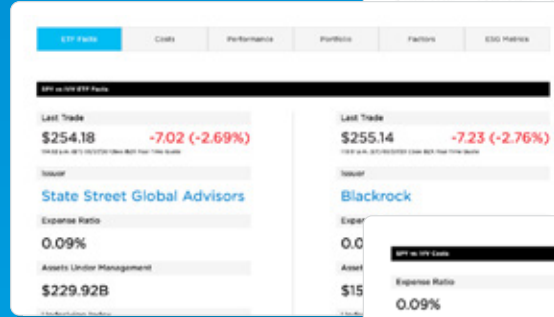
At ETF.com, we understand that not all ETFs are created equal

## ETF Comparison Tool

Simply select two ETF tickers using the search boxes and you'll instantly be able to compare two ETFs

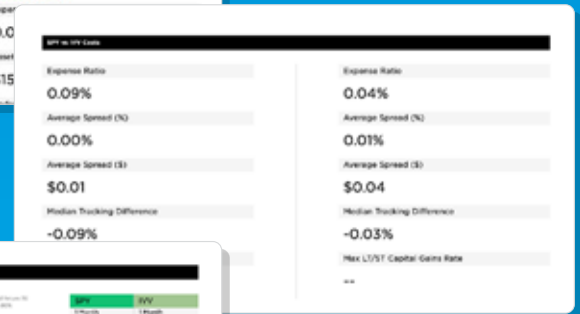
### Real-Time ETF Quotes

Compare the most recent price, issuer, expense ratio, AUM, underlying index and number of holdings per fund



### ETF Cost Breakdown

Take an in-depth look at how each fund's costs compare



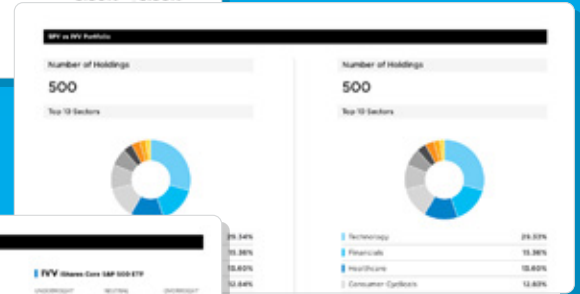
### Fund vs. Fund Performance

Compare how each fund performed year-over-year



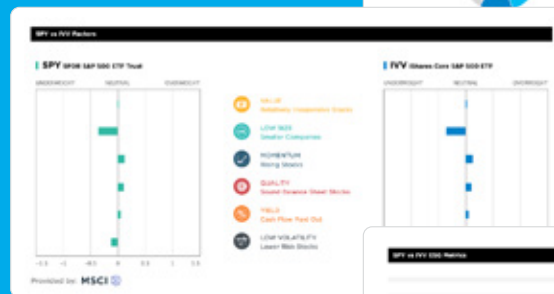
### Portfolio Makeup

Top 10 sector and stock holdings



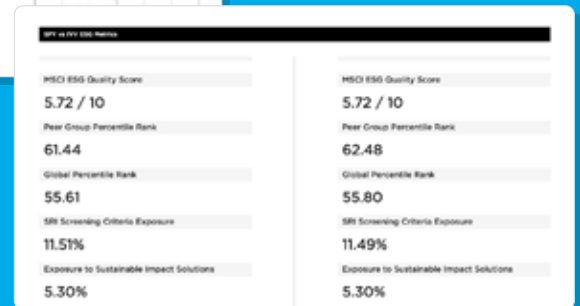
### MSCI Factor Box

Easy-to-compare factor boxes



### MSCI ESG Metrics

Key ESG metrics breakdown



Learn more at [ETF.com/etfanalytics/ETF-comparison-tool](https://ETF.com/etfanalytics/ETF-comparison-tool)

# ETF Stock Finder

The ETF.com Stock Finder Tool helps you find an ETF's allocation to a certain stock. The Stock Finder is limited to U.S. common equities listed on U.S. stock exchanges. Each month, we look at selected stocks based on their performance and importance to investors. This month, we highlight [Moderna, Inc. \(MRNA\)](#), [Zoom Video Communications, Inc. \(ZM\)](#) and [Amazon.com, Inc. \(AMZN\)](#).

## Stock

# MRNA

### Moderna, Inc.

ETFs Holding MRNA      MRNA Shares in ETFs

**115**      **25.5 Million**

Biggest Holder      Largest Allocation

**QQQ**

Invesco QQQ Trust

**GERM**

ETFMG Treatments Testing and Advancements ETF

#### Most MRNA Exposure

Ticker	Fund	% of Allocation
<b>GERM</b>	ETFMG Treatments Testing and Advancements	<b>12.20%</b>
<b>BBH</b>	VanEck Vectors Biotech ETF	<b>11.59%</b>
<b>IPO</b>	Renaissance IPO ETF	<b>11.05%</b>
<b>IDNA</b>	iShares Genomics Immunology and Healthcare	<b>7.97%</b>
<b>CNCR</b>	Loncar Cancer Immunotherapy ETF	<b>6.64%</b>

#### Most MRNA Shares

Ticker	Fund	# of Allocation
<b>QQQ</b>	Invesco QQQ Trust	<b>4.59M</b>
<b>IBB</b>	iShares NASDAQ Biotechnology ETF	<b>4.02M</b>
<b>VO</b>	Vanguard Mid-Cap ETF	<b>2.27M</b>
<b>VTI</b>	Vanguard Total Stock Market ETF	<b>1.59M</b>
<b>IWP</b>	iShares Russell Mid-Cap Growth ETF	<b>1.30M</b>

#### Top-Performing ETFs With MRNA

Ticker	Fund	30-day % Change
<b>LABU</b>	Direxion Daily S&P Biotech Bull 3X Shares	<b>33.83%</b>
<b>TQQQ</b>	ProShares UltraPro QQQ	<b>19.64%</b>
<b>SFYF</b>	SoFi 50 ETF	<b>19.09%</b>
<b>IPO</b>	Renaissance IPO ETF	<b>18.98%</b>
<b>PRFZ</b>	Invesco FTSE RAFI US 1500 Small-Mid ETF	<b>18.00%</b>

#### Top ETF Strategies Using MRNA

Strategy	# of ETFs
<b>Vanilla</b>	<b>32</b>
<b>Multifactor</b>	<b>17</b>
<b>Active Management</b>	<b>13</b>
<b>Growth</b>	<b>10</b>
<b>Exchange-specific</b>	<b>9</b>

## Stock

# ZM

### Zoom Video Communications, Inc.

ETFs Holding ZM      ZM Shares in ETFs

**151**      **11.1 Million**

Biggest Holder      Largest Allocation

**QQQ**

Invesco QQQ Trust

**IPO**

Renaissance IPO ETF

#### Most ZM Exposure

Ticker	Fund	% of Allocation
<b>IPO</b>	Renaissance IPO ETF	<b>7.11%</b>
<b>IGV</b>	iShares Expanded Tech-Software Sector ETF	<b>4.03%</b>
<b>VIRS</b>	Pacer BioThreat Strategy ETF	<b>3.85%</b>
<b>XITK</b>	SPDR FactSet Innovative Technology ETF	<b>3.70%</b>
<b>FDN</b>	First Trust Dow Jones Internet Index Fund	<b>3.48%</b>

#### Most ZM Shares

Ticker	Fund	# of Allocation
<b>QQQ</b>	Invesco QQQ Trust	<b>2.12M</b>
<b>FDN</b>	First Trust Dow Jones Internet Index Fund...	<b>935.49K</b>
<b>VTI</b>	Vanguard Total Stock Market ETF	<b>874.16K</b>
<b>VUG</b>	Vanguard Growth ETF	<b>654.98K</b>
<b>VGX</b>	Vanguard Information Technology ETF	<b>650.81K</b>

#### Top-Performing ETFs With ZM

Ticker	Fund	30-day % Change
<b>ARKK</b>	ARK Innovation ETF	<b>20.18%</b>
<b>TQQQ</b>	ProShares UltraPro QQQ	<b>19.64%</b>
<b>SFYF</b>	SoFi 50 ETF	<b>19.09%</b>
<b>IPO</b>	Renaissance IPO ETF	<b>18.98%</b>
<b>KOMP</b>	SPDR S&P Kensho New Economies Composite ETF	<b>18.01%</b>

#### Top ETF Strategies Using ZM

Strategy	# of ETFs
<b>Vanilla</b>	<b>37</b>
<b>Multifactor</b>	<b>27</b>
<b>Active Management</b>	<b>16</b>
<b>Fundamental</b>	<b>13</b>
<b>Growth</b>	<b>12</b>

## Stock

# AMZN

### Amazon.com, Inc.

ETFs Holding AMZN      AMZN Shares in ETFs

**282**      **28.3 Million**

Biggest Holder      Largest Allocation

**QQQ**

Invesco QQQ Trust

**ONLN**

ProShares Online Retail ETF

#### Most AMZN Exposure

Ticker	Fund	% of Allocation
<b>ONLN</b>	ProShares Online Retail ETF	<b>24.12%</b>
<b>CLIX</b>	ProShares Long Online/Short Stores ETF	<b>23.86%</b>
<b>VCR</b>	Vanguard Consumer Discretionary ETF	<b>22.55%</b>
<b>FDIS</b>	Fidelity MSCI Consumer Discr Index ETF	<b>21.53%</b>
<b>XLY</b>	Consumer Discretionary Select Sector SPDR Fund	<b>21.48%</b>

#### Most AMZN Shares

Ticker	Fund	# of Allocation
<b>QQQ</b>	Invesco QQQ Trust	<b>4.57M</b>
<b>SPY</b>	SPDR S&P 500 ETF Trust	<b>4.50M</b>
<b>IVV</b>	iShares Core S&P 500 ETF	<b>3.32M</b>
<b>VOO</b>	Vanguard S&P 500 ETF	<b>2.50M</b>
<b>VTI</b>	Vanguard Total Stock Market ETF	<b>2.15M</b>

#### Top-Performing ETFs With AMZN

Ticker	Fund	30-day % Change
<b>RETL</b>	Direxion Daily Retail Bull 3x Shares	<b>64.37%</b>
<b>UPRO</b>	ProShares UltraPro S&P500	<b>23.97%</b>
<b>TQQQ</b>	ProShares UltraPro QQQ	<b>19.64%</b>
<b>SFYF</b>	SoFi 50 ETF	<b>19.09%</b>
<b>XRT</b>	SPDR S&P Retail ETF	<b>18.88%</b>

#### Top ETF Strategies Using AMZN

Strategy	# of ETFs
<b>Vanilla</b>	<b>59</b>
<b>Active Management</b>	<b>58</b>
<b>Multifactor</b>	<b>37</b>
<b>Fundamental</b>	<b>24</b>
<b>Equal</b>	<b>20</b>



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By Heather Bell  
ETF Report Editor

# UNDERSTANDING ETF BASICS



**The difference between mutual funds and  
exchange-traded funds is a thing of beauty**

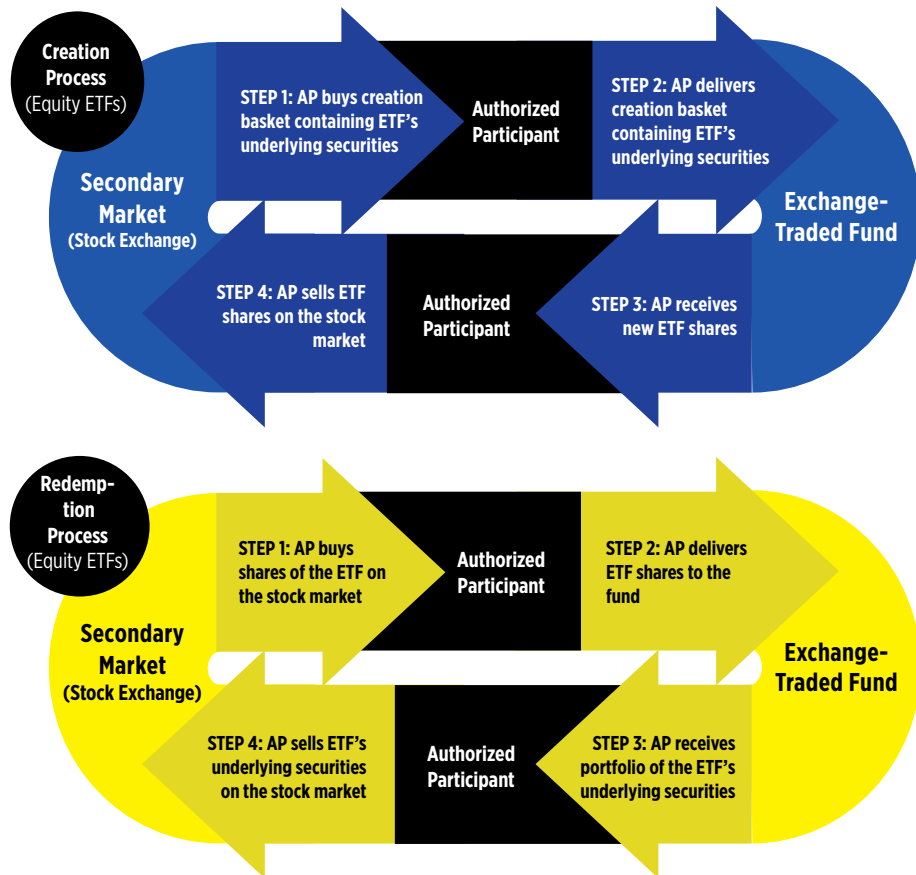
**E-T-F: The three letters are becoming more ubiquitous in the financial press, but it's clear that not all investors know they stand for "exchange-traded fund." ETFs are, essentially, funds that trade on financial exchanges like stocks.**

The most important thing to understand about ETFs is that, legally, they're considered mutual funds. The only difference is that ETFs trade on an exchange, meaning you can trade in and out anytime during market hours.

On the other hand, mutual funds have been around for about a century. Before ETFs became an offshoot of them nearly 30 years ago, mutual funds were the most accessible way for the average investor to hold a large basket of stocks.

Essentially, a mutual fund allows a group of investors to hold a basket of stocks in common, with shares representing the proportion of the basket that each investor owns. The mutual fund tallies up the value of everything it owns and divides it by the number of shares that exist at the end of each business day to arrive at the net asset value (NAV). Thus, the investors know how much their holdings are worth on any given day.

ETFs take the mutual fund concept and amp up its advantages. For one thing, you can trade an ETF throughout the day, so if the market takes a turn you don't like, you don't have to wait until market close to get out of a fund. You know exactly how your fund is performing throughout the day, just as you would an individual stock. And similar to a stock, you can short an ETF, write options against it or buy it on margin.



### CREATIONS, REDEMPTIONS & APs

One of the great benefits of the ETF is its creation/redemption mechanism and the authorized participants that drive it.

An authorized participant is generally an institution like a large investment bank. Their job is to make sure that ETFs trade at or close to their NAV. To do this when a large spread between the NAV and trading price opens up, they arbitrage shares through the creation/redemption process as necessary until the ETF's share price is brought back into alignment with its NAV. APs trade in large blocks of shares in the area of a minimum of 50,000.

Creations and redemptions take place on the primary market for the ETF. To create shares in the case of a premium developing—meaning the price is higher than the NAV—an AP will buy the securities in an ETF to create and sell shares of the fund that can be sold on the secondary market (the stock exchange) to meet demand until the premium is closed up.

When a discount develops, where the price is below the NAV, the AP will buy shares of the ETF to remove them from the secondary market so that the supply more closely matches the demand (or lack thereof) and the discount eventually closes up. The securities underlying those shares can be redeemed from the fund for market value, and the AP can sell them.

In this way, an ETF's liquidity can be maintained and is largely unconnected to the liquidity of its underlying holdings. But that's not the only purpose of the creation/redemption mechanism. It also has significant tax implications.

## TAX BENEFITS

The creation/redemption mechanism is the source of ETFs' tax efficiency. A mutual fund that sells a security for any reason will incur a capital gain and the tax consequences that come with that. Security sales can happen for a host of reasons: rebalancing, redemptions by shareholders or just ordinary portfolio adjustments. Capital gains are paid out to investors on an annual basis under the laws governing mutual funds.

However, ETFs have a way around these inconvenient profits. First of all, since the vast majority of them are passively managed, ETFs tend to be very disciplined with regard to trading, generally only executing trades according to the demands of the index, some of which only rebalance annually. ETFs just have fewer occasions to incur capital gains.

Secondly, and most importantly, ETFs can use the creation/redemption mechanism to sidestep a sizable percentage of the capital gains that they'd incur if they were traditional mutual funds.

When a mutual fund investor wants to cash out of the fund they're invested in, the fund has to sell the securities to meet that redemption, and those costs are spread out across the mutual fund's investor base.

But an ETF investor just needs to sell their shares of the fund on an exchange and deal with capital gains on their own. The fund itself never sees any consequences from the transaction, nor do its remaining shareholders.

It gets even better when an AP redeems shares of an ETF. In that case, the AP receives the stocks underlying the shares of the ETFs—an "in kind" transaction. With no formal sale, there are no resulting capital gains incurred.

The ETF issuer can even pick and choose which shares to give to the AP—meaning the issuer can hand off the shares with the lowest possible tax basis. This leaves the ETF issuer with only shares purchased at or even above the current market price, thus reducing the fund's tax burden and ultimately resulting in higher after-tax returns for investors.

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## EXPLAINING ETNs

While true ETFs are just a type of open-ended mutual fund, there are several structures that can fall under the ETF rubric, such as grantor trusts and commodity pools. But the most common of these alternate structures is the exchange-traded note.

ETNs are debt notes issued by a bank. When you buy an ETN, the bank promises to pay you a certain pattern of return. If you buy an ETN linked to the price of gold, for instance, the value of that ETN will increase if the gold price goes up.

The beauty of the ETN structure is that it can be linked to anything. There are ETNs that track commodities, and ETNs that track hard-to-reach corners of the equity market. They sometimes combine stock or bond positions with options overlays, or use other sophisticated strategies that would be difficult to package into a traditional ETF.

In the commodity space, the ETN also offers significant long-term tax advantages compared with most ETFs, with long-term capital gains coming with a tax of 20%, less than the long-term cap gains tax burden for grantor trusts or limited partnerships.

The downside of an ETN is that if the underlying bank goes bankrupt, you lose essentially all of your money; for instance, there were a few ETNs backed by Lehman Brothers. While most investors in Lehman's ETNs fled before the firm shut down, anyone who held to the bitter end probably still has a bad taste in their mouth.

The good news is that this credit risk in most situations is fairly minor. Institutional investors can "redeem" (get their money back) from the underwriter of an ETN on a daily basis. While anything can happen, you can usually see major bank defaults coming more than a day or two ahead of time.

Keep in mind that ETNs are more complicated than ETFs, and as debt instruments, the motivations for shutting them down can be more complicated. If a bank is looking to clear up the debts on its books, a large ETN might be doomed to closure despite being widely used by investors, which we've seen over the years. ETNs can be very suitable investments for some, but it's even more important than it is for ETFs that prospective ETN investors read the fine print associated with the product they're looking at.



## BOND ETFs

Bond ETFs require more explanation than equity ETFs, simply because bonds are more complicated than stocks. As over-the-counter products, they tend to be thinly traded, with some not trading at all for weeks or even months, and their prices can become stale or just plain out-of-whack relative to their actual value.

However, ETFs can allow investors to circumvent that. Just because the underlying securities of a bond ETF aren't being traded doesn't mean nobody's trading the ETF that holds them. In this way, bond ETFs can provide price discovery for the bond market.

With regard to dividends, while most bonds pay out their dividends semiannually, most bond ETFs pay out dividends on a monthly basis since they're holding so many bonds, all with different distribution schedules. This can be useful for investors seeking monthly income, even if the amounts of the payouts can vary from month to month.

One of the drawbacks—or perhaps simply “un-bondlike” features—of a bond ETF is the fact that the bond ETF never matures. It's a basket that rotates out its holdings as they mature and buys new ETFs.

This means traditional bond strategies like laddering aren't that easily done with ETFs. However, the ever-innovative ETF industry has found a way around this.

Multiple firms have launched “target maturity” bond ETFs that hold bonds that mature in the same year. Once all the holdings of the fund have reached their maturity, the fund ceases to trade and is pulled from the market, usually to be replaced by a fund maturing at a later date.

Such ETFs are suitable for investors looking to implement laddering strategies, but also for investors looking to cash out on a specific date for a particular purpose, like paying for a child's college tuition, or buying a retirement home.

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## IN A NUTSHELL

ETFs have been a major democratizing force in the investment world. They've led to price compression in expense ratios across the board, with broad-based equity exposures now available for as little as 3 basis points. They've also opened up wider access to strategies and asset classes that were previously only available to institutional investors.

Today the U.S. ETF industry includes nearly 2,400 funds, with \$5 trillion in assets under management. Not bad for almost 30 years of innovation. ●

## PROS OF ETFs

- **Intraday Liquidity:** You can buy and sell ETFs at any time during the trading day. If the market is falling apart, you can get out at 10 a.m. In a mutual fund, you would have to wait until after the close of trading ... which could be a costly delay.
- **Lower Costs:** Although it's not guaranteed, ETFs often have lower total expense ratios than competing mutual funds. The reason is simple: When you buy shares of a mutual fund directly from the mutual fund company, that company must handle myriad paperwork to record who you are, where you live and to send you documents. When you buy shares of an ETF, you do so through your brokerage account, and all the record keeping is done (and paid for) by your brokerage firm. Less paperwork equals lower costs, most of the time.
- **Transparency:** Holdings of most ETFs are disclosed on a regular, frequent basis, so investors know what they're investing in and where their money is parked. Mutual funds, by contrast, only disclose their holdings quarterly, with a 30-day lag.
- **Tax Efficiency:** ETFs are almost always more tax efficient than mutual funds because of the benefits of their creation/redemption mechanism.
- **Greater Flexibility:** Because ETFs are traded like stocks, you can do things with them you can't do with mutual funds, including writing options against them, shorting them and buying them on margin.

## CONS OF ETFs

- **Commissions:** The beauty of intraday liquidity doesn't come without costs: Typically, you pay a commission when you buy or sell any security, and ETFs are no different, which can make dollar cost averaging cost-prohibitive. There are an increasing number of commission-free ETF trading programs in place at firms like Charles Schwab, Etrade, Fidelity and TD Ameritrade. But check before you trade.
- **Spreads:** In addition to commissions, investors also pay the “spread” when buying or selling ETFs. The spread is the difference between the price you pay to acquire a security and the price at which you can sell it. The larger the spread—and for some ETFs, the spread can be quite large—the larger the cost. There's no way to avoid this.
- **Premiums & Discounts:** When you buy or sell a mutual fund at the end of the day, you always transact exactly at its stated “net asset value” (NAV), so you always get a “fair” price. While mechanisms exist that keep ETF share prices in line with their fair value, those mechanisms aren't perfect. At any given moment, an ETF might trade at a premium or a discount to its NAV. If you buy at a premium and sell at a discount, ouch ... you've lost out.
- **General Illiquidity:** Not all ETFs are as tradable as you think. Some trade rarely, or only at wide spreads, which can make them hard to unload once you purchase them.



By Debbie Carlson

Contributor to ETF.com  
& ETF Report

The risks  
surrounding  
ETFs and what  
investors should  
care about

# ETF Risks & How To Avoid Them

**Investing has risk. Period. But each investment type has risks inherent to the vehicle, and exchange-traded funds are no different.**

In ETFs, there are perceived risks and actual risks, and this year cleared up worries about at least one perceived risk: that in times of market stress, ETFs would be a disaster for investors.

Critics particularly flagged bond ETFs as being too new, that certain strategies received too many inflows and that sellers would be stuck.

“That was never true,” said Todd Rosenbluth, director of ETF research at CFRA. “We have proof that it wasn’t true during March 2020. Investors turned to fixed income ETFs as a way to access the bond market because there was somebody on the other side of that trade.”

Elisabeth Kashner, director of ETF research at FactSet, called those worries about bond ETF “a manufactured concern.”

She says that when people specifically asked her about investors not being able to sell bond ETFs, “I would wind up just sort of staring them down and saying, ‘So you’re telling me that every bond in the entire portfolio is going to be zero bid; that there will be not one buyer?’”

## KEY INVESTOR LESSON

What actually happened when liquidity dried up during the March 2020 bond market break was that panicked sellers sold their ETFs at a price

that wasn’t necessarily net asset value. That’s the lesson investors should take away: Don’t panic-sell because prices are stale and discounts are likely.

Kashner believes that episode showcased one of the “finest features” of ETFs: that traders—not the current shareholders—bear the transaction costs, unlike in mutual funds.

“Is there not some appropriateness to the panic seller paying a price for demanding liquidity in an uncertain market?” she noted. “You know what doesn’t happen in that instance? The rest of the ETF holders don’t get fleeced, because their portfolio manager is not having to sell the most liquid bond to meet redemptions, which, in a market panic, transact at artificially high NAVs.”

Bond ETFs withstood a severe market test in March 2020, but there are other risks for investors to worry about. Here are a few of the bigger ones and how to avoid them.

## DON’T JUDGE A BOOK BY ITS COVER

Kashner suggests that active risk is investors’ biggest issue. This is the economic risk investors take, such as if an investor buys a small cap ETF versus the total market, or buys a single-country ETF versus a region. Even in segments, funds with similar names have significantly different returns (see Figure 1).

“The poster child for that is biotech, but I’ve seen it in ‘boring’ stuff like utility ETFs,” she said.

Investors can mitigate some of this by knowing what they own and why, but Kashner also mentions that what investors don’t know is whether the active bet will pay off. That’s why narrower ETFs come with other risks and rewards.

They may be different than the overall market, she says: “That difference opens the door to opportunity, but that door can also slam you in the rear. That’s the biggest risk, and it’s mitigated by breadth and diversification.”

Related to active risk are the costs of niche markets with low secondary-market turnover, meaning a small amount of liquidity available at the exchange. Fund expenses can be a good predictor of long-term holding costs, and the fund may do things to lower those costs internally, such as having an active securities lending program, or a strong foreign dividend recapture. But

there are other costs to consider when ETFs tap into illiquid markets.

Will Rhind, CEO of GraniteShares, reminds investors that the ETF itself isn’t illiquid, but that there’s less demand on the secondary market for those shares at any given time. ETFs have market makers who are supposed to post visible bid/offer spreads, according to exchange rules.

“You just have to exercise more caution when you have a fund that is thinly traded,” he said, because if the market order is bigger than the quote size, investors may get their trades done at a wider spread, so execution costs will be higher.

Rhind notes the biggest misconception about ETFs is forgetting that these vehicles are wrappers providing exposure to an underlying asset class, and asset classes are different. He explains that investors need to understand the market they’re getting exposure to through an ETF to understand the individual risks.

#### Examples Of Performance Dispersion Among Similar Funds

FIGURE 1

TICKER	FUND	SEGMENT	RETURN (YTD)
XBI	SPDR S&P Biotech ETF	Equity: U.S. Biotech	40.2%
CNCR	Loncar Cancer Immunotherapy ETF	Equity: U.S. Biotech	38.0%
BBC	Virtus LifeSci Biotech Clinical Trials ETF	Equity: U.S. Biotech	23.5%
BBP	Virtus LifeSci Biotech Products ETF	Equity: U.S. Biotech	18.5%
PBE	Invesco Dynamic Biotechnology & Genome ETF	Equity: U.S. Biotech	14.5%
FBT	First Trust NYSE Arca Biotechnology Index Fund	Equity: U.S. Biotech	8.4%
YOLO	AdvisorShares Pure Cannabis ETF	Equity: Global Cannabis	46.2%
CNBS	Amplify Seymour Cannabis ETF	Equity: Global Cannabis	38.6%
MJJ	Microsectors Cannabis ETN	Equity: Global Cannabis	29.5%
THCX	Cannabis ETF	Equity: Global Cannabis	13.0%
TOKE	Cambria Cannabis ETF	Equity: Global Cannabis	5.2%
MJ	ETFMG Alternative Harvest ETF	Equity: Global Cannabis	-3.2%
POTX	Global X Cannabis ETF	Equity: Global Cannabis	-16.4%
TAN	Invesco Solar ETF	Equity: Global Renewable Energy	174.6%
PBW	Invesco WilderHill Clean Energy ETF	Equity: Global Renewable Energy	170.1%
QCLN	First Trust Nasdaq Clean Edge Green Energy Index Fund	Equity: Global Renewable Energy	156.1%
PBD	Invesco Global Clean Energy ETF	Equity: Global Renewable Energy	112.3%
ACES	ALPS Clean Energy ETF	Equity: Global Renewable Energy	110.2%
CNRG	SPDR S&P Kensho Clean Power ETF	Equity: Global Renewable Energy	109.1%
ICLN	iShares Global Clean Energy ETF	Equity: Global Renewable Energy	101.1%
SMOG	VanEck Vectors Low Carbon Energy ETF	Equity: Global Renewable Energy	93.5%
FAN	First Trust Global Wind Energy ETF	Equity: Global Renewable Energy	43.7%
YLCO	Global X Funds Global X YieldCo & Renewable Energy Income ETF	Equity: Global Renewable Energy	14.6%
XWEB	SPDR S&P Internet ETF	Equity: U.S. Internet	76.7%
PNQI	Invesco NASDAQ Internet ETF	Equity: U.S. Internet	58.4%
FDN	First Trust Dow Jones Internet Index Fund	Equity: U.S. Internet	49.1%
PXQ	Invesco Dynamic Networking ETF	Equity: U.S. Internet	23.5%
DBE	Invesco DB Energy Fund	Commodities: Energy	-29.7%
JJE	iPath Series B Bloomberg Energy Subindex Total Return ETN	Commodities: Energy	-42.2%
RJN	Elements Rogers International Commodity Index-Energy Total Return ETN	Commodities: Energy	-47.0%

Source: FactSet; data as of 11/30/2020

# Funds with similar names have significantly different returns

For example, a hallmark of ETFs is their tax efficiency during rebalancing and selling. However, differences in what an ETF holds and how it may be structured means that investors may also pay different taxes, Rhind explains. An ETF that invests in equities will have a different tax treatment than one that invests in futures, a partnership or physical precious metals, and investors should be aware of how the Internal Revenue Service categorizes those investments.

## LEVERAGED & INVERSE ETFs

Andrew Mies, chief investment officer of 6 Meridian, says that most of the ETF “horror stories” are about leveraged ETFs that went against the investor. CFRA’s Rosenbluth explains that these types of ETFs can lure unsuspecting investors because their returns are often at the top—or bottom—of performance charts because of that leverage.

Inverse ETFs, which are designed to ride negative market momentum, are another risky vehicle. Rosenbluth suggests that investors who want to use these types of ETFs have short-term tactical—not strategic—reasons because of their compounding effect: “The longer you’re in these products, the more risk there can be. An ETF that goes up 5% and then down 5% and back up 5% is not breaking even.”

## CLOSURE RISKS & DEFAULTS

ETFs defaults are extremely rare, and Kashner says there have been four defaults since the

ETF concept debuted in 1993. And that involved exchange-traded notes that were backed by Lehman Brothers and Bear Stearns, which defaulted during the 2008 credit crisis. Actual ETFs can’t default, because they’re backed by actual assets—usually securities—rather than by the resources of an individual bank.

Closure risk is a far more plausible concern with a genuine ETF and can happen for different reasons, usually because of low asset levels. Kashner says an investor’s principal is not at risk when a fund closes, but they could have a tax event if the fund closes at a higher price than where the investor bought it, or a capital loss if the price is lower.

She says FactSet rates ETFs on a low, medium and high risk for closing, using metrics such as net inflows, regulatory risk and if two fund houses merge.

## WHEN AN ETF ISN’T AN ETF

Many people casually assign the term “ETF” to ETNs, but they aren’t the same. Rhind explains that these are debt securities issued by a bank and they have a different regulatory structure. The investor holds that bank’s debt as an unsecured creditor.

Only the bank can initiate the creation/redemption process for their ETNs, Rhind notes, so they don’t have ETFs’ independent authorized participation network and arbitrage mechanism. Banks can often call them at any time to close them, especially with newer ETNs. When that happens, investors are put in a “close-only mode,” limiting tradability since they can only be sold.

Because of the ETN’s structure, the only way to avoid this risk is not to own one.

2020 saw a rash of ETN closures, and Kashner observes that three-quarters of all ETNs are no longer trading on exchanges. Because of that, FactSet’s fund closure metric has no ETNs rated as low risk. Banks have closed even big, billion-dollar ETNs, she notes.

“Don’t tell me it’s low risk,” she said. ●

“Most helpful plain-  
English resource for  
investors who want to  
demystify ETFs.”  
- Bloomberg



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## UPCOMING EPISODES

### JANUARY 12

**John Hoffman**, head of Americas ETFs & indexed strategies at Invesco; **Paul Kim**, CEO & co-founder of Simplify ETFs

### JANUARY 19

**Doug Yones**, head of exchange-traded products at NYSE; **Kevin Carter**, founder & CEO of EMQQ

### JANUARY 26

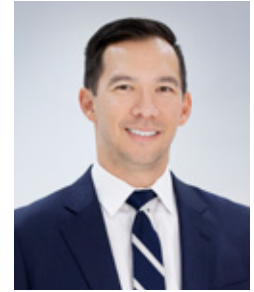
**David Mann**, head of capital markets, global ETFs at Franklin Templeton; **Scott Helfstein**, executive director, thematic investing at ProShares

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# VanEck: Bond ETFs Offer Fresh Takes



William Sokol  
Director  
ETF Product Management  
VanEck®

THE NEWEST ETFs FROM VANECK OFFER A FRESH ANGLE ON THE WELL-TROD INVESTMENT-GRADE CORPORATE BOND SPACE



*VanEck is known for offering differentiated exposure across the asset classes it covers. It recently expanded its fixed income offering by launching the VanEck Vectors Moody's Analytics IG Corporate Bond ETF (MIG) and the VanEck Vectors Moody's Analytics BBB Corporate Bond ETF (MBBB), which rely on indexes that draw on Moody's proprietary research to construct bond portfolios. Here, VanEck Director of ETF Product Management William Sokol discusses what sets these funds apart and their underlying investment case.*

- VanEck Vectors Moody's Analytics IG Corporate Bond ETF (MIG), 0.20%
- VanEck Vectors Moody's Analytics BBB Corporate Bond ETF (MBBB), 0.25%

## Tell me about VanEck's first launches in more than a year.

We launched the VanEck Vectors Moody's Analytics IG Corporate Bond ETF (MIG) and the VanEck Vectors Moody's Analytics BBB Corporate Bond ETF (MBBB) in early December. Essentially, both of these funds track indices that comprise attractively valued, dollar-denominated, investment-grade corporate bonds, which provide excess compensation relative to their risk. Excess spread means the excess of market spread versus "fair value," which is based on proprietary credit risk metrics developed by Moody's Analytics.

The two funds are very similar in their approach. The difference is that MIG focuses on the broad investment-grade market and the most attractively valued bonds out of the broad investment-grade universe. Meanwhile, MBBB, as the name implies, focuses on the BBB segment of the corporate bond universe, which, in itself, is a very large segment of the corporate bonds part of it—approximately 50%. It's a very similar methodology, but with a different starting universe.

The Moody's Analytics credit model is very well-known among credit practitioners. It's been out in the market for several decades. It has a very large team of researchers who support the credit model. So it's really relied on by many institutions around the world, for credit risk management and portfolio management.

The model calculates what's called the "expected default frequency." It's essentially a forward-looking measure of the probability of default, from which fair value can be derived, as well as other credit risk metrics, including the probability of experiencing a ratings downgrade. It's very much a quantitatively driven strategy, with a large number of inputs incorporated by the model.

## Talk a little more about the model.

One of the key inputs is a firm's stock price. The model uses a firm's stock price and a company's assets from its balance sheet to model out the probability of default, over several different paths based on volatility assumptions to determine the forward-look-

ing probability of default.

That's very different from just taking a credit rating to make that determination, because credit ratings can tell you things like historical probabilities of default. They could tell you, relative to other ratings, which is more risky. But they don't tell you, on an absolute basis, what you can expect with a particular bond, over the next year or some other period, in terms of its probability of default. It only provides historical information.

For instance, if you want to build a strategy around security selection—and considering that 50% of the corporate bond market is BBB—just knowing that a bond is rated BBB doesn't really tell you anything in terms of assessing whether a bond currently provides attractive value. You need to be issuer-specific and bond-specific when you're assessing whether a bond has value.

Further, these estimates need to have a higher frequency to capture market opportunities as they come up. That's why we like the Moody's Analytics credit model, because it's based on nearly real-time market data. Credit ratings are useful, but we felt you need granular, responsive and forward-looking metrics to identify individual bonds that provide attractive value based on current market pricing.

The methodology ranks every bond in the universe by excess spread. What we mean by that is that the model determines a fair value spread based on its expected default frequency, or expected probability of default. The fair value spread is a model-determined

spread that an investor should be earning as compensation for the risk of the bond.

The index provider compares that fair value spread, calculated by Moody's Analytics, to the actual spread that can be achieved based on current market prices. If the bond provides you more spread than what's needed to compensate you for the risk that's embedded in that bond, then that may be attractive.

Essentially, you end up with an index comprising bonds that have attractive value, in the sense that they're providing an attractive level of spread for the amount of risk you're taking.

### Could MBBB and MIG replace a standard, plain vanilla corporate bond exposure in a regular portfolio?

I think MIG could certainly be an attractive option to replace a broad corporate bond exposure within your core bond portfolio. Investment-grade corporates can play an important role within a core bond portfolio. This could be a good option to get that exposure.

It's selecting the most attractively valued bonds from within the entire U.S. corporate bond market to build a very diversified portfolio, but one that only focuses on the most attractively valued securities, and one that avoids bonds where you're not earning enough compensation for the risk you're taking.

MBBB might be an attractive complement to a broader exposure or to increase corporate exposure within a core bond portfolio for investors who are able to assume a little more risk and volatility for the enhanced yield and total return potential.

Both funds allow you to maintain that corporate exposure without taking on too much risk relative to spread you're earning. And what we've found in our research is that bonds that have high excess spread have provided consistent outperformance over time, versus bonds that have low excess spread, or versus the broad corporate bond market.

### This seems to be very on-brand for VanEck. The firm doesn't really do plain vanilla, at least not in the income space. How do these funds fit in with the wider field?

We definitely think that, in some markets, a broad beta exposure is not always the best way to approach investing, depending on what your goals are. If you're looking for outperformance,

if you're looking to enhance yield, or maintain yield and reduce risk, you need to be selective and target the individual securities that can provide the characteristics you're looking for, so you can achieve the desired outcomes.

For example, that's what the VanEck Vectors Fallen Angel High Yield Bond ETF (ANGL) does, by targeting a specific segment of the high yield universe that has delivered very attractive performance, and what we believe to be superior outcomes, versus a broad-based high yield bond exposure.

That's what we're trying to do here with MBBB and MIG: Select a unique segment of bonds from a very broad universe—meaning, the most attractively valued investment-grade corporate bonds—so that investors can achieve their desired outcomes. In this case, that means maintaining an attractive level of yield without having to take on too much risk within a core bond portfolio.

Again, the way we do that, in the investment-grade space, is by focusing on the most attractively valued bonds. What makes this a little bit different is that the methodology relies on credit metrics developed by Moody's Analytics. It has an industry-leading credit risk model

that has been around for several decades. It's built on an established methodology supported by extensive research, and an extensive data set that is proprietary to Moody's.

MIG and MBBB are the first U.S. ETFs that deliver rules-based strategies that use data from the Moody's Analytics credit model to select bonds, the same platform relied on by hundreds of the world's largest institutions. That's a very attractive feature of these strategies.

They're also completely quantitatively driven strategies. The credit model and the index selection process don't rely on stale data. It doesn't rely on backward-looking data. It's not influenced by the way companies report their financials. It's a completely rules-based methodology, so you remove any subjectivity and apply a very disciplined process.

And it's more forward-looking. Bonds are selected based on forward-looking measures of credit risk. And because equity prices really help to drive some of these credit risk metrics, it gives you these signals that have sufficient frequency to allow investors to capture market opportunities. For a performance-oriented strategy that relies on security selection, we think that's important.

#### DISCLOSURES

*The information presented does not involve the rendering of personalized investment, financial, legal or tax advice. Certain statements contained herein may constitute projections, forecasts and other forward-looking statements that do not reflect actual results, are valid as of the date of this communication and subject to change without notice. Information provided by third-party sources are believed to be reliable and have not been independently verified for accuracy or completeness and cannot be guaranteed. The information herein represents the opinion of the author(s), but not necessarily those of VanEck.*

*An investment in the VanEck Vectors Moody's Analytics IG Corporate Bond ETF (MIG) and VanEck Vectors Moody's Analytics BBB Corporate Bond ETF (MBBB) (the "Funds") may be subject to risks that include, among others, investing in European issuers, foreign securities, foreign currency, BBB-rated bond, credit, interest rate, liquidity, restricted securities, consumer staples sector, financials sector, energy sector, communications sector, market, operational, high portfolio turnover, call, sampling, index tracking, authorized participant concentration, new fund, absence of prior active market, trading issues, passive management, nondiversified, and trading, premium/discount and liquidity of fund shares risks. The Funds' assets may be concentrated in a particular sector and may be subject to more risk than investments in a diverse group of sectors.*

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*The Funds are not sponsored, promoted, sold or supported in any manner by Moody's Analytics, nor does Moody's Analytics offer any express or implicit guarantee or assurance either with regard to the results of using the Indices and/or the Moody's Analytics trademark or data at any time or in any other respect. Certain quantitative financial data used in calculating and publishing the Indices is provided by Moody's Analytics. Moody's Analytics has no obligation to point out errors in the data to third parties including but not limited to investors and/or financial intermediaries of the Funds. The licensing of data or the Moody's Analytics trademark for the purpose of use in connection with the Indices and Funds does not constitute a recommendation by Moody's Analytics to invest capital in the Funds, nor does it in any way represent an assurance or opinion of Moody's Analytics with regard to any investment in this financial instrument.*

*An investment in the VanEck Vectors Fallen Angel High Yield Bond ETF (ANGL) may be subject to risk that includes, among others, high yield securities, foreign securities, foreign currency, credit, interest rate, restricted securities, market, operational, call, consumer staples, consumer discretionary, energy, communications, index tracking, authorized participant concentration, no guarantee of active trading market, trading issues, passive management, fund shares trading, premium/discount risk and liquidity of fund shares, non-diversified and concentration risks, all of which may adversely affect the Fund.*

**Investing involves substantial risk and high volatility, including possible loss of principal. Bonds and bond funds will decrease in value as interest rates rise. An investor should consider the investment objective, risks, charges and expenses of the Fund carefully before investing. To obtain a prospectus and summary prospectus, which contains this and other information, call 888.460.6805 or visit [vaneck.com](http://vaneck.com). Please read the prospectus and summary prospectus carefully before investing.**



By Heather Bell  
ETF Report Editor

# Glossary of Terms

## Actively Managed ETF

Most ETFs track an index, in what's known as index-based or passive investing. An actively managed ETF is a fund that literally has a portfolio manager at the helm of the fund, making active allocation decisions rather than passively tracking a benchmark. Active managers have long been plagued with persistence issues—meaning that few outperform indexes, and the ones that do aren't likely to repeat that outperformance consistently—hindering adoption of actively managed ETFs, which are often more expensive to own than their passive counterparts.

## Alpha

Alpha is return that can't be simply explained by market movement. In the ETF space, alpha is primarily the “extra juice” an active manager can extract beyond the market performance, as measured by an index. But it can also be outsized gains achieved through index-based ETFs that track some form of smart beta benchmark designed to deliver outperformance relative to a segment of the market.

## Authorized Participant

He or she is the protagonist of the ETF creation/redemption process most investors will never know. Designated by an ETF issuer, the AP is someone with purchasing power who creates and redeems shares of an ETF, keeping the supply elastic to meet demand. When there's new appetite for a given ETF, the AP will create shares of that ETF through the in-kind creation/redemption mechanism, keeping supply ample and helping the ETF trade in line with its net asset value (NAV). Ample supply means no need for steep premiums. When demand dries up and ETF share prices face a discount, the AP can redeem shares of the ETF from the market, reducing supply, allowing the ETF to trade back in line with its NAV. The AP plays a crucial role in ETF liquidity and trading.

## Beta

Beta is the correlation between a stock and the broader market, or the performance of an ETF relative to the segment of the market it accesses. The higher the beta, the more sensitive a stock or an ETF is to market moves. (We list “beta” for most ETFs in our fund pages—[etf.com/ticker](http://etf.com/ticker)—under the tab “Fit.”)

## Bid/Ask Spread

ETFs trade like single stocks, so bid/ask spreads are a part of daily life for an ETF. The spread is simply the difference between the price someone is willing to pay for an ETF (the bid) and the price someone is willing to sell that ETF for (the ask). The most important takeaway here is that the wider the spread, the more expensive it is to trade that ETF. That's why we list the “average spread” for all ETFs on our fund pages ([etf.com/ticker](http://etf.com/ticker)) along with other crucial data points such as expense ratio, assets under management and average daily volume. This metric should be part of your ETF due diligence if costs are important to you.

## Closed-End Funds

These are baskets of securities that come to market with a fixed number of shares. They trade intraday, so they often trade at premiums or discounts to their net asset value due to their inelastic supply of shares. They often pay out dividends and capital gains distributions.

## Contango/Backwardation

These are terms seen across the commodity ETF space. They pertain to roll costs associated with moving from one futures contract to another. When an expiring futures contract is cheaper than—or trading at a discount to—the next month's contract, the futures curve is in contango. Contango translates into roll costs to an investor (or an ETF) having to move from one contract to the next. The opposite of contango is backwardation, when the expiring futures contract is trading at a premium to the next contract. Contango and backwardation impact commodity futures and futures-based ETF returns. Many commodity ETFs try to optimize their roll strategy to circumvent the impact of contango on returns.

## Counterparty Risk

This is the risk an investor faces that whoever is on the other side of the deal might fail. For example, ETF issuers offer a pattern of returns for a given fee in an ETF wrapper. They can be a source of counterparty risk if they don't deliver on what that ETF prospectus promises. Depending on the type of exchange-traded product, counterparty risk is higher or lower. Exchange-traded notes, which are debt instruments, pose counterparty risk associated with the institutions backing them and whether they can meet these debt obligations. ETFs that use a lot of derivatives contracts in their portfolios can also face counterparty risk stemming from the parties issuing these contracts.

## Creation/Redemption Mechanism

This is how ETF shares are created and redeemed, in a process that's unique to the ETF structure. When there's demand for new shares of an ETF, an authorized participant buys the securities the ETF holds, and hands that basket of securities to the ETF issuer in exchange for ETF shares. This is known as an in-kind transaction—securities for shares. In the case of a redemption, this process works in reverse. The in-kind nature of the creation/redemption mechanism is crucial to how ETFs trade because it allows them to trade throughout the day in line with the value of their underlying holdings (their net asset value).

## Custodian

In the ETF ecosystem, the custodian—often a large bank—is responsible for holding all the securities and cash for an ETF. That custody role is crucial to the day-to-day operations of a fund, even if it's a largely overlooked role by most investors. Custodians hardly make headlines, and most investors don't know who custodies the ETFs they own. But occasionally custodians are all the buzz, when companies involved with things like federally illegal marijuana find their way into ETF wrappers. Then suddenly, custody becomes a hot-button issue.

## Custom Basket

Like it sounds, a custom basket refers to a select grouping of securities, customized for a purpose. In ETFs, custom baskets come into play during the creation/redemption process for the purpose of improving tax efficiency. When ETF issuers rebalance portfolios, some ETF holdings may have incurred capital gains, which would have to be realized at rebalance. A custom basket is an in-kind mix of only certain securities the ETF issuer wants to trade (redeem) to avoid having to pass on capital gains distributions down the road. Until recently, only some ETFs were allowed to use custom baskets, but the Securities and



Exchange Commission changed that when, in September 2019, it approved Rule 6c-11, known as the “ETF Rule.” Under the new rule, effective in 2020, all ETFs may use custom baskets, which is great news for ETF investors everywhere.

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### Direct Indexing

Direct indexing is index investing without any wrapper around it. Some say it’s going to be the next big thing and potentially disrupt the ETF space. In practice, direct indexing means buying all the stocks found in the S&P 500 instead of buying a single ticker in the form of an S&P 500 ETF. In that process, you, the investor, can custom-create your own index by picking and choosing the securities you want to own—no middleman, or better yet, no middle ticker.

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### Environmental/Social/Governance

ESG is a set of metrics outside traditional fundamentals that can explain or impact a company’s bottom line over time. When it comes to assessing the investment case of a company, ESG speaks to its business’ sustainability, environmental footprint, social impact, management and diversity efforts as well as ethical issues. ESG ETFs incorporate ESG metrics in their security selection and weighting in an effort to offer more targeted access for investors looking to be socially responsible, or environment friendly with—or to impact-invest—their money.

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### Exchange-Traded Funds

An ETF is essentially an investment wrapper, merely a vehicle. It’s a basket of securities that offers diversified access to an area of the market. An ETF can invest in everything from stocks, to bonds, commodities, currencies, as well as derivatives, or a mix of any of these different assets. An equity ETF, for example, is a portfolio of several stocks from different companies; a Treasury ETF is a portfolio of several bonds, and so on. ETFs are structured much like a mutual fund except that they list and trade on a stock exchange under a single ticker, like a single stock.

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### Exchange-Traded Notes

An ETN is a debt note issued by a bank. ETNs can access just about every corner of the market, and can often package complicated strategies, but they introduce counterparty risk associated with the issuing bank.

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### Expense Ratio

The expense ratio is the operating expenses an ETF incurs over a given year divided by its assets. While the expense ratio is not the total cost of ownership an ETF investor faces, it’s the most commonly used metric to assess the cost of an ETF.

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### Grantor Trusts

One of the most commonly used structures for commodity ETFs, a grantor trust is a physically backed trust that stores the physical commodity—say, gold bars or silver coins—in vaults while giving investors exposure to spot returns of that commodity. The biggest example of a grantor trust is the **SPDR Gold Trust (GLD)**. By owning shares of GLD, ETF investors actually have claim to physical gold being vaulted in London.

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### Index-Based ETFs

These are exchange-traded funds that are designed to mimic the performance of an underlying index, delivering the same returns minus fees. Index-based ETFs simply replicate a benchmark either by owning every security included in that index, or by using a representative sample of securities. Most of the 2,200-plus ETFs on the market today are index-based, or passive, ETFs.

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### Leveraged/Inverse ETFs

Leveraged ETFs offer enhanced returns of a given index over a short period of time. For example, a 2x S&P 500 ETF is designed to deliver twice the daily return of the S&P 500 index. Most often, the amount of leverage is reset daily, making these vehicles ideal for daily or very-short-term holding periods due to the compounding nature of their returns. They are not long-term, buy-and-hold instruments, but tactical tools for short time horizons. Inverse ETFs work similarly, but they offer the inverse performance of an index.

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### Market Maker

Also known as a liquidity provider, a market maker is someone who facilitates ETF trading, ensuring tight bid/ask spreads, depth and smooth trading throughout the day. Every ETF has a lead market maker, many of which are incentivized by exchanges to keep markets humming along.

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### Net Asset Value

The net asset value (NAV) is a measure of the fair value of an ETF share. It’s the sum of the value of all the securities in an ETF basket, divided by the number of shares of each security in the portfolio. In other words, the NAV tells you how much a share of an ETF is actually worth.

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### Nontransparent Active ETFs

ETFs are known for their transparency, with portfolio holdings that are disclosed in real time every day. Nontransparent active ETFs seek to keep the secret sauce of many portfolio managers secret by disclosing portfolio holdings only periodically. These proposed ETFs work either by introducing a “trusted agent” in the process who would create/redeem shares through confidential accounts for the APs, or by using proxy portfolios that don’t represent the entire basket in an effort to keep holdings secret. It has long been said that transparency has kept many active fund managers away from the ETF market, so the argument goes that a nontransparent wrapper could revolutionize the space.

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### Open-End Funds

These are portfolios of securities that have an elastic supply of shares that trade on an exchange at net asset value. ETFs and most mutual funds are open-end funds.

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### Securities Lending

This is the common practice of ETFs lending underlying securities to short-sellers. By lending out securities, the ETF picks up extra revenue that can ultimately lower overall costs and boost results for the ETF. If an ETF holds a hot in-demand security, lending it out can generate significant revenue for ETF shareholders. The biggest risk associated with this practice is counterparty risk.

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### Smart Beta ETFs

One of the most controversial commonly used terms in the ETF market is “smart beta,” but its adoption is widespread. Smart beta ETFs are funds that forgo traditional market capitalization weighting for some alternative scheme, be it equal-weighting portfolio holdings, or some form of factor-based weighting, or dividend- and revenue-weighting methodologies, to name a few. About half of all U.S.-listed ETFs are some flavor of smart beta.

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### Tracking Difference/Tracking Error

Most ETFs are designed to track an index. Tracking difference, simply put, is the disparity between the returns of an ETF and the performance of the underlying index it tracks. In a perfect world, an index-based ETF would deliver exactly the performance of the index minus its fees (the expense ratio). But other factors can contribute to tracking difference, such as trading and rebalancing costs, as well as tracking methodologies that differ from the original benchmark, among other things. Tracking difference is not to be confused with tracking error, which is a measure of how volatile the performance difference between an ETF and its index is—the standard deviation—on an annualized basis.

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### Unit Investment Trusts

One type of ETF structure, unit investment trusts blend traits of open-end and close-end mutual funds by offering a diversified basket of assets open to investors, but one that’s first issued through an initial public offering. UITs also come to market with a set number of shares and an expiration date. The **SPDR S&P 500 ETF Trust (SPY)** is the biggest example of a UIT, and one that has had its expiration date postponed over time.

*(This is not an exhaustive list, of course. We’ll keep adding terms online, so check back often at the ETF.com Education Center or contact Cinthia Murphy at [cmurphy@etf.com](mailto:cmurphy@etf.com).)*



# ETF DATA

## U.S.-LISTED ETFs BY ASSET CLASS AND YEAR-TO-DATE RETURN

- Data as of 11/30/2020
- Exp Ratio is annual expense ratio
- AUM is net assets in \$US millions
- YTD is year-to-date
- 3YR and 5YR returns are annualized
- Includes all U.S.-listed ETFs and ETNs with assets of \$110 million and above
- Source: ETF.com

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
<b>U.S. EQUITY: TOTAL MARKET</b>						
Renaissance IPO	IPO	0.60	456.3	107.85	32.88	25.06
ERShares Entrepreneur 30	ENR3	0.49	155.2	48.04	23.07	-
SPDR S&P Kensho New Economies	KOMP	0.20	1,645.1	47.18	-	-
First Trust US Equity Opportunities	FPX	0.58	1,819.5	40.99	19.47	17.38
Fidelity NASDAQ Composite	ONEQ	0.21	3,348.3	36.60	22.13	20.12
Global X Millennials Thematic	MILN	0.50	115.0	35.93	23.44	-
Motley Fool 100	TMFC	0.50	363.8	35.63	-	-
Goldman Sachs Hedge Industry VIP	GVIP	0.45	138.2	35.31	18.10	-
American Century STOXX US Qual Growth	QGRO	0.29	241.8	30.93	-	-
Invesco DWA Momentum	PDP	0.62	1,917.1	30.22	17.44	14.91
iShares MSCI USA Momentum Factor	MTUM	0.15	12,530.4	25.54	16.30	17.77
IQ Candriam ESG US Equity	IQSU	0.09	285.8	22.75	-	-
iShares MSCI USA ESG Select	SUSA	0.25	2,284.2	20.63	15.02	15.13
Vanguard ESG US Stock	ESGV	0.12	2,632.4	20.19	-	-
iShares ESG Aware MSCI USA	ESGU	0.15	12,763.9	18.04	14.60	-
iShares MSCI KLD 400 Social	DSI	0.25	2,501.6	16.84	14.19	14.13
JPMorgan BetaBuilders US Equity	BBUS	0.02	250.4	16.14	-	-
Schwab US Broad Market	SCHB	0.03	17,382.0	15.78	13.19	13.89
Vanguard Russell 3000	VTHR	0.10	777.9	15.72	13.10	13.78
iShares Core S&P Total US Stock Market	ITOT	0.03	30,905.8	15.63	13.14	13.93
Vanguard Total Stock Market	VTI	0.03	189,796.6	15.62	13.15	13.90
iShares Russell 3000	IWV	0.20	10,476.8	15.47	13.01	13.74
iShares Dow Jones US	IYY	0.20	1,389.1	15.31	13.08	13.79
iShares ESG MSCI USA Leaders	SUSL	0.10	2,714.5	14.39	-	-
Xtrackers MSCI USA ESG Leaders Equity	USSG	0.10	2,765.0	14.38	-	-
Innovator IBD 50	FFTY	0.80	196.7	13.73	5.58	10.96
Global X Conscious Companies	KRMA	0.43	405.3	13.41	13.21	-
SPDR Portfolio S&P 1500 Composite	SPTM	0.03	4,005.5	13.40	12.57	13.57
iShares MSCI USA Quality Factor	QUAL	0.15	24,473.5	12.85	13.00	13.34
TrimTabs US Free Cash Flow Quality	TTAC	0.59	179.0	12.57	10.30	-
Vanguard Dividend Appreciation	VIG	0.06	52,093.3	12.56	13.17	14.15
Avantis US Equity	AVUS	0.15	540.7	11.99	-	-
iShares MSCI USA Size Factor	SIZE	0.15	760.1	11.51	10.59	12.12
VanEck Vectors Mstar Wide Moat	MOAT	0.48	3,959.8	11.50	14.69	16.49
WisdomTree US Quality Dividend Growth	DGRW	0.28	4,962.8	10.64	11.27	13.54
ALPS Barron's 400	BFOR	0.65	119.7	10.57	5.15	9.11
FlexShares Mstar US Market Factor Tilt	TILT	0.25	1,345.9	10.49	9.58	11.77
iShares MSCI USA Equal Weighted	EUSA	0.15	269.5	10.13	9.99	11.69
Timothy Plan US Large/Mid Cap Core	TPLC	0.52	165.8	9.98	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Franklin Liberty US Low Volatility	FLV	0.29	124.5	9.21	13.57	-
SPDR MSCI USA StrategicFactors	QUS	0.15	914.2	8.91	12.05	13.21
First Trust Dorsey Wright Mom/ Low Vol	DVOL	0.60	120.5	7.45	-	-
RiverFront Dynamic US Div Advantage	RFDA	0.52	134.1	7.24	7.76	-
Invesco Dividend Achievers	PFM	0.53	493.3	6.93	9.63	11.59
WisdomTree US Multifactor	USMF	0.28	150.2	6.89	9.41	-
iShares MSCI USA Multifactor	LRGF	0.20	850.2	6.38	6.64	10.24
iShares Core Dividend Growth	DGRO	0.08	13,680.0	6.08	10.83	13.47
FlexShares US Quality Low Volatility	QLV	0.22	124.4	6.02	-	-
Schwab Fundamental US Broad Market	FNOB	0.25	253.6	4.69	8.07	10.54
Invesco Defensive Equity	DEF	0.55	261.9	4.63	8.88	12.22
iShares MSCI USA Min Vol Factor	USMV	0.15	33,650.2	3.25	10.23	12.04
Invesco Dynamic Market	PWC	0.58	161.9	2.76	3.20	7.44
Invesco BuyBack Achievers	PKW	0.62	721.8	1.41	7.63	9.24
VictoryShares US Multi-Factor Min Vol	VSMV	0.35	143.2	1.40	10.15	-
Vident Core US Equity	VUSE	0.48	356.7	1.22	1.60	6.45
FlexShares Quality Dividend	QDF	0.37	1,456.0	0.97	6.14	9.39
VictoryShares MSCI USA Value Momentum	ULVM	0.20	557.8	0.18	2.67	-
FlexShares Quality Dividend Defensive	QDEF	0.37	448.1	-0.39	6.70	9.63
WisdomTree US Total Dividend	DTD	0.28	796.0	-1.02	6.32	9.86
Invesco Raymond James SB-1 Equity	RYJ	0.76	119.9	-1.29	4.25	7.56
Global X Adaptive US Factor	AUSF	0.27	146.3	-2.03	-	-
Legg Mason Low Volatility High Dividend	LVHD	0.27	708.1	-2.71	4.22	-
American Century STOXX US Quality Value	VALQ	0.29	171.6	-2.72	-	-
Virtus Real Asset Income	VRAI	0.55	122.9	-10.45	-	-
iShares US Tech Breakthrough Multisector	TECB	0.40	339.4	-	-	-
Goldman Sachs MarketBeta US Equity	GSUS	0.07	268.6	-	-	-
<b>U.S. EQUITY: TOTAL MARKET GROWTH</b>						
iShares Core S&P US Growth	IUSG	0.04	9,943.5	27.41	18.44	17.21
First Trust Multi Cap Growth AlphaDEX	FAD	0.63	193.8	25.90	14.44	14.31
Janus Henderson Sm/Mid Cap Gro Alpha	JSMG	0.30	135.1	21.90	15.62	-
American Century Focused Dyn Growth	FDG	0.45	198.0	-	-	-
<b>U.S. EQUITY: TOTAL MARKET VALUE</b>						
iShares Core S&P US Value	IUSV	0.04	7,331.8	-2.03	5.92	9.23
iShares MSCI USA Value Factor	VLUE	0.15	8,775.1	-3.05	3.70	8.64
Vanguard US Value Factor	VFVA	0.14	136.7	-3.72	-	-
Alpha Architect US Quantitative Value	QVAL	0.49	133.8	-9.23	-1.28	4.54
<b>U.S. EQUITY: EXTENDED CAP</b>						
Vanguard Extended Market	VXF	0.06	12,571.0	23.32	12.79	13.54
iShares Russell 2500	SMMD	0.15	150.6	11.69	9.46	-
Invesco FTSE RAFI US 1500 Small-Mid	PRFZ	0.39	1,691.4	3.82	3.78	8.56
<b>U.S. EQUITY: LARGE CAP</b>						
Invesco QQQ Trust	QQQ	0.20	144,451.2	41.67	25.53	22.42
Direxion NASDAQ-100 Equal Weighted	QQQE	0.35	332.5	31.21	19.58	17.87
First Trust Nasdaq-100 Equal Weighted	QQEW	0.59	1,108.1	31.00	19.37	17.64
First Trust NASDAQ-100 Ex-Technology	QQXT	0.60	144.0	30.34	17.03	13.19
First Trust Lunt US Factor Rotation	FCTR	0.65	124.7	26.19	-	-
Pacer Trendpilot 100	PTNQ	0.65	802.3	25.73	19.41	16.20
JPMorgan US Momentum Factor	JMOM	0.12	151.3	24.19	15.38	-
Invesco S&P 500 Top 50	XLG	0.20	1,701.3	19.66	15.65	15.62
Inspire 100	BIBL	0.35	150.4	19.49	13.56	-
iShares Russell Top 200	IWL	0.15	892.7	17.53	14.90	14.97
Invesco S&P 500 High Beta	SPHB	0.25	787.0	17.26	10.83	13.02
Vanguard Mega Cap	MGC	0.07	3,190.2	17.08	14.51	14.89
iShares S&P 100	IEF	0.20	7,421.1	16.86	14.49	14.53
Vanguard Large-Cap	VW	0.04	20,601.1	16.22	13.86	14.33
Schwab US Large-Cap	SCHX	0.03	24,742.9	16.16	13.80	14.29
Vanguard Russell 1000	VONE	0.08	1,867.6	16.11	13.60	14.08
Schwab 1000	SCHK	0.05	1,307.5	16.00	13.50	-
iShares Russell 1000	IWB	0.15	25,222.0	15.99	13.54	14.07
Xtrackers S&P 500 ESG	SNPE	0.10	380.7	15.84	-	-
Invesco S&P 500 Downside Hedged	PHDG	0.39	129.3	15.69	7.25	7.04
Overlay Shares Large Cap Equity	OWL	0.78	125.3	15.36	-	-
SPDR S&P 500 Fossil Fuel Reserves Free	SPYX	0.20	788.5	15.31	13.74	-
Distillate US Fundamental Stability/Value	DSTL	0.39	200.0	15.24	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Barclays ETN+ Shiller CAPE ETN	CAPE	0.45	264.7	14.98	14.06	16.14
Nationwide Risk-Managed Income	NUSI	0.68	127.6	14.75	-	-
VictoryShares US 500 Enh Volatility Wtd	CFO	0.35	727.5	14.74	8.66	11.74
Global X S&P 500 Catholic Values	CATH	0.29	440.6	14.69	12.98	-
Goldman Sachs JUST US Large Cap Equity	JUST	0.20	179.9	14.45	-	-
Aptus Drawdown Managed Equity	ADME	0.79	189.0	14.37	5.43	-
SPDR Portfolio S&P 500	SPLG	0.03	7,603.9	14.21	13.27	13.87
SPDR S&P 500 Trust	SPY	0.09	323,922.3	14.14	13.10	13.88
iShares Core S&P 500	IIV	0.03	235,740.1	14.09	13.13	13.93
Goldman Sachs ActiveBeta US Large Cap	GSLC	0.09	10,953.2	14.05	12.98	13.43
Vanguard S&P 500	VOO	0.03	178,106.6	14.02	13.15	13.93
iShares Mstar Large-Cap	JKD	0.20	830.5	14.00	11.63	13.79
Invesco Russell 1000 Dynamic Multifactor	OMFL	0.29	1,157.4	13.38	15.19	-
Nationwide Risk-Based US Equity	RBUS	0.30	114.4	12.68	11.48	-
JPMorgan US Quality Factor	JQUA	0.12	434.1	12.65	13.33	-
HCM Defender 500	LGH	1.23	124.5	12.62	-	-
Invesco S&P 500 Quality	SPHQ	0.15	2,335.0	12.61	12.38	13.46
Fidelity Quality Factor	FQAL	0.29	159.2	12.42	11.74	-
John Hancock Multifactor Large Cap	JHML	0.29	984.3	12.39	11.68	13.00
Principal US Mega-Cap	USMC	0.12	1,677.2	11.67	12.67	-
SPDR SSGA Gender Diversity	SHE	0.20	151.8	11.54	10.36	-
Invesco Russell 1000 Equal Weight	EQAL	0.20	525.6	10.92	8.32	10.63
Goldman Sachs Eq Wt US Large Cap Equity	GSEW	0.09	439.8	10.85	10.31	-
Main Sector Rotation	SECT	0.80	618.0	10.63	9.09	-
Xtrackers Russell 1000 US QARP	QARP	0.19	120.3	10.53	-	-
Invesco RAFI Strategic US	IUS	0.19	155.9	10.45	-	-
First Trust Capital Strength	FTCS	0.58	6,729.7	10.35	10.42	12.82
FT Cboe Vest US Equity Buffer - Nov	FNOV	0.85	147.6	10.23	-	-
First Trust Large Cap Core AlphaDEX	FEV	0.59	990.2	9.72	8.24	11.14
Davis Select US Equity	DUSA	0.63	305.6	9.68	8.98	-
VictoryShares Dividend Accelerator	VSDA	0.35	303.9	9.63	13.61	-
Innovator S&P 500 Buffer - January	BJAN	0.80	112.8	9.59	-	-
Amplify CWP Enhanced Dividend Income	DIVO	0.49	139.8	9.36	11.29	-
Fidelity Low Volatility Factor	FDLO	0.29	388.6	8.99	12.98	-
Innovator S&P 500 Power Buffer - October	POCT	0.80	208.1	8.98	-	-
Innovator S&P 500 Power Buffer - August	PAUG	0.79	115.3	8.97	-	-
VictoryShares US EQ Inc Enh Volatility Wtd	CDC	0.35	638.9	8.37	6.90	10.81
Invesco S&P 500 Equal Weight	RSP	0.20	16,190.8	8.22	9.19	11.22
Aptus Collared Income Opportunity	ACIO	0.79	168.5	7.90	-	-
Franklin LibertyQ US Equity	FLQL	0.15	1,471.4	7.88	11.26	-
WisdomTree US LargeCap	EPS	0.08	448.0	7.74	10.06	12.45
ALPS Equal Sector Weight	EQL	0.28	166.0	7.48	9.18	11.07
VictoryShares US 500 Volatility Wtd	CFA	0.35	663.8	7.02	8.60	11.71
FT Cboe Vest US Equity Deep Buffer - Aug	DAUG	0.85	141.4	6.96	-	-
ProShares S&P 500 Dividend Aristocrats	NOBL	0.35	6,876.0	6.75	10.33	12.00
Innovator S&P 500 Power Buffer - Sept	PSEP	0.79	357.3	6.69	-	-
Innovator S&P 500 Power Buffer - July	PJUL	0.79	115.1	6.57	-	-
Global X NASDAQ 100 Covered Call	QYLD	0.60	1,483.9	6.43	8.73	9.20
Pacer US Cash Cows 100	COWZ	0.49	237.2	6.38	7.02	-
Innovator S&P 500 Power Buffer - January	PJAN	0.79	249.8	6.37	-	-
First Trust Rising Dividend Achievers	RDVY	0.50	1,694.8	6.22	10.22	13.80
ProShares Large Cap Core Plus	CSM	0.46	421.1	6.16	7.51	10.20
SPDR Dow Jones Industrial Average Trust	DIA	0.16	25,496.7	6.12	9.25	13.37
SPDR Russell 1000 Momentum Focus	ONEQ	0.20	242.7	6.02	5.80	-
Invesco S&P 500 Revenue	RWL	0.39	822.8	5.87	8.40	10.69
Schwab Fundamental US Large Company	FNDX	0.25	5,210.4	4.87	8.46	10.77
0?Shares US Quality Dividend	OUSA	0.48	594.8	4.57	8.74	11.04
Innovator S&P 500 Power Buffer - April	PAPR	0.79	178.7	4.45	-	-
Xtrackers Russell 1000 Compr Factor	DEUS	0.17	167.1	4.33	7.07	10.43
JPMorgan Diversified Return US Equity	JPUS	0.18	602.1	4.24	7.28	10.36
SPDR SSGA US Large Cap Low Volatility	LGLV	0.12	606.9	4.17	11.02	12.31
Invesco FTSE RAFI US 1000	PRF	0.39	4,289.7	3.73	7.12	9.96
First Trust Horizon Managed Vol Domestic	HUSV	0.70	185.5	3.54	8.47	-
Hartford Multifactor US Equity	ROUS	0.19	261.0	2.58	5.40	9.25
SPDR Russell 1000 Low Volatility Focus	ONEV	0.20	453.8	2.43	8.40	-
IQ Chaikin US Large Cap	CLRG	0.25	277.7	1.96	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
WisdomTree US LargeCap Dividend	DLN	0.28	2,508.0	1.27	7.64	10.62
WisdomTree CBOE S&P 500 PutWrite	PUTW	0.44	110.5	-0.61	1.68	-
Global X S&P 500 Covered Call	XYLD	0.60	115.3	-2.03	4.18	6.83
Invesco Dow Jones Industrial Avg Div	DJD	0.07	118.6	-2.14	6.92	-
SPDR Russell 1000 Yield Focus	ONEY	0.20	454.8	-2.41	5.30	-
ALPS Sector Dividend Dogs	SDOG	0.40	1,023.8	-3.29	2.47	7.71
Invesco S&P 500 Low Volatility	SPLV	0.25	8,489.4	-3.34	6.93	9.73
Timothy Plan High Dividend Stock	TPHD	0.52	121.2	-3.49	-	-
Pacer Trendpilot US Large Cap	PTLC	0.60	1,911.6	-4.75	4.75	7.16
Invesco S&P 500 BuyWrite	PBP	0.49	169.4	-4.76	1.29	4.06
VictoryShares US Lrg Cap High Div Vol Wtd	CDL	0.35	184.0	-7.78	3.32	8.53
WisdomTree US Dividend ex-Financials	DTN	0.38	537.1	-8.16	1.49	6.46
Invesco S&P 500 High Dividend Low Vol	SPHD	0.30	2,555.2	-12.31	-0.39	6.46
SPDR Portfolio S&P 500 High Dividend	SPYD	0.07	2,310.0	-15.15	-0.41	6.44
FT Cboe Vest US Equity Deep Buffer - Feb	DFEB	0.85	467.9	-	-	-
Invesco NASDAQ 100	QQQM	0.15	350.0	-	-	-
Invesco NASDAQ Next Gen 100	QQQJ	0.15	302.4	-	-	-
FT Cboe Vest US Equity Buffer - February	FFEB	0.85	226.9	-	-	-
6 Meridian Hedged Eq-Index Option Strat	SIXH	0.81	202.3	-	-	-
JPMorgan Equity Premium Income	JEPI	0.35	138.5	-	-	-
Day Hagan/ND Research Smart Sector	SSUS	0.79	129.7	-	-	-
6 Meridian Mega Cap Equity	SIXA	0.82	116.2	-	-	-
BNY Mellon US Large Cap Core Equity	BKLC	0.00	110.6	-	-	-
<b>U.S. EQUITY: LARGE CAP GROWTH</b>						
Vanguard Mega Cap Growth	MGK	0.07	9,782.9	35.56	22.26	19.46
iShares Mstar Large-Cap Growth	JKE	0.25	1,852.9	34.93	22.89	18.89
Vanguard Growth	VUG	0.04	65,254.8	34.62	21.63	18.76
Nuveen ESG Large-Cap Growth	NULG	0.35	395.3	33.93	23.34	-
Schwab US Large-Cap Growth	SCHG	0.04	12,911.0	33.26	21.80	19.01
iShares Russell Top 200 Growth	IWY	0.20	3,277.0	33.02	22.03	20.11
Vanguard Russell 1000 Growth	VONG	0.08	5,245.6	32.45	21.41	19.46
iShares Russell 1000 Growth	IWF	0.19	61,937.4	32.37	21.31	19.35
Vanguard S&P 500 Growth	VOOG	0.10	4,583.1	28.40	19.07	17.54
SPDR Portfolio S&P 500 Growth	SPYG	0.04	9,188.1	28.36	19.11	17.55
iShares S&P 500 Growth	IWV	0.18	31,356.9	28.07	18.96	17.45
Invesco Dynamic Large Cap Growth	PWB	0.56	887.5	27.31	17.31	16.73
First Trust Large Cap Growth AlphaDEX	FTC	0.60	1,069.7	26.95	15.24	14.24
Invesco S&P 500 Pure Growth	RPG	0.35	2,665.8	23.75	14.53	14.31
SoFi Select 500	SFY	0.00	130.6	20.90	-	-
Invesco S&P 500 GARP	SPGP	0.34	261.8	9.09	15.82	15.78
<b>U.S. EQUITY: LARGE CAP VALUE</b>						
Fidelity Value Factor	FVAL	0.29	246.4	4.39	8.78	-
Schwab US Large-Cap Value	SCHV	0.04	7,622.7	-0.83	5.47	9.21
iShares Russell 1000 Value	IWD	0.19	42,044.2	-0.97	5.13	8.28
Vanguard Russell 1000 Value	VONV	0.08	3,196.8	-1.03	5.19	8.30
Vanguard Value	VTV	0.04	59,275.0	-1.21	6.06	9.74
Vanguard Mega Cap Value	MGV	0.07	3,395.5	-1.30	6.50	9.99
Nuveen ESG Large-Cap Value	NULV	0.35	638.0	-1.34	6.44	-
iShares Russell Top 200 Value	IWX	0.20	896.1	-1.76	5.55	8.42
SPDR Portfolio S&P 500 Value	SPVW	0.04	7,137.8	-1.84	6.35	9.44
iShares S&P 500 Value	IVE	0.18	18,048.5	-2.07	6.02	9.22
Vanguard S&P 500 Value	VOOV	0.10	1,522.1	-2.08	6.03	9.24
First Trust Large Cap Value AlphaDEX	FTA	0.60	756.0	-3.28	2.01	7.99
iShares Mstar Large-Cap Value	JKF	0.25	520.0	-4.15	4.70	8.65
Invesco Dynamic Large Cap Value	PWV	0.56	842.4	-7.36	1.11	7.15
Invesco S&P 500 Pure Value	RPV	0.35	1,011.0	-12.09	-0.68	5.16
American Century Focused Large Cap Val	FLV	0.42	138.0	-	-	-
<b>U.S. EQUITY: MID CAP</b>						
Invesco S&P Midcap Momentum	XMMO	0.34	783.1	19.71	20.26	19.19
Vanguard Mid-Cap	VO	0.04	40,196.0	13.50	10.89	11.76
iShares Russell Mid-Cap	IWR	0.19	23,780.3	11.69	10.10	11.57
John Hancock Multifactor Mid Cap	JHMM	0.42	1,794.1	10.51	9.28	11.49
Schwab US Mid-Cap	SCHM	0.04	7,603.9	8.88	8.48	10.91
iShares Mstar Mid-Cap	JKG	0.25	736.0	8.67	8.56	10.45
First Trust Mid Cap Core AlphaDEX	FNX	0.60	696.4	8.54	7.19	10.04
iShares Core S&P Mid-Cap	IJH	0.05	51,410.4	6.69	6.21	9.95

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
SPDR Portfolio S&P 400 Mid Cap	SPMD	0.05	3,148.5	6.63	6.16	9.47
SPDR S&P Midcap 400 Trust	MDY	0.23	16,999.7	6.63	6.05	9.75
Vanguard S&P Mid-Cap 400	IVOO	0.10	1,052.4	6.63	6.11	9.88
JPMorgan Diversified Return US Mid Cap	JPME	0.24	248.2	3.52	5.95	-
Pacer Trendpilot US Mid Cap	PTMC	0.60	428.1	3.45	1.53	7.29
Invesco S&P MidCap 400 Revenue	RWK	0.39	244.5	3.43	4.53	8.13
ProShares S&P MidCap 400 Div Aristocrats	REGL	0.41	802.1	2.45	5.40	10.29
WisdomTree US MidCap	EZM	0.38	604.7	-0.61	2.99	7.71
Invesco Zacks Mid-Cap	CZA	0.69	229.0	-3.00	5.21	9.90
WisdomTree US MidCap Dividend	DON	0.38	2,638.0	-9.51	1.15	6.72
Invesco S&P MidCap Low Volatility	XMLV	0.25	1,775.1	-13.37	1.76	7.70
JPMorgan BetaBuilders US Mid Cap Equity	BBMC	0.07	1,149.5	-	-	-

#### U.S. EQUITY: MID CAP GROWTH

iShares Mstar Mid-Cap Growth	JKH	0.30	1,415.7	38.91	22.27	18.62
Nuveen ESG Mid-Cap Growth	NUMG	0.40	233.0	37.85	20.82	-
iShares Russell Mid-Cap Growth	IWP	0.24	14,468.1	29.11	18.58	16.76
Vanguard Mid-Cap Growth	VOT	0.07	9,540.3	28.46	17.52	15.53
First Trust Mid Cap Growth AlphaDEX	FNY	0.70	431.6	27.08	15.93	15.69
Invesco S&P MidCap 400 Pure Growth	RFG	0.35	359.0	24.95	7.87	8.58
Vanguard S&P Mid-Cap 400 Growth	IVOG	0.15	783.5	15.35	9.12	11.52
iShares S&P Mid-Cap 400 Growth	IJK	0.17	7,582.0	15.14	9.02	11.44
SPDR S&P 400 Mid Cap Growth	MDYG	0.15	1,941.5	15.09	9.05	11.51

#### U.S. EQUITY: MID CAP VALUE

iShares Russell Mid-Cap Value	IWS	0.24	11,489.0	0.21	4.06	7.86
Vanguard Mid-Cap Value	VOE	0.07	10,731.3	-0.98	4.14	7.78
SPDR S&P 400 Mid Cap Value	MDYV	0.15	1,443.1	-2.70	2.76	7.72
Vanguard S&P Mid-Cap 400 Value	IVOV	0.15	518.2	-2.74	2.66	7.68
iShares S&P Mid-Cap 400 Value	IJJ	0.18	5,313.9	-2.89	2.58	7.58
Nuveen ESG Mid-Cap Value	NUMV	0.40	140.4	-3.51	3.85	-
iShares Mstar Mid-Cap Value	JKI	0.30	380.6	-6.64	1.83	7.31

#### U.S. EQUITY: SMALL CAP

Invesco DWA SmallCap Momentum	DWAS	0.60	302.4	23.13	12.90	12.19
Nuveen ESG Small-Cap	NUSC	0.40	464.0	15.21	10.00	-
Invesco S&P SmallCap Momentum	XSMO	0.39	118.8	15.17	12.90	12.45
Invesco S&P SmallCap 600 Revenue	RWJ	0.39	272.5	13.17	4.18	7.81
Vanguard Small-Cap	VB	0.05	34,734.5	10.84	8.73	11.04
Vanguard Russell 2000	VTWO	0.10	2,458.7	10.70	7.19	10.36
iShares ESG Aware MSCI USA Small-Cap	ESML	0.17	482.7	10.61	-	-
iShares Russell 2000	IWM	0.19	52,012.5	10.48	7.04	10.26
Schwab US Small-Cap	SCHA	0.04	12,031.3	9.99	7.10	10.05
First Trust Small Cap Core AlphaDEX	FYX	0.63	550.9	9.28	5.86	9.42
Goldman Sachs ActiveBeta US SmCap Eq	GSSC	0.20	219.9	7.41	5.98	-
Principal US Small-Cap Multi-Factor	PSC	0.38	789.5	5.20	4.98	-
JPMorgan Diversified Ret US Small Cap	JPSE	0.29	178.6	4.48	5.37	-
VictoryShares MSCI USA SmCap Val Mom	USVM	0.24	306.6	3.93	4.14	-
John Hancock Multifactor Small Cap	JHSC	0.42	540.0	3.69	4.29	-
Vanguard S&P Small-Cap 600	VIOO	0.10	1,135.0	3.06	4.71	9.53
SPDR S&P 600 Small Cap	SLY	0.15	1,249.8	2.90	4.64	9.44
iShares Core S&P Small-Cap	IJR	0.06	52,297.7	2.81	4.75	9.54
SPDR Portfolio S&P 600 Small Cap	SPSM	0.05	3,065.1	2.80	4.83	8.88
07Shares US Small-Cap Quality Dividend	OUSM	0.48	118.8	1.87	5.22	-
iShares MSCI USA Small-Cap Multifactor	SMLF	0.30	615.7	1.33	3.74	8.61
Schwab Fundamental US Small Company	FNDA	0.25	3,534.9	0.97	3.45	7.86
iShares Mstar Small-Cap	JKI	0.25	209.5	0.23	3.97	8.11
WisdomTree US Smcap Qual Div Growth	DGRS	0.38	129.7	-0.17	3.26	7.98
IQ Chaikin US Small Cap	CSML	0.35	159.3	-1.27	-0.82	-
WisdomTree US SmallCap	EES	0.38	452.0	-4.51	1.11	7.57
iShares MSCI USA SmCap Min Vol Factor	SMMV	0.20	867.3	-8.22	4.67	-
SPDR SSGA US Small Cap Low Volatility	SMLV	0.12	212.0	-8.37	1.43	6.85
ProShares Russell 2000 Dividend Growers	SMDV	0.41	666.6	-9.37	0.43	7.69
WisdomTree US SmallCap Dividend	DES	0.38	1,501.8	-11.07	-2.36	4.96
Invesco S&P SmallCap Low Volatility	XSLV	0.25	1,501.5	-22.98	-4.62	4.24

#### U.S. EQUITY: SMALL CAP GROWTH

MFAM Small-Cap Growth	MFMS	0.85	135.9	46.44	-	-
iShares Mstar Small-Cap Growth	JKK	0.30	570.4	30.95	16.01	15.24

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Vanguard Small-Cap Growth	VBK	0.07	13,180.4	25.04	16.22	15.35
iShares Russell 2000 Growth	IWO	0.24	10,981.0	23.22	12.83	13.26
Vanguard Russell 2000 Growth	VTWG	0.15	443.7	23.19	12.86	13.23
First Trust Small Cap Growth AlphaDEX	FYC	0.70	200.5	19.27	9.57	12.02
Vanguard S&P Small-Cap 600 Growth	VIOG	0.16	364.2	10.01	8.12	11.22
SPDR S&P 600 Small Cap Growth	SLYG	0.15	1,822.6	9.67	8.01	11.17
iShares S&P Small-Cap 600 Growth	IJT	0.18	4,908.5	9.54	7.95	11.10
Invesco S&P SmallCap 600 Pure Growth	RZG	0.35	114.9	8.05	4.27	8.91

#### U.S. EQUITY: SMALL CAP VALUE

First Trust Small Cap Value AlphaDEX	FYT	0.72	111.7	1.03	2.63	7.05
Vanguard Small-Cap Value	VBR	0.07	16,867.7	-0.87	2.38	7.23
Avantis US Small Cap Value	AVUV	0.25	491.4	-1.20	-	-
Vanguard Russell 2000 Value	VTWV	0.15	454.2	-2.92	0.79	6.81
iShares Russell 2000 Value	IWN	0.24	11,091.9	-3.08	0.63	6.70
SPDR S&P 600 Small Cap Value	SLYV	0.15	2,592.2	-4.38	2.31	7.54
iShares S&P Small-Cap 600 Value	IUS	0.18	6,023.1	-4.53	0.96	7.46
Vanguard S&P Small-Cap 600 Value	VIOV	0.15	652.0	-4.53	1.09	7.51
iShares Mstar Small Cap Value	JKL	0.30	320.2	-5.73	-1.98	4.13
Invesco S&P SmallCap 600 Pure Value	RZV	0.35	162.4	-7.87	-3.60	2.70

#### U.S. EQUITY: MICRO CAP

iShares Micro-Cap	IWC	0.60	912.9	12.33	5.87	9.06
First Trust Dow Jones Select MicroCap	FDM	0.60	119.5	-11.01	-1.22	6.55

#### U.S. EQUITY: BASIC MATERIALS

Invesco S&P 500 Equal Weight Materials	RTM	0.40	389.9	19.14	9.51	13.03
Materials Select Sector SPDR	XLB	0.13	5,346.5	17.60	8.27	11.48
First Trust Materials AlphaDEX	FXZ	0.67	155.0	15.22	4.12	10.49
Vanguard Materials	VAW	0.10	2,139.7	15.18	6.23	10.98
Fidelity MSCI Materials	FMAT	0.08	231.4	15.16	6.17	10.90
iShares US Basic Materials	IYM	0.43	848.3	14.20	5.18	10.20
SPDR S&P Metals & Mining	XME	0.35	781.4	1.43	-0.74	14.85

#### U.S. EQUITY: CONSUMER CYCLICALS

Amplify Online Retail	IBUY	0.65	1,214.6	105.72	40.78	-
ProShares Online Retail	ONLN	0.58	821.3	101.44	-	-
ProShares Long Online/Short Stores	CLX	0.65	261.3	84.13	32.96	-
Global X E-commerce	EBIZ	0.50	125.4	68.37	-	-
Fidelity MSCI Consumer Discretionary	FDIS	0.08	1,173.5	41.98	22.46	18.01
Vanguard Consumer Discretionary	VCR	0.10	4,375.5	40.96	21.54	17.49
SPDR S&P Retail	XRT	0.35	676.7	32.06	12.88	7.76
VanEck Vectors Retail	RTH	0.35	201.2	31.56	22.34	16.91
SPDR S&P Homebuilders	XHB	0.35	1,538.3	26.83	10.45	10.50
Consumer Discr Select Sector SPDR	XLY	0.13	17,820.7	26.56	19.15	15.86
iShares US Home Construction	ITB	0.42	2,125.1	26.50	9.88	14.95
iShares US Consumer Services	IVC	0.43	1,194.2	20.58	17.00	14.39
Invesco S&P 500 Eq Wt Consumer Discr	RCD	0.40	305.5	7.54	8.31	7.63
First Trust Consumer Discr AlphaDEX	FXD	0.63	1,265.8	7.09	6.32	7.52
Invesco Dynamic Leisure/Entertainment	PEJ	0.63	646.9	-17.72	-4.79	0.47

#### U.S. EQUITY: CONSUMER NON-CYCLICALS

iShares US Consumer Goods	IYK	0.43	706.5	24.39	11.91	10.98
Fidelity MSCI Consumer Staples	FSTA	0.08	888.8	8.80	8.88	9.05
Vanguard Consumer Staples	VDC	0.10	5,697.4	8.71	8.86	8.96
Consumer Staples Select Sector SPDR	XLP	0.13	13,904.5	8.35	9.07	9.15
Invesco S&P 500 Eq Wt Consumer Staples	RHS	0.40	508.3	4.52	7.22	8.27
First Trust Consumer Staples AlphaDEX	FXG	0.63	251.8	3.88	3.75	4.99

#### U.S. EQUITY: ENERGY

First Trust North Amer Energy Infrastr	EMLP	0.96	1,800.6	-13.59	-0.68	3.93
Tortoise North American Pipeline	TPYP	0.40	367.8	-21.13	-3.83	2.13
Global X MLP & Energy Infrastructure	MLPX	0.45	555.1	-21.24	-5.59	-2.33
First Trust Energy AlphaDEX	FXN	0.64	124.5	-26.36	-18.26	-12.71
Barclays ETN+ Select MLP ETN	ATMP	0.95	160.6	-30.37	-10.95	-4.57
JPMorgan Alerian MLP ETN	AMJ	0.85	1,820.3	-31.34	-12.83	-7.85
ETRACS Alerian MLP Infrastr ETN Ser B	MLPB	0.85	173.4	-32.27	-14.46	-11.08
Energy MLP	AMPLP	0.87	4,045.0	-33.96	-13.99	-8.67
Energy Select Sector SPDR	XLE	0.13	12,801.8	-35.42	-14.67	-7.69
Global X MLP	MLPA	0.46	711.4	-35.56	-13.98	-7.97
iShares US Energy	IYE	0.42	495.3	-36.29	-15.91	-9.02

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Vanguard Energy	VDE	0.10	3,239.2	-36.41	-16.31	-9.04
Fidelity MSCI Energy	FENY	0.08	575.7	-36.41	-16.40	-9.34
iShares US Oil & Gas Expl & Production	IEO	0.42	161.4	-37.59	-16.29	-10.10
SPDR S&P Oil & Gas Expl & Production	XOP	0.35	2,260.2	-41.45	-26.47	-17.15
SPDR S&P Oil & Gas Equipment & Svcs	XES	0.35	112.5	-50.73	-36.36	-27.24
InfraCap MLP	AMZA	2.41	142.4	-52.65	-27.06	-17.64

#### U.S. EQUITY: FINANCIALS

iShares US Broker-Dealers & Sec Exch	IAI	0.42	132.8	8.11	7.53	12.94
Invesco S&P 500 Equal Weight Financials	RYF	0.40	165.2	-1.28	3.45	9.94
First Trust Financials AlphaDEX	FXO	0.62	608.9	-2.90	3.00	7.92
iShares US Financial Services	IYG	0.42	1,160.5	-5.84	5.01	10.29
iShares US Financials	IYF	0.42	1,390.1	-6.00	4.44	8.93
SPDR S&P Insurance	KIE	0.35	364.2	-6.70	3.39	8.11
Financial Select Sector SPDR	XLFI	0.13	22,782.2	-7.50	2.62	9.15
Invesco KBW Property & Casualty Ins	KBWP	0.35	261.2	-7.78	4.65	8.20
Vanguard Financials	VFH	0.10	7,005.0	-8.35	1.90	8.78
Fidelity MSCI Financials	FNCL	0.08	835.3	-8.38	1.95	8.80
VanEck Vectors BDC Income	BIZD	10.24	259.3	-9.02	3.28	5.33
iShares US Regional Banks	IAT	0.42	286.4	-14.95	-2.52	5.28
SPDR S&P Regional Banking	KRE	0.35	1,769.4	-15.72	-4.66	3.11
SPDR S&P Bank	KBE	0.35	2,313.6	-16.26	-4.34	3.36
Invesco KBW Bank	KBWB	0.35	1,288.8	-18.12	-2.41	5.85
Invesco KBW High Div Yield Financial	KBWD	1.58	274.7	-20.75	-4.29	1.69

#### U.S. EQUITY: HEALTH CARE

Invesco DWA Healthcare Momentum	PTH	0.60	619.3	55.33	27.60	21.26
Principal Healthcare Innovators	BTEC	0.42	130.2	45.46	22.90	-
SPDR S&P Biotech	XBI	0.35	6,740.6	40.18	17.13	13.25
SPDR S&P Health Care Equipment	XHE	0.35	647.4	23.74	16.99	19.26
SPDR S&P Health Care Services	XHS	0.35	120.8	23.73	15.03	9.84
First Trust Health Care AlphaDEX	FXH	0.61	1,394.5	21.66	13.73	11.28
iShares NASDAQ Biotechnology	IBB	0.46	9,676.2	20.55	11.52	5.63
Invesco S&P SmallCap Health Care	PSCH	0.29	434.8	19.30	16.34	16.36
iShares US Medical Devices	IHI	0.42	8,686.6	18.68	21.16	21.25
ALPS Medical Breakthroughs	SBIO	0.50	240.5	16.11	17.54	9.78
Invesco Dynamic Biotechnology/Genome	PBE	0.58	307.7	14.47	11.47	4.97
Invesco S&P 500 Equal Weight Health Care	RYH	0.40	731.6	13.77	12.27	11.29
Vanguard Health Care	VHT	0.10	12,313.4	13.56	13.28	12.01
Fidelity MSCI Health Care	FHLC	0.08	2,231.5	13.52	13.22	12.02
iShares US Healthcare Providers	IHF	0.42	1,077.4	12.87	14.84	14.15
iShares US Healthcare	IYH	0.43	2,414.4	11.30	12.23	11.39
Health Care Select Sector SPDR	XLV	0.13	24,501.3	9.19	11.60	10.98
First Trust NYSE Arca Biotechnology	FBT	0.55	1,961.6	8.37	8.73	7.48
iShares US Pharmaceuticals	IHE	0.42	335.2	7.98	4.95	2.56
SPDR S&P Pharmaceuticals	XPH	0.35	254.7	5.30	4.34	-0.48
Invesco Dynamic Pharmaceuticals	PJP	0.56	361.3	4.02	2.72	-0.01

#### U.S. EQUITY: INDUSTRIALS

Invesco DWA Industrials Momentum	PRN	0.60	134.8	27.17	12.36	13.84
Invesco Dynamic Building & Construction	PKB	0.59	209.5	20.93	5.30	10.04
Invesco S&P 500 Equal Weight Industrials	RGI	0.40	383.1	15.55	10.92	13.99
iShares US Industrials	IYJ	0.42	1,168.9	14.61	10.71	13.85
iShares Transportation Average	IYT	0.42	1,442.1	13.62	7.19	9.86
First Trust Nasdaq Transportation	FTXR	0.60	766.6	12.24	3.84	-
Fidelity MSCI Industrials	FIDU	0.08	521.7	11.35	8.44	12.38
Vanguard Industrials	VIS	0.10	3,790.8	10.11	7.86	11.85
Industrial Select Sector SPDR	XLI	0.13	15,935.6	9.85	7.90	12.27
SPDR S&P Transportation	XTN	0.35	359.7	9.07	4.24	9.46
First Trust Industr/Producer Dur AlphaDEX	FXR	0.64	307.2	7.78	7.62	12.53
SPDR S&P Aerospace & Defense	XAR	0.35	1,218.9	-1.34	9.88	15.74
Invesco Aerospace & Defense	PPA	0.59	711.9	-3.88	7.53	13.64
iShares US Aerospace & Defense	ITA	0.42	2,960.4	-15.91	1.08	10.34

#### U.S. EQUITY: TECHNOLOGY

WisdomTree Cloud Computing	WCLD	0.45	1,002.3	91.74	-	-
SPDR FactSet Innovative Technology	XITK	0.45	330.9	75.15	36.78	-
Invesco DWA Technology Momentum	PTF	0.60	307.3	67.56	34.20	25.49
SPDR S&P NYSE Technology	XNTK	0.35	572.9	62.58	28.16	26.72

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Invesco NASDAQ Internet	PNQI	0.60	997.2	58.39	25.39	22.36
SPDR S&P Semiconductor	XSD	0.35	720.3	49.15	31.23	29.26
First Trust Dow Jones Internet	FDN	0.52	10,899.1	49.13	23.97	22.15
First Trust Cloud Computing	SKYY	0.60	5,715.2	49.03	26.17	24.33
VanEck Vectors Semiconductor	SMH	0.35	3,574.7	47.52	29.72	32.20
iShares Expanded Tech-Software Sector	IGV	0.46	5,902.0	45.79	29.76	26.66
Invesco Dynamic Semiconductors	PSI	0.57	398.5	45.71	24.65	30.36
iShares PHLX Semiconductor	SOXX	0.46	4,414.7	45.44	29.63	33.24
First Trust Technology AlphaDEX	FXL	0.61	2,444.4	44.18	26.66	25.73
Invesco Dynamic Software	PSJ	0.56	734.2	41.78	29.75	26.38
iShares US Technology	IYW	0.43	6,427.7	40.75	26.95	25.33
iShares Expanded Tech Sector	IGM	0.46	2,996.8	39.04	26.36	25.12
Vanguard Information Technology	VTG	0.10	38,919.7	38.11	28.16	26.10
SPDR S&P Software & Services	XSW	0.35	311.5	38.07	26.52	22.31
Fidelity MSCI Information Technology	FTEC	0.08	4,888.0	37.92	27.00	25.42
Technology Select Sector SPDR	XLK	0.13	36,573.7	36.07	26.33	24.84
HCM Defender 100	QQH	1.14	139.0	32.41	-	-
First Trust NASDAQ-100 Technology Sector	QTEC	0.57	3,165.9	31.98	22.91	25.74
Invesco S&P 500 Equal Weight Technology	RYT	0.40	2,138.8	23.05	20.07	21.90
Invesco S&P SmallCap Information Tech	PSCT	0.29	281.0	14.72	12.23	15.50
Dirxion Work From Home	WFH	0.45	152.7	-	-	-

#### U.S. EQUITY: TELECOMMUNICATIONS

Vanguard Communication Services	VOX	0.10	3,181.5	23.57	9.85	8.76
Fidelity MSCI Communication Services	FCOM	0.08	630.7	22.95	13.92	13.40
Communication Svcs Select Sector SPDR	XLC	0.13	11,701.3	22.80	-	-
iShares US Telecommunications	IYZ	0.42	385.0	2.09	2.20	2.65

#### U.S. EQUITY: UTILITIES

First Trust Utilities AlphaDEX	FXU	0.62	209.2	0.45	4.28	8.02
Utilities Select Sector SPDR	XLU	0.13	12,049.2	-0.06	7.10	11.67
Fidelity MSCI Utilities	FUTY	0.08	1,145.0	-1.53	6.50	11.59
Vanguard Utilities	VPU	0.10	4,383.2	-1.63	6.45	11.61
iShares US Utilities	IDU	0.43	805.0	-1.67	6.06	11.03
Invesco S&P 500 Equal Weight Utilities	RYU	0.40	228.9	-3.13	6.55	10.25

#### U.S. EQUITY: REAL ESTATE

Pacer Benchmark Data/Infrastr Real Estate	SRVR	0.60	1,069.0	10.01	-	-
Pacer Benchmark Industrial Real Estate	INDS	0.60	124.7	6.15	-	-
Real Estate Select Sector SPDR	XLRE	0.13	2,261.8	-3.53	6.46	7.16
Vanguard Real Estate	VNQ	0.12	30,052.2	-7.20	3.92	5.45
iShares Cohen & Steers REIT	ICF	0.34	1,924.8	-7.25	4.21	5.16
Fidelity MSCI Real Estate	FREL	0.09	1,170.3	-7.51	4.24	6.18
iShares US Real Estate	IYR	0.42	4,793.0	-7.58	4.24	6.05
iShares Residential/Multisector Real Est	REZ	0.48	389.0	-9.93	4.73	5.35
PPTY-U.S. Diversified Real Estate	PPTY	0.49	114.6	-10.28	-	-
JPMorgan BetaBuilders MSCI US REIT	BBRE	0.11	901.8	-10.57	-	-
iShares Core US REIT	USRT	0.08	1,574.0	-10.93	2.20	4.41
SPDR Dow Jones REIT	RWR	0.25	1,339.5	-14.01	0.31	2.57
Schwab US REIT	SCHH	0.07	4,558.2	-17.04	-0.77	1.96
iShares Mortgage Real Estate	REM	0.48	1,301.8	-25.71	-3.65	4.00
VanEck Vectors Mortgage REIT Income	MORT	0.41	215.1	-26.74	-4.48	3.82
Invesco KBW Premium Yield Equity REIT	KBWY	0.35	198.5	-28.25	-10.88	-1.10

#### U.S. EQUITY: HIGH DIVIDEND YIELD

Schwab US Dividend Equity	SCHD	0.06	15,420.0	11.66	11.02	13.34
SPDR S&P Dividend	SDY	0.35	16,972.4	-1.18	6.23	10.22
First Trust Value Line Dividend	FVD	0.70	9,933.5	-2.12	6.12	9.77
Vanguard High Dividend Yield	VYM	0.06	30,397.2	-2.19	5.03	9.01
First Trust Mstar Dividend Leaders	FDL	0.45	1,386.4	-7.11	3.36	8.11
WisdomTree US High Dividend	DHS	0.38	761.0	-7.86	1.88	6.56
iShares Select Dividend	DVY	0.39	14,398.7	-8.00	2.12	7.79
Invesco High Yield Equity Div Achievers	PEY	0.52	721.3	-8.12	2.05	8.22
iShares Core High Dividend	HDV	0.08	5,751.5	-8.43	3.00	6.94
Invesco S&P Ultra Dividend Revenue	RDIV	0.39	638.0	-14.25	0.76	6.90
Global X SuperDividend US	DIV	0.46	469.1	-25.14	-7.01	-0.98

#### GLOBAL EQUITY

ARK Innovation	ARKK	0.75	12,962.1	124.52	46.90	41.57
ProShares Pet Care	PAWZ	0.50	161.5	49.99	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
AdvisorShares DW FSM All Cap World	DWAW	1.24	120.6	38.74	-	-
iShares MSCI Global Impact	SDG	0.49	295.1	35.84	17.01	-
ClearBridge All Cap Growth	CACG	0.54	193.2	22.83	16.26	-
First Trust Dorsey Wright Focus 5	FV	0.87	2,304.2	22.71	12.52	10.97
Davis Select Worldwide	DWLD	0.63	324.5	17.33	7.36	-
iShares Global 100	IOO	0.40	2,714.0	13.41	11.74	12.64
iShares MSCI ACWI Low Carbon Target	CRBN	0.20	572.0	12.25	9.76	11.07
SPDR Portfolio MSCI Global Stock Market	SPGM	0.09	487.7	11.17	8.91	10.65
iShares MSCI ACWI	ACWI	0.32	14,252.3	11.12	9.05	11.02
Vanguard Total World Stock	VT	0.08	16,148.4	11.12	8.91	10.94
First Trust Dorsey Wright Dynamic Focus 5	FVC	0.71	216.2	7.79	5.69	-
Inspire Global Hope	BLES	0.52	122.1	7.03	7.04	-
Principal Active Global Dividend Income	GDVD	0.58	310.5	5.56	7.51	-
iShares MSCI Global Min Vol Factor	ACWW	0.20	5,858.8	0.41	6.47	8.88
Goldman Sachs Innovate Equity	GINN	0.50	322.5	-	-	-

#### GLOBAL EQUITY EX-U.S.

First Trust Intl Equity Opportunities	FPXI	0.70	545.1	56.44	22.96	19.63
Davis Select International	DINT	0.68	272.0	18.74	-	-
American Century Quality Diversified Intl	QINT	0.39	119.4	12.54	-	-
Invesco International BuyBack Achievers	IPKW	0.55	110.2	10.45	2.42	8.79
WisdomTree Gbl ex-US Qual Div Growth	DNL	0.58	273.8	10.29	9.39	11.56
Vanguard Intl Dividend Appreciation	VIGI	0.20	2,816.8	9.36	7.66	-
Vanguard ESG International Stock	VGX	0.17	1,530.3	6.99	-	-
Vanguard FTSE All-World ex-US	VEU	0.08	28,123.0	5.11	3.89	7.44
iShares Core MSCI Total Intl Stock	IXUS	0.09	24,284.0	4.76	3.67	7.41
Vanguard FTSE All-World ex-US Small-Cap	VSS	0.11	5,480.2	4.59	2.18	6.87
Vanguard Total International Stock	VXUS	0.08	35,264.9	4.57	3.60	7.32
iShares MSCI ACWI ex US	ACWX	0.32	3,642.5	4.49	3.55	7.07
SPDR MSCI ACWI ex-US	CWI	0.30	1,431.9	3.83	3.51	7.11
iShares International Dividend Growth	IGRO	0.22	116.2	2.54	4.00	-
First Trust Dorsey Wright Intl Focus 5	IFV	1.06	245.0	-0.71	0.79	4.80
FlexShares International Quality Dividend	IQDF	0.47	516.5	-2.43	0.13	4.97
Avantis International Small Cap Value	AVDV	0.36	346.0	-3.35	-	-
Vident International Equity	VIDI	0.59	459.8	-5.36	-2.47	5.18
Invesco International Dividend Achievers	PID	0.53	530.1	-10.72	1.35	3.91

#### INTERNATIONAL EQUITY: BLENDED DEVELOPMENT

ClearBridge Large Cap Growth ESG	LRGE	0.59	124.5	28.24	20.49	-
iShares Asia 50	AIA	0.50	2,407.2	24.32	9.88	15.54
iShares MSCI All Country Asia ex Japan	AAXJ	0.68	5,204.0	16.04	6.03	11.05
Fidelity Blue Chip Growth	FBCG	0.59	142.6	-	-	-

#### INTERNATIONAL EQUITY: DEVELOPED

BlueStar Israel Technology	ITEQ	0.75	147.7	42.33	24.47	19.88
iShares MSCI Denmark	EDEN	0.53	137.3	32.98	13.27	12.40
iShares MSCI Sweden	EWSD	0.55	371.5	18.64	7.96	8.69
iShares MSCI New Zealand	ENZL	0.50	184.7	15.81	17.13	17.34
iShares MSCI Intl Momentum Factor	IMTM	0.30	750.2	15.73	7.53	9.18
iShares MSCI Netherlands	EWNL	0.50	263.9	15.60	9.46	11.84
Invesco DWA DM Momentum	PIDZ	0.81	163.2	12.56	6.63	7.76
Knowledge Leaders Developed World	KLW	0.75	169.5	12.21	8.07	10.84
FlexShares STOXX Global ESG Impact	ESGG	0.42	126.4	11.97	10.30	-
iShares MSCI EAFE Growth	EFG	0.40	9,931.2	11.88	8.02	8.82
iShares MSCI World	URTH	0.24	1,117.2	11.40	9.86	11.09
Invesco S&P Intl Developed Quality	IDHQ	0.29	113.2	10.46	8.20	9.18
iShares MSCI Kokusai	TOK	0.25	171.4	10.28	9.94	11.32
Franklin FTSE Japan	FLJP	0.09	579.6	9.74	4.12	-
WisdomTree Intl Quality Dividend Growth	IQDG	0.42	148.2	9.61	6.31	-
iShares MSCI Japan	EWJ	0.49	12,890.2	9.56	4.19	7.18
JPMorgan BetaBuilders Japan	BBJP	0.19	6,191.5	9.49	-	-
Vanguard FTSE Pacific	VPL	0.08	4,189.4	9.22	3.91	8.27
iShares Core MSCI Pacific	IPAC	0.09	1,102.4	6.82	4.14	8.01
iShares MSCI Intl Quality Factor	IQLT	0.30	2,550.0	6.79	7.19	8.29
iShares MSCI Switzerland	EWL	0.50	1,697.2	6.35	8.93	8.96
WisdomTree Intl Hedged Qual Div Growth	IHDG	0.58	829.6	6.22	7.97	8.63
Xtrackers MSCI Japan Hedged Equity	DBJP	0.45	209.6	6.11	3.30	4.79
iShares Currency Hedged MSCI Japan	HEWJ	0.49	327.1	5.66	3.18	4.77

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
SPDR S&P International Small Cap	GWX	0.40	752.5	5.53	1.27	6.78
ProShares MSCI EAFE Dividend Growers	EFAD	0.51	129.4	5.32	5.64	5.14
IQ Candriam ESG International Equity	IQSI	0.15	121.2	5.25	-	-
iShares MSCI Germany	EWG	0.49	2,811.0	5.03	-0.67	4.54
SPDR MSCI EAFE Fossil Fuel Reserves Free	EFAX	0.20	151.7	4.50	3.56	-
iShares MSCI EAFE Small-Cap	SCZ	0.40	10,621.7	4.32	3.20	7.82
Invesco FTSE RAFI DM ex-US Small-Mid	PDN	0.49	355.8	4.28	1.31	7.08
SPDR Portfolio Developed World ex-US	SPDW	0.04	8,967.1	4.22	3.59	6.74
Vanguard FTSE Developed Markets	VEA	0.05	84,745.9	3.88	3.35	6.64
Schwab International Equity	SCHF	0.06	22,457.9	3.77	3.35	6.60
iShares MSCI Europe Small-Cap	IEUS	0.40	148.9	3.73	3.53	7.29
Schwab International Small-Cap Equity	SCHC	0.11	2,842.8	3.41	2.17	6.45
iShares MSCI Eurozone	EZU	0.49	4,733.6	3.33	1.86	5.83
Fidelity Dividend for Rising Rates	FDRR	0.29	300.0	3.30	8.64	-
JPMorgan BetaBuilders Canada	BBCA	0.19	4,208.7	3.14	-	-
iShares Core MSCI International DM	IDEV	0.05	3,819.9	3.07	3.47	-
iShares ESG Aware MSCI EAFE	ESGD	0.20	3,706.3	2.97	3.59	-
JPMorgan BetaBuilders Intl Equity	BBIN	0.07	2,184.8	2.87	-	-
iShares MSCI Israel	EIS	0.59	113.9	2.82	7.29	4.78
iShares Core MSCI EAFE	IEFA	0.07	81,113.0	2.78	3.19	6.44
iShares MSCI Saudi Arabia	KSA	0.74	532.8	2.78	10.07	7.76
Nationwide Risk-Based Intl Equity	RBIN	0.42	119.4	2.59	2.62	-
Goldman Sachs ActiveBeta Intl Equity	GSIE	0.25	2,036.0	2.47	3.46	6.53
iShares MSCI EAFE	EFA	0.32	51,343.3	2.45	2.98	5.94
IQ 50 Percent Hedged FTSE International	HFXI	0.20	295.0	2.45	3.98	6.37
iShares MSCI Canada	EWC	0.49	2,435.7	2.32	3.90	7.73
SPDR MSCI EAFE StrategicFactors	QEFA	0.30	456.2	2.22	4.14	6.51
JPMorgan BetaBuilders Dev Asia ex-Japan	BBAX	0.19	1,735.1	2.16	-	-
Avantis International Equity	AVDE	0.23	421.9	2.13	-	-
First Trust RiverFront Dynamic Dev Intl	RFDI	0.83	136.9	1.88	0.45	-
iShares MSCI Australia	EWA	0.50	1,512.5	1.84	4.57	8.33
John Hancock Multifactor Dev Intl	JHMD	0.39	476.5	1.83	1.85	-
SPDR Portfolio Europe	SPEU	0.09	204.9	1.66	3.77	5.27
iShares MSCI Intl Small-Cap Multifactor	ISCF	0.40	150.5	1.00	2.17	7.65
SPDR Euro STOXX 50	FEZ	0.29	1,873.4	0.74	1.77	5.14
Schwab Fundamental Intl Small Company	FNDC	0.39	2,084.5	0.42	0.10	6.46
JPMorgan BetaBuilders Europe	BBEU	0.09	4,377.6	0.41	-	-
Vanguard FTSE Europe	VGK	0.08	13,727.3	0.40	2.69	5.62
iShares Core MSCI Europe	IEUR	0.09	3,821.2	0.34	2.68	5.51
iShares MSCI Pacific ex-Japan	EPP	0.48	2,025.6	0.28	2.99	7.68
iShares MSCI France	EWQ	0.50	900.9	-0.02	3.28	7.59
Franklin FTSE Europe	FLEE	0.09	234.8	-0.07	1.55	-
iShares MSCI Hong Kong	EWK	0.49	1,425.0	-0.32	0.87	6.80
Xtrackers MSCI EAFE Hedged Equity	DBEF	0.35	3,766.7	-0.68	4.30	6.11
iShares Europe	IEV	0.59	1,566.7	-0.71	2.05	4.86
iShares Currency Hedged MSCI EAFE	HEFA	0.35	2,379.7	-0.81	4.27	6.11
IQ 500 International	IQIN	0.25	253.7	-0.83	-	-
Invesco RAFI Strategic Developed ex-US	ISDX	0.23	270.6	-0.92	-	-
JPMorgan Diversified Return Intl Equity	JPIN	0.37	926.2	-0.94	0.65	4.48
iShares Currency Hedged MSCI Eurozone	HEZU	0.52	599.2	-1.21	4.36	5.49
WisdomTree Japan Hedged Equity	DXJ	0.48	1,621.7	-1.39	-1.33	2.28
FlexShares Mstar DM ex-US Factor Tilt	TLTD	0.39	590.5	-1.56	0.08	5.28
First Trust DM ex-US AlphaDEX	FDT	0.80	357.9	-1.66	-1.83	4.52
First Trust Europe AlphaDEX	FEP	0.80	382.4	-1.68	0.70	6.20
Schwab Fundamental Intl Large Company	FNDF	0.25	5,135.4	-1.92	0.46	5.22
Fidelity High Dividend	FDVV	0.29	603.7	-2.17	6.87	-
iShares MSCI Italy	EWI	0.49	194.2	-2.17	0.50	3.01
iShares MSCI Intl Multifactor	INTF	0.30	907.6	-2.53	-0.27	4.19
Invesco FTSE RAFI Developed Mkts ex-US	PXF	0.45	1,044.0	-2.77	-0.29	4.69
iShares MSCI EAFE Min Vol Factor	EFMV	0.20	10,764.5	-3.01	2.46	5.15
Xtrackers MSCI Europe Hedged Equity	DBEU	0.45	446.3	-3.41	4.31	6.00
WisdomTree Japan SmallCap Dividend	DFJ	0.58	184.6	-3.52	-2.09	6.17
Hartford Multifactor Dev Markets (ex-US)	RODM	0.29	2,075.5	-4.37	0.84	5.40
WisdomTree Europe Hedged Equity	HEDJ	0.58	1,920.8	-4.42	3.04	4.87
VictoryShares MSCI Intl Value Momentum	UVM	0.35	399.1	-4.73	-2.66	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
WisdomTree Intl MidCap Dividend	DIM	0.58	159.3	-4.79	-0.58	4.66
WisdomTree Intl Dividend ex-Financials	DOO	0.58	135.1	-5.83	0.43	3.78
Pacer Trendpilot International	PTIN	0.66	126.0	-5.92	-	-
iShares MSCI Spain	EWP	0.50	517.7	-6.56	-4.25	0.87
WisdomTree International Equity	DWM	0.48	596.2	-6.89	-1.02	3.69
ALPS International Sector Dividend Dogs	IDOG	0.50	149.8	-7.04	-0.12	4.73
iShares MSCI EAFE Value	EFV	0.39	7,237.7	-7.14	-2.48	2.60
WisdomTree Europe SmallCap Dividend	DFE	0.58	272.1	-7.50	-1.54	4.71
WisdomTree Intl SmallCap Dividend	DLS	0.58	1,376.3	-7.56	-1.96	5.25
WisdomTree Intl LargeCap Dividend	DOL	0.48	346.5	-7.58	-0.93	3.27
WisdomTree Dyn Currency Hedged Intl	DDWM	0.40	145.5	-7.85	-0.04	-
Pacer Global Cash Cows Dividend	GCOW	0.60	128.7	-8.85	0.24	-
iShares MSCI Intl Value Factor	IVLU	0.30	546.6	-9.15	-3.14	1.85
iShares MSCI Singapore	EWS	0.50	633.5	-11.38	-3.29	3.46
Invesco S&P Intl Developed Low Vol	IDLV	0.25	838.4	-12.93	-0.98	3.68
iShares MSCI United Kingdom	EWU	0.50	2,735.2	-15.87	-3.05	0.12
Global X MSCI Greece	GREK	0.57	146.7	-23.64	-3.17	-0.32
Xtrackers MSCI Kokusai Equity	KOKU	0.09	821.5	-	-	-
Goldman Sachs MarketBeta International	GSID	0.20	305.7	-	-	-
<b>INTERNATIONAL EQUITY: EMERGING</b>						
KraneShares CSI China Internet	KWEB	0.76	3,891.7	54.97	11.48	15.40
WisdomTree China ex-SOE	CXSE	0.32	590.7	49.45	14.90	20.84
Invesco Golden Dragon China	PGJ	0.70	225.4	40.60	11.36	13.56
First Trust Chindia	FNI	0.60	237.1	39.39	13.81	15.36
KraneShares Boseria MSCI China A Share	KBA	0.60	787.8	32.25	10.29	6.83
iShares MSCI China A	CNYA	0.60	551.4	31.82	10.43	-
Xtrackers Harvest CSI 300 China A-Shares	ASHR	0.65	2,449.2	29.22	8.93	7.52
SPDR S&P China	GXC	0.59	1,778.6	25.47	8.28	12.98
iShares MSCI China	MCHI	0.59	6,587.7	24.99	8.07	13.10
iShares MSCI South Korea	EYW	0.59	6,174.2	22.88	2.74	9.84
Invesco BLDRS Emerging Markets 50 ADR	ADRE	0.18	167.1	21.72	9.72	13.87
iShares MSCI Taiwan	EWT	0.59	5,019.5	20.25	13.19	15.44
WisdomTree Emerging Markets ex-SOE	XSOE	0.32	2,861.7	19.58	7.72	13.18
SPDR S&P Emerging Asia Pacific	GMF	0.49	634.0	18.58	7.79	12.19
iShares MSCI Emerging Markets Asia	EEMA	0.50	621.5	17.72	6.34	11.79
iShares Currency Hedged MSCI EM	HEEM	0.68	183.9	11.93	6.34	9.56
Xtrackers MSCI EM Hedged Equity	DBEM	0.65	114.7	11.81	5.76	8.87
iShares MSCI BRIC	BKF	0.69	220.0	11.65	6.41	12.44
iShares MSCI Emerging Markets Small-Cap	EEMS	0.69	231.0	11.30	1.56	6.38
SPDR MSCI EM Fossil Fuel Reserves Free	EEMX	0.30	119.1	11.14	4.47	-
iShares MSCI India Small Cap	SMIN	0.76	217.1	10.72	-6.44	4.91
iShares ESG Aware MSCI EM	ESGE	0.25	5,611.2	10.59	5.42	-
Invesco DWA Emerging Mkts Momentum	PIE	0.90	168.6	10.49	3.19	7.89
iShares Core MSCI Emerging Markets	IEMG	0.13	62,555.7	10.06	4.57	10.04
iShares MSCI Emerging Markets	EEM	0.68	26,937.7	9.24	4.30	9.86
Vanguard FTSE Emerging Markets	VWO	0.10	67,915.1	8.66	5.07	9.76
SPDR S&P Emerging Markets Small Cap	EWX	0.65	569.3	8.21	1.82	7.87
Schwab Emerging Markets Equity	SCHE	0.11	8,114.4	8.07	5.28	10.15
SPDR Portfolio Emerging Markets	SPEM	0.11	5,026.1	7.95	4.64	10.12
WisdomTree India Earnings	EPI	0.84	672.0	7.16	0.72	7.03
Avantis Emerging Markets Equity	AVEM	0.33	409.5	6.19	-	-
Goldman Sachs ActiveBeta EM Equity	GEM	0.45	1,697.6	5.60	3.40	8.82
FlexShares Mstar EM Factor Tilt	TLTE	0.59	258.9	4.34	0.80	7.55
iShares MSCI India	INDA	0.69	3,588.3	4.06	2.61	6.90
John Hancock Multifactor Emerging Mkts	JHEM	0.49	728.1	3.56	-	-
iShares MSCI Emerging Mkts Multifactor	EMGF	0.45	619.6	2.75	1.17	-
SPDR MSCI Emerging Mkts StrategicFactors	QEMM	0.30	148.4	2.56	2.04	7.34
iShares MSCI EM Min Vol Factor	EEMV	0.25	4,165.0	1.82	2.57	5.92
PIMCO RAFI Dynamic Multi-Factor EM	MFEM	0.49	735.2	1.31	2.04	-
iShares India 50	INDY	0.93	617.1	1.07	3.41	7.87
iShares MSCI Malaysia	EWM	0.49	386.4	-0.67	-1.11	0.86
WisdomTree EM SmallCap Dividend	DCS	0.63	1,635.2	-1.32	1.25	8.57
First Trust EM Small Cap AlphaDEX	FEMS	0.80	141.7	-1.34	1.95	10.37
VictoryShares MSCI EM Value Momentum	UEVM	0.45	269.1	-2.36	-2.39	-
JPMorgan Diversified Return EM Equity	JPEM	0.44	232.4	-7.12	0.01	6.50

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Invesco S&P Emerging Mkts Low Volatility	EELV	0.29	291.2	-7.75	-0.15	3.70
iShares MSCI Peru	EPV	0.59	124.3	-8.34	-4.20	11.62
Invesco FTSE RAFI Emerging Markets	PXH	0.50	1,104.4	-8.56	0.75	9.17
First Trust Emerging Markets AlphaDEX	FEM	0.80	418.3	-8.69	-0.77	7.99
VanEck Vectors Russia	RSX	0.67	1,383.4	-8.69	6.82	10.76
Schwab Fundamental EM Large Company	FNDE	0.39	3,455.1	-9.54	0.21	9.14
iShares MSCI Mexico	EWX	0.49	1,208.5	-9.56	-4.78	-3.36
iShares MSCI Philippines	EPHE	0.59	130.5	-9.78	-5.02	-1.54
iShares Emerging Markets Dividend	DVYE	0.49	626.2	-10.37	0.19	7.53
WisdomTree EM High Dividend	DEM	0.63	1,668.9	-10.52	1.36	7.80
iShares MSCI Thailand	THD	0.59	419.0	-12.53	-3.31	5.94
SPDR S&P Emerging Markets Dividend	EDIV	0.49	278.2	-14.13	-1.29	5.04
iShares MSCI Indonesia	EIDO	0.59	354.0	-14.36	-5.00	2.83
iShares MSCI South Africa	EZA	0.59	359.5	-14.69	-8.28	-0.22
iShares MSCI Russia	ERUS	0.59	472.5	-15.79	7.23	11.35
iShares MSCI Poland	EPOL	0.61	249.1	-16.13	-11.24	0.89
iShares MSCI Turkey	TUR	0.59	269.5	-17.16	-13.91	-7.90
iShares MSCI Chile	ECH	0.59	485.4	-17.75	-13.96	-1.72
iShares Latin America 40	ILF	0.48	1,179.1	-21.60	-4.20	5.54
iShares MSCI Brazil	EWZ	0.59	5,867.9	-29.08	-2.33	10.75
iShares ESG MSCI EM Leaders	LDEM	0.16	813.5	-	-	-
<b>INTERNATIONAL EQUITY: FRONTIER</b>						
VanEck Vectors Vietnam	VNM	0.66	416.8	-0.19	-1.11	2.29
iShares MSCI Frontier 100	FM	0.79	401.3	-7.95	-2.53	4.46
<b>GLOBAL EQUITY: SECTOR</b>						
Invesco Solar	TAN	0.71	2,812.6	174.61	52.40	28.43
Invesco WilderHill Clean Energy	PBW	0.70	1,696.2	170.15	56.64	36.05
First Trust NASDAQ Cl Edge Green Energy	QCLN	0.60	1,552.9	156.07	47.30	34.95
ARK Genomic Revolution	ARKG	0.75	3,916.5	143.74	50.21	33.31
ARK Next Generation Internet	ARKW	0.79	4,078.4	136.34	51.39	46.36
Invesco Global Clean Energy	PBD	0.75	200.3	112.32	35.07	23.93
ALPS Clean Energy	ACES	0.65	616.9	110.20	-	-
SPDR S&P Kensho Clean Power	CNRG	0.45	148.9	109.09	-	-
iShares Global Clean Energy	ICLN	0.46	3,060.2	101.12	40.76	22.92
O'Shares Global Internet Giants	OGIG	0.48	579.4	95.05	-	-
ARK Fintech Innovation	ARKF	0.75	1,239.7	94.58	-	-
VanEck Vectors Low Carbon Energy	SMOG	0.62	243.8	93.48	35.83	23.87
Global X Lithium & Battery Tech	LIT	0.75	1,371.2	91.98	12.38	23.39
ARK Autonomous Technology & Robotics	ARKQ	0.75	1,096.9	85.08	28.24	29.75
Global X Video Games & Esports	HERO	0.50	480.0	75.02	-	-
VanEck Vectors Video Gaming/eSports	ESPO	0.55	640.0	71.71	-	-
WedbushMG Video Game Tech	GAMR	0.75	137.1	67.63	18.38	-
Global X Cloud Computing	CLOU	0.68	1,401.7	64.35	-	-
Global X Social Media	SOCL	0.65	264.2	64.20	20.63	23.31
Amplify Transformational Data Sharing	BLOK	0.70	199.2	61.52	-	-
Siren Nasdaq NexGen Economy	BLCN	0.68	156.9	50.72	-	-
iShares Gen Immunology/Healthcare	IDNA	0.47	192.4	50.01	-	-
Global X Autonomous & Electric Vehicles	DRIV	0.68	136.6	47.96	-	-
Global X Artificial Intelligence/Tech	AIQ	0.68	120.6	45.62	-	-
Global X Robotics & Artificial Intelligence	BOTZ	0.68	2,146.7	45.11	10.75	-
AdvisorShares Pure Cannabis	YOLO	0.75	115.8	43.97	-	-
First Trust Global Wind Energy	FAN	0.62	321.1	43.71	20.29	16.67
Global X FinTech	FINX	0.68	875.0	40.66	25.21	-
iShares Robotics/AI Multisector	IRBO	0.47	240.4	40.41	-	-
Invesco Cleantech	PZD	0.65	393.4	38.04	18.29	19.07
VanEck Vectors Rare Earth/Strat Metals	REMX	0.60	242.8	36.81	-8.83	8.59
First Trust Nasdaq AI/Robotics	ROBT	0.65	165.6	35.98	-	-
iShares Global Tech	IXN	0.46	4,647.2	34.67	23.57	24.16
ALPS Disruptive Technologies	DTEC	0.50	149.9	33.49	-	-
ROBO Global Robotics and Automation	ROBO	0.95	1,519.0	33.43	10.65	17.96
Global X Copper Miners	COPX	0.65	159.3	33.13	5.34	18.17
iShares MSCI Global Silver/Metals Miners	SLVP	0.39	201.5	32.55	14.98	21.89
First Trust NASDAQ Cybersecurity	CIBR	0.60	2,486.5	30.71	20.43	16.53
iShares Cybersecurity and Tech	IHAK	0.47	167.6	29.75	-	-
iShares Exponential Technologies	XT	0.47	2,938.5	27.37	16.68	18.16

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Global X Internet of Things	SNSR	0.68	296.8	26.89	15.42	-
Defiance Next Gen Connectivity	FINV	0.30	722.6	24.47	-	-
ETFMG Prime Mobile Payments	IPAY	0.75	929.9	23.81	21.32	19.43
ETFMG Prime Cyber Security	HACK	0.60	1,669.7	23.21	17.75	13.85
Global X Silver Miners	SIL	0.66	932.8	20.87	9.91	17.20
First Trust Indxx NextG	NXTG	0.70	729.9	20.08	9.15	13.06
iShares Global Comm Services	IXP	0.46	341.7	19.13	9.03	7.42
iShares Global Consumer Discretionary	RXI	0.46	355.2	19.00	13.06	11.71
iShares MSCI Global Gold Miners	RING	0.39	450.2	18.55	17.54	22.44
VanEck Vectors Gold Miners	GDX	0.52	15,261.7	18.44	16.33	21.06
VanEck Vectors Junior Gold Miners	GDXJ	0.53	5,623.3	18.39	16.84	23.12
Sprott Gold Miners	SGDM	0.50	249.2	18.33	14.96	18.75
Invesco Water Resources	PHO	0.60	1,252.6	16.25	14.13	15.66
First Trust Water	FIW	0.55	647.1	16.03	12.77	18.12
U.S. Global GO Gold/Prec Metal Miners	GOAU	0.60	110.8	14.86	18.37	-
iShares Global Materials	MXI	0.45	540.8	14.75	7.00	12.62
Global X US Infrastr Development	PAVE	0.47	661.5	14.16	8.60	-
First Trust NASDAQ Technology Dividend	TDIV	0.50	1,309.5	12.04	13.43	15.46
Invesco Global Water	PIO	0.75	226.3	10.83	10.94	11.10
iShares MSCI Global Metals/Mining Prod	PICK	0.39	348.5	10.50	5.25	16.05
ETFMG Prime Junior Silver Miners	SILJ	0.69	454.6	10.05	10.53	21.90
Invesco S&P Global Water	CGW	0.59	791.9	9.94	9.73	11.42
VanEck Vectors Agribusiness	MOO	0.56	745.0	9.12	8.62	11.11
iShares Global Healthcare	IXJ	0.46	2,375.4	8.95	11.25	9.58
iShares Global Industrials	EXI	0.46	344.2	8.71	6.44	10.29
iShares Global Timber & Forestry	WOOD	0.46	262.4	8.51	2.88	8.79
Global X Uranium	URA	0.71	155.9	8.32	-4.34	-0.01
iShares Global Consumer Staples	KXI	0.46	605.9	4.52	5.51	6.61
Invesco Global Listed Private Equity	PSP	1.58	178.2	3.33	6.82	9.43
VanEck Vectors Pharmaceutical	PPH	0.36	263.8	2.82	6.16	2.07
iShares Global Utilities	JXI	0.46	148.9	2.78	7.48	9.91
FlexShares STOXX Global Broad Infrastr	NFRA	0.47	2,112.5	-0.06	5.39	7.37
SPDR S&P North American Natural Res	NANR	0.35	458.1	-2.95	0.68	-
ETFMG Alternative Harvest	MJ	0.75	929.9	-3.17	-15.39	-
FlexShares Mstar Global Upstr Nat Res	GUNR	0.46	3,427.3	-4.98	2.31	8.43
SPDR S&P Global Natural Resources	GNR	0.40	1,237.8	-6.69	-0.07	7.49
iShares Global Financials	IXG	0.46	312.4	-7.96	-0.65	5.45
iShares Global Infrastructure	IGF	0.46	3,168.7	-9.25	0.58	5.89
SPDR S&P Global Infrastructure	GII	0.40	372.0	-9.30	0.68	6.01
ProShares DJ Brookfield Global Infrastr	TOLZ	0.47	142.8	-9.40	1.95	5.40
Davis Select Financial	DFNL	0.64	151.7	-10.55	0.88	-
FlexShares Global Quality Real Estate	GORE	0.45	282.8	-11.98	-0.55	2.93
iShares Global REIT	REET	0.14	2,350.6	-14.10	0.84	3.00
SPDR Dow Jones Global Real Estate	RWO	0.50	1,578.1	-14.26	-0.33	1.92
iShares North American Natural Resources	IGE	0.46	351.0	-22.61	-9.10	-3.62
US Global Jets	JETS	0.60	2,757.0	-30.07	-11.04	-1.84
iShares Global Energy	IXC	0.46	927.9	-33.68	-12.72	-4.81
Global X SuperDividend REIT	SRET	0.59	376.3	-39.22	-10.51	-0.12
VanEck Vectors Oil Services	OIH	0.35	650.2	-47.96	-33.00	-24.40
Global X Telemedicine & Digital Health	EDOC	0.68	486.0	-	-	-
Roundhill Sports Betting & iGaming	BETZ	0.75	153.5	-	-	-
AdvisorShares Pure US Cannabis	MSOS	0.74	123.7	-	-	-
<b>GLOBAL EX-U.S. EQUITY: SECTOR</b>						
VanEck Vectors Biotech	BBH	0.35	486.5	21.27	10.86	6.73
Xtrackers International Real Estate	HAUZ	0.10	316.9	-9.94	-1.08	5.51
Vanguard Global ex-US Real Estate	VNQL	0.12	4,731.2	-10.46	0.59	4.85
iShares Intl Developed Real Estate	IFGL	0.48	257.8	-10.96	1.07	3.99
SPDR Dow Jones International Real Estate	RWX	0.59	891.5	-14.06	-0.79	1.48
<b>INTERNATIONAL EQUITY: DEVELOPED SECTOR</b>						
iShares MSCI Europe Financials	EUFN	0.48	959.4	-12.31	-6.35	-0.42
<b>INTERNATIONAL EQUITY: EMERGING SECTOR</b>						
Global X MSCI China Consumer Discr	CHIQ	0.65	553.3	84.86	26.81	23.48
Emerging Markets Internet & Ecommerce	EMQQ	0.86	1,324.8	70.48	18.23	20.76
Invesco China Technology	CQQQ	0.70	1,229.7	47.30	8.63	17.00
KraneShares MSCI All China Health Care	KURE	0.65	140.7	46.17	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
KraneShares EM Consumer Technology	KEMQ	0.60	124.4	28.49	8.75	-
Columbia Emerging Markets Consumer	ECON	0.59	179.1	14.31	0.10	4.12
<b>GLOBAL EQUITY: HIGH DIVIDEND YIELD</b>						
First Trust Dow Jones Global Select Div	FGD	0.59	384.3	-10.00	-0.89	4.09
SPDR S&P Global Dividend	WDIV	0.40	176.9	-13.18	-0.87	4.29
Global X SuperDividend	SDIV	0.59	741.7	-25.43	-10.00	-2.38
<b>GLOBAL EX-U.S. EQUITY: HIGH DIVIDEND YIELD</b>						
Vanguard Intl High Dividend Yield	VYMI	0.27	1,605.9	-6.06	-0.30	-
SPDR S&P International Dividend	DWIX	0.45	590.4	-7.81	-0.02	5.36
<b>INTERNATIONAL EQUITY: HIGH DIVIDEND YIELD</b>						
Xtrackers MSCI EAFE High Dividend Yield	HDEF	0.20	519.4	-6.01	0.01	2.47
First Trust Stoxx European Select Div	FDD	0.58	208.6	-7.61	1.51	4.62
iShares International Select Dividend	IDV	0.49	3,658.1	-10.76	0.22	4.66
WisdomTree International High Dividend	DTH	0.58	169.1	-11.53	-2.54	2.54
<b>U.S. FIXED INCOME: BROAD MARKET - BROAD MATURITIES</b>						
Fidelity Corporate Bond	FCOR	0.36	247.2	10.45	7.51	6.66
iShares Core Total USD Bond Market	IUSB	0.06	5,986.2	7.21	5.38	4.56
iShares Yield Optimized Bond	BYLD	0.20	197.1	3.78	5.03	4.82
iShares Edge US Fixed Income Bal Risk	FIBR	0.25	122.6	2.67	3.86	3.99
iShares ESG Adv Total USD Bond Market	EUSB	0.12	136.5	-	-	-
<b>U.S. FIXED INCOME: BROAD MARKET - LONG-TERM</b>						
iShares Core 10+ Year USD Bond	ILTB	0.06	410.4	16.03	10.40	9.29
<b>U.S. FIXED INCOME: BROAD MARKET - SHORT-TERM</b>						
iShares Core 1-5 Year USD Bond	ISTB	0.06	4,750.9	4.43	3.70	3.02
VictoryShares USAA Core Short-Term Bond	USTB	0.34	243.8	4.10	3.52	-
First Trust Low Duration Strategic Focus	LDSF	0.82	145.4	1.87	-	-
First Trust Enhanced Short Maturity	FTSM	0.40	5,099.8	1.08	1.97	1.70
<b>U.S. FIXED INCOME: GOVERNMENT/CREDIT - INTERMEDIATE</b>						
VictoryShares Core Intermediate Bond	UITB	0.38	591.7	8.60	6.29	-
iShares Core 5-10 Year USD Bond	IMTB	0.06	131.1	5.68	4.90	-
Vident Core US Bond Strategy	VBND	0.41	403.2	5.17	4.56	3.74
<b>U.S. FIXED INCOME: GOVERNMENT/CREDIT - LONG-TERM</b>						
SPDR Portfolio Long Term Corporate Bond	SPLB	0.07	913.0	13.55	9.97	9.89
Vanguard Long-Term Corporate Bond	VCLT	0.05	5,738.1	13.49	10.14	9.81
iShares 10+ Year Investment Grade Corp	IGLB	0.06	2,557.3	13.33	9.86	9.52
iShares iBonds Dec 2028 Term Corporate	IBDT	0.10	210.0	9.10	-	-
Invesco BulletShares 2027 Corporate Bond	BSCR	0.10	250.2	8.76	7.02	-
iShares Int Rate Hedged Long-Term Corp	IGBH	0.16	592.8	-0.57	2.03	4.13
ProShares Inv Grade-Interest Rate Hedged	IGHG	0.30	457.7	-0.98	2.53	3.64
<b>U.S. FIXED INCOME: GOVERNMENT</b>						
Invesco 1-30 Laddered Treasury	PLW	0.25	124.8	13.36	7.81	5.59
iShares US Treasury Bond	GOVT	0.15	14,472.5	8.11	5.27	3.65
WisdomTree Floating Rate Treasury	USFR	0.15	1,300.3	0.54	1.54	1.24
iShares Treasury Floating Rate Bond	TFLO	0.15	407.3	0.45	1.48	1.15
Franklin Liberty US Treasury Bond	FLGV	0.09	422.8	-	-	-
<b>U.S. FIXED INCOME: TREASURY - SHORT TERM</b>						
SPDR Portfolio Short Term Treasury	SPTS	0.06	3,025.4	3.10	2.55	1.81
Schwab Short-Term US Treasury	SCHO	0.05	8,006.1	3.06	2.69	1.81
Vanguard Short-Term Treasury	VGSH	0.05	9,516.1	3.01	2.69	1.82
iShares 1-3 Year Treasury Bond	SHY	0.15	20,336.9	2.99	2.60	1.75
Franklin Liberty Short Duration US Govt	FTSD	0.25	528.7	2.74	2.28	1.76
Invesco Treasury Collateral	CLTL	0.08	909.3	0.90	1.70	-
iShares Short Treasury Bond	SHV	0.15	18,936.4	0.79	1.65	1.19
Goldman Sachs Access Treasury 0-1 Year	GBIL	0.12	2,834.7	0.49	1.56	-
SPDR Bloomberg Barclays 1-3 Mo T-Bill	BIL	0.14	13,220.0	0.40	-	0.99
iShares 0-3 Month Treasury Bond	SGOV	0.03	875.2	-	-	-
<b>U.S. FIXED INCOME: TREASURY - INTERMEDIATE</b>						
iShares 7-10 Year Treasury Bond	IEF	0.15	16,363.5	10.27	6.42	4.40
Schwab Intermediate-Term US Treasury	SCHR	0.05	3,770.7	7.69	5.07	3.49
SPDR Portfolio Intermediate Treasury	SPTI	0.06	2,602.7	7.67	5.26	3.50
Vanguard Intermediate-Term Treasury	VGIT	0.05	6,869.5	7.66	5.05	3.51
iShares 3-7 Year Treasury Bond	IEI	0.15	11,355.7	6.83	4.60	3.18
<b>U.S. FIXED INCOME: TREASURY - LONG-TERM</b>						
PIMCO 25+ Year Zero Coupon US Treasury	ZROZ	0.15	413.3	26.38	14.92	11.12
Vanguard Extended Duration Treasury	EDV	0.07	1,460.4	25.82	14.17	10.64



FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
iShares 20+ Year Treasury Bond	TLT	0.15	17,916.5	19.62	10.99	8.15
SPDR Portfolio Long Term Treasury	SPTL	0.06	2,720.8	19.48	10.91	7.98
Vanguard Long-Term Treasury	VGLT	0.05	2,382.8	18.95	10.85	7.99
iShares 10-20 Year Treasury Bond	TLH	0.15	1,487.2	14.99	8.52	5.88
<b>U.S. FIXED INCOME: AGENCIES</b>						
iShares Agency Bond	AGZ	0.20	978.4	5.79	4.25	3.12
<b>U.S. FIXED INCOME: AGENCY MBS</b>						
Janus Henderson MBS	JMBS	0.32	597.7	5.23	-	-
SPDR Portfolio Mortgage Backed Bond	SPMB	0.06	2,811.6	4.02	3.73	2.87
iShares MBS	MBB	0.06	25,257.3	3.91	3.71	2.89
Vanguard Mortgage-Backed Securities	VMBS	0.05	12,691.3	3.46	3.57	2.86
iShares GNMA Bond	GNMA	0.15	496.8	3.26	3.30	2.54
First Trust Low Duration Opportunities	LMBS	0.67	6,465.8	1.56	2.43	3.16
<b>U.S. FIXED INCOME: TIPS</b>						
PIMCO 15+ Year US TIPS	LTPZ	0.20	721.2	23.83	11.84	9.57
Quadratic Interest Rate Vol & Infl Hedge	IVOL	0.99	821.1	11.33	-	-
SPDR Portfolio TIPS	SPIP	0.12	2,082.6	9.98	5.95	4.72
PIMCO Broad US TIPS	TIPZ	0.20	112.0	9.79	5.85	4.67
iShares TIPS Bond	TIP	0.19	24,431.6	9.63	5.73	4.54
Schwab US TIPS	SCHP	0.05	13,505.8	9.49	5.75	4.58
FlexShares iBoxx 5-Year Target Dur TIPS	TDTF	0.18	588.8	8.52	5.35	4.17
SPDR Bloomberg Barclays 1-10 Year TIPS	TIPX	0.15	497.7	7.12	4.58	3.62
FlexShares iBoxx 3 Year Target Dur TIPS	TDTT	0.18	1,324.0	5.62	3.85	2.89
PIMCO 1-5 Year US TIPS	SPZP	0.20	674.5	4.39	3.19	2.51
iShares 0-5 Year TIPS Bond	STIP	0.06	3,030.5	4.26	3.26	2.59
Vanguard Short-Term Inflation-Protected Sec	VTIP	0.05	9,672.1	3.94	3.16	2.52
<b>U.S. FIXED INCOME: MUNICIPAL - BROAD MARKET</b>						
Invesco Taxable Municipal Bond	BAB	0.28	2,215.3	8.09	6.94	6.72
IQ MacKay Municipal Insured	MMIN	0.31	218.0	6.41	5.19	-
SPDR Nuveen Bloomberg Barclays Muni	TFI	0.23	3,349.6	5.40	4.84	3.89
VanEck Vectors CEF Municipal Income	XMPT	1.86	152.5	5.01	6.16	6.07
Invesco California AMT-Free Muni	PWZ	0.28	457.3	4.50	5.05	4.43
iShares National Muni Bond	MUB	0.07	19,483.9	4.42	4.45	3.57
Invesco National AMT-Free Muni	PZA	0.28	2,156.1	4.35	4.92	4.34
Vanguard Tax-Exempt Bond	VTXB	0.06	9,740.8	4.33	4.51	3.76
iShares California Muni Bond	CMF	0.25	1,626.7	4.28	4.32	3.48
iShares New York Muni Bond	NYF	0.25	489.0	3.38	3.85	3.15
First Trust Managed Municipal	FMB	0.50	1,778.8	3.24	4.45	4.27
First Trust Municipal High Income	FMHI	0.55	126.7	1.76	5.04	-
Hartford Municipal Opportunities	HMOP	0.29	126.3	1.55	-	-
<b>U.S. FIXED INCOME: MUNICIPAL - SHORT-TERM</b>						
VanEck Vectors AMT-Free Short Muni	SMB	0.20	230.1	2.83	3.02	2.04
SPDR Bloomberg Barclays Short Muni	SHM	0.20	4,312.5	2.55	2.62	1.64
PIMCO Short Term Municipal Bond Active	SMMU	0.35	264.8	2.53	2.58	1.85
iShares Short-Term National Muni Bond	SUB	0.07	3,896.6	2.19	2.34	1.55
JPMorgan Ultra-Short Municipal Income	JMST	0.18	892.3	1.90	-	-
BlackRock Short Maturity Municipal Bond	MEAR	0.25	286.2	1.02	1.54	1.23
<b>U.S. FIXED INCOME: MUNICIPAL - INTERMEDIATE</b>						
VanEck Vectors AMT-Free Intermdt Muni	ITM	0.24	1,728.3	4.99	5.09	4.07
iShares iBonds Dec 2025 Tm Muni Bond	IBMN	0.18	129.4	4.61	-	-
PIMCO Intermediate Muni Bond Active	MUNI	0.35	568.3	4.21	4.43	3.51
iShares iBonds Dec 2024 Term Muni Bond	IBMM	0.18	188.0	3.66	-	-
iShares iBonds Dec 2023 Term Muni Bond	IBML	0.18	281.5	2.88	3.12	-
iShares iBonds Dec 2022 Term Muni Bond	IBMK	0.18	364.2	2.09	2.44	2.12
iShares iBonds Dec 2021 Term Muni Bond	IBMJ	0.18	313.5	1.35	1.84	1.57
<b>U.S. FIXED INCOME: MUNICIPAL - LONG-TERM</b>						
VanEck Vectors AMT-Free Long Municipal	MLN	0.24	226.1	5.41	5.69	4.85
Xtrackers Muni Infrastructure Revenue	RVNU	0.15	115.6	4.99	5.51	5.04
<b>U.S. FIXED INCOME: MUNICIPAL - HIGH YIELD</b>						
SPDR Bloomberg Barclays High Yield Muni	HYMB	0.35	1,269.0	1.56	5.55	4.46
VanEck Vectors Short High-Yield Municipal	SHYD	0.35	238.3	0.48	3.77	3.03
VanEck Vectors High-Yield Municipal	HYD	0.35	3,028.8	-1.50	3.49	4.17
<b>U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - BROAD MATURITIES</b>						
Vanguard Long-Term Bond	BLV	0.05	5,664.8	16.41	11.52	10.88
iShares iBoxx USD Inv Grade Corporate	LQD	0.14	58,343.4	10.81	8.19	7.07

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
iShares Edge Inv Grade Enhanced Bond	IGEB	0.18	169.1	10.54	7.20	-
Principal Inv Grade Corporate Active	IG	0.26	333.5	10.13	-	-
SPDR Portfolio Corporate Bond	SPBO	0.06	308.8	9.84	7.53	6.20
iShares Aaa-A Rated Corporate Bond	QLTA	0.15	1,411.5	9.65	6.76	5.76
Goldman Sachs Access Inv Grade Corp	GIGB	0.14	753.5	9.55	7.29	-
iShares ESG Aware USD Corporate Bond	SUSC	0.18	675.5	9.40	7.10	-
Franklin Liberty Investment Grade Corp	FLCO	0.35	1,060.4	9.35	-	-
PIMCO Investment Grade Corporate Bond	CORP	0.20	828.4	9.13	7.09	6.44
iShares Broad USD Investment Grade Corp	USIG	0.06	5,909.4	9.09	7.04	6.15
Vanguard Total Corporate Bond	VTC	0.05	688.7	9.02	7.11	-
iShares Government/Credit Bond	GBF	0.20	188.7	8.51	5.92	4.63
FlexShares Core Select Bond	BNDX	0.35	115.2	8.36	5.37	-
Overlay Shares Core Bond	OVV	0.79	120.3	8.16	-	-
Vanguard Total Bond Market	BND	0.04	65,882.7	7.55	5.54	4.38
Schwab US Aggregate Bond	SCHZ	0.04	8,501.1	7.44	5.38	4.26
Nuveen ESG US Aggregate Bond	NUBD	0.20	180.1	7.40	5.19	-
iShares Core US Aggregate Bond	AGG	0.04	83,365.9	7.38	5.41	4.29
iShares ESG Aware US Aggregate Bond	EAGG	0.10	650.6	7.32	-	-
SPDR Portfolio Aggregate Bond	SPAB	0.04	5,524.7	7.31	5.34	4.30
Franklin Liberty US Core Bond	FLCB	0.15	1,595.4	7.26	-	-
JPMorgan US Aggregate Bond	JAGG	0.07	793.5	7.06	-	-
WisdomTree Yield Enh US Aggregate Bond	AGGY	0.12	1,207.4	5.59	5.29	4.80
Hartford Schroders Tax-Aware Bond	HTAB	0.40	117.4	4.97	-	-
Fidelity Low Duration Bond Factor	FLDR	0.15	244.7	1.92	-	-
iShares Int Rate Hedged Corporate Bond	LQDH	0.24	462.8	0.49	2.87	3.74
Goldman Sachs Access US Aggregate Bond	GCOR	0.14	120.2	-	-	-
<b>U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - SHORT-TERM</b>						
iShares 1-5 Year Inv Grade Corp Bond	IGSB	0.06	21,701.5	4.93	4.41	3.20
Schwab 1-5 Year Corporate Bond	SCHJ	0.05	129.2	4.89	-	-
Vanguard Short-Term Corporate Bond	VCSH	0.05	34,906.1	4.70	4.18	3.41
iShares ESG Aware 1-5 Year USD Corporate	SUSB	0.12	471.2	4.65	4.09	-
Vanguard Short-Term Bond	BSV	0.05	28,098.9	4.46	3.57	2.62
iShares 0-5 Year Investment Grade Corp	SLQD	0.06	2,092.3	4.39	3.89	3.07
WisdomTree Yield Enh US Short-Term Agg	SHAG	0.12	139.1	4.35	3.70	-
SPDR Portfolio Short Term Corporate Bond	SPSB	0.07	7,180.1	3.64	3.47	2.72
JPMorgan Ultra-Short Income	JPST	0.18	15,152.8	2.01	2.55	-
PIMCO Enh Short Maturity Active ESG	EMNT	0.27	138.2	2.00	-	-
BlackRock Ultra Short-Term Bond	ICSH	0.08	4,927.2	1.57	2.38	1.93
Goldman Sachs Access Ultra Short Bond	GSST	0.16	175.3	1.53	-	-
PIMCO Enhanced Short Maturity Active	MINT	0.37	14,455.8	1.50	2.21	2.08
SPDR SSGA Ultra Short Term Bond	ULST	0.20	310.5	1.38	2.23	1.89
PGIM Ultra Short Bond	PULS	0.15	1,111.4	1.34	-	-
iShares iBonds Dec 2020 Term Corporate	IBDL	0.10	952.5	1.03	1.96	2.24
Invesco BulletShares 2020 Corporate Bond	BSCX	0.10	1,208.9	0.91	1.90	2.22
ClearShares Ultra-Short Maturity	OPER	0.20	130.1	0.62	-	-
<b>U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - INTERMEDIATE</b>						
Schwab 5-10 Year Corporate Bond	SCHI	0.05	179.1	9.14	-	-
iShares 5-10 Year Investment Grade Corp	IGIB	0.06	11,221.5	9.07	7.52	5.71
Invesco BulletShares 2028 Corporate Bond	BSCS	0.10	158.1	9.04	-	-
Vanguard Intermediate Corporate Bond	VCIT	0.05	41,521.9	8.86	7.03	6.08
Invesco BulletShares 2026 Corporate Bond	BSCQ	0.10	326.9	8.60	6.85	-
iShares iBonds Dec 2027 Term Corporate	IBDS	0.10	397.2	8.30	6.91	-
FlexShares Credit-Scored US Corporate	SKOR	0.22	270.6	8.29	5.92	4.80
iShares iBonds Dec 2026 Term Corporate	IBDR	0.10	567.4	8.13	6.76	-
iShares iBonds Dec 2025 Term Corporate	IBDQ	0.10	878.1	7.65	6.30	5.83
Invesco BulletShares 2025 Corporate Bond	BSCP	0.10	728.6	7.22	6.11	5.52
SPDR Portfolio Intermediate Corporate	SPIB	0.07	5,977.4	7.13	5.60	4.71
American Century Diversified Corporate	KORP	0.29	130.1	6.25	-	-
Invesco BulletShares 2024 Corporate Bond	BSCO	0.10	1,169.3	6.16	5.30	5.18
iShares iBonds Dec 2024 Term Corporate	IBDP	0.10	1,068.2	5.70	5.10	5.06
iShares iBonds Dec 2023 Term Corporate	IBDO	0.10	1,339.8	5.08	4.57	4.37
Inspire Corporate Bond Impact	IBD	0.50	164.1	5.06	3.96	-
Invesco BulletShares 2023 Corporate Bond	BSCN	0.10	1,457.7	4.72	4.47	4.66
Invesco BulletShares 2022 Corporate Bond	BSCM	0.10	2,149.1	3.53	3.63	3.86
iShares iBonds Dec 2022 Term Corporate	IBDN	0.10	1,403.9	3.26	3.54	3.54

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
Invesco BulletShares 2021 Corporate Bond	BSCL	0.10	2,104.9	2.05	2.69	3.00
iShares iBonds Dec 2021 Term Corporate	IBDM	0.10	1,553.0	2.04	2.70	2.82
<b>U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - FLOATING RATE</b>						
Invesco Variable Rate Investment Grade	VRIG	0.30	451.7	1.60	2.28	-
VanEck Vectors Inv Grade Floating Rate	FLTR	0.14	441.1	1.26	2.49	2.45
iShares Floating Rate Bond	FLOT	0.20	5,539.4	0.84	2.08	1.92
SPDR Bloomberg Inv Gr Floating Rate	FLRN	0.15	2,368.8	0.75	2.08	1.92
<b>U.S. FIXED INCOME: CORPORATE - HIGH YIELD - BROAD MATURITIES</b>						
iShares Fallen Angels USD Bond	FALN	0.25	381.0	11.59	7.72	-
VanEck Vectors Fallen Angel High Yield	ANGL	0.35	3,657.3	10.16	7.24	10.37
Pacer Trendpilot US Bond	PTBD	0.60	356.0	8.13	-	-
FlexShares High Yield Value-Scored Bond	HYGV	0.37	198.3	5.20	-	-
SPDR Portfolio High Yield Bond	SPHY	0.15	169.5	4.37	4.82	5.91
Goldman Sachs Access HiYld Corp Bond	GHYB	0.34	174.4	3.98	5.09	-
iShares Broad USD HiYld Corp Bond	USHY	0.15	6,847.7	3.87	5.13	-
JPMorgan High Yield Research Enhanced	JPHY	0.24	256.3	3.49	4.98	-
SPDR Bloomberg Barclays High Yield Bond	JNK	0.40	12,832.3	2.77	4.63	6.17
Xtrackers USD HiYld Corp Bond	HLYB	0.15	6,684.6	2.51	4.79	-
iShares iBoxx USD HiYld Corp Bond	HYG	0.49	27,346.4	2.47	4.72	6.19
Invesco Senior Loan	BKLN	0.65	4,268.1	-0.44	2.73	3.63
WisdomTree Interest Rate Hedged HiYld	HYZD	0.43	125.7	-2.45	1.57	4.42
<b>U.S. FIXED INCOME: CORPORATE - HIGH YIELD - SHORT-TERM</b>						
SPDR Bloomberg Short Term HiYld	SJNK	0.40	3,574.3	3.73	4.32	5.88
iShares 0-5 Year HiYld Corp Bond	SHYG	0.30	5,265.3	1.47	3.89	5.39
PIMCO 0-5 Year HiYld Corp Bond	HYS	0.56	1,636.6	1.27	3.58	5.70
Invesco BulletShares 2020 HiYld Corp Bond	BSJK	0.42	575.4	-1.01	1.88	4.28
<b>U.S. FIXED INCOME: CORPORATE - HIGH YIELD - INTERMEDIATE</b>						
Vanguard Intermediate-Term Bond	BIV	0.05	15,061.1	9.44	6.51	5.04
iShares Intermediate Govt/Credit Bond	GVI	0.20	2,309.7	6.13	4.45	3.34
Invesco Fundamental HiYld Corp Bond	PHB	0.50	836.8	3.63	4.68	5.92
Invesco BulletShares 2025 HiYld Corp Bond	BSJP	0.42	152.3	1.91	4.49	-
Invesco BulletShares 2024 HiYld Corp Bond	BSJO	0.42	199.9	0.75	3.82	-
Invesco BulletShares 2023 HiYld Corp Bond	BSJN	0.42	439.6	0.12	3.44	5.39
Invesco BulletShares 2022 HiYld Corp Bond	BSJM	0.42	695.4	-1.53	2.37	5.02
Invesco BulletShares 2021 HiYld Corp Bond	BSJL	0.42	973.8	-3.21	1.91	4.41
<b>U.S. FIXED INCOME: CORPORATE - ASSET-BACKED</b>						
iShares CMBS	CMBS	0.25	493.6	6.85	5.26	4.11
<b>U.S. FIXED INCOME: CORPORATE - CONVERTIBLES</b>						
iShares Convertible Bond	ICVT	0.20	1,131.2	49.18	21.94	18.13
SPDR Bloomberg Barclays Conv Securities	CWB	0.40	6,035.6	43.20	19.64	16.74
<b>U.S. FIXED INCOME: CORPORATE - PREFERRED STOCK</b>						
Global X US Preferred	PFFD	0.23	864.3	6.53	6.06	-
Innovator Financial Preferred	PGF	0.61	1,865.9	5.61	5.50	5.90
Innovator S&P Inv Grade Preferred	EPRF	0.47	151.6	5.37	5.85	-
iShares Preferred and Income Securities	PFF	0.46	18,774.5	5.14	4.96	5.02
Invesco Preferred	PGK	0.52	6,644.4	5.08	5.73	5.96
VanEck Vectors Pref Securities ex Fin	PFXF	0.41	807.9	4.47	6.25	6.65
SPDR Wells Fargo Preferred Stock	PSK	0.45	1,341.6	4.43	5.30	5.36
Invesco Variable Rate Preferred	VRP	0.50	1,497.3	3.57	4.92	6.07
<b>GLOBAL FIXED INCOME</b>						
First Trust SSI Strategic Conv Securities	FCVT	0.95	291.1	39.88	18.42	14.97
SPDR Dorsey Wright Fixed Inc Allocation	DWFI	0.60	119.5	12.00	3.89	-
Invesco Total Return Bond	GTO	0.50	499.9	10.10	7.30	-
Western Asset Total Return	WBND	0.47	152.7	9.24	-	-
Fidelity Total Bond	FBNB	0.36	1,639.6	8.91	6.08	5.42
JPMorgan Core Plus Bond	JCPB	0.40	123.4	8.80	-	-
SPDR Bloomberg Barclays Intl Corporate	IBND	0.50	246.8	8.58	2.37	4.43
Hartford Total Return Bond	HTRB	0.29	777.5	8.55	5.84	-
First Trust TCW Opportunistic Fixed Inc	FIXD	0.55	4,495.8	8.51	5.98	-
Columbia Diversified Fixed Inc Allocation	DIAL	0.28	594.8	7.89	6.47	-
PIMCO Active Bond	BOND	0.57	3,988.7	6.97	5.33	4.64
SPDR Bloomberg Barclays Intl Treasury	BWX	0.35	974.4	6.92	3.56	4.40
iShares Global Green Bond	BGRN	0.20	145.1	6.52	-	-
RiverFront Dynamic Core Income	RFCI	0.52	112.7	6.17	4.55	-
Vanguard Total World Bond	BNDW	0.06	472.2	5.94	-	-

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
JPMorgan Intl Bond Opportunities	JPIB	0.50	169.6	5.56	4.76	-
First Trust TCW Unconstrained Plus Bond	UCON	0.75	226.4	5.30	-	-
Fidelity Limited Term Bond	FLTB	0.36	210.4	5.04	4.00	3.07
SPDR BB Short Term Intl Treasury Bond	BWZ	0.35	248.3	4.37	0.81	2.26
Vanguard Total International Bond	BNDX	0.08	35,242.6	4.27	5.06	4.34
PIMCO Enhanced Low Duration Active	LDUR	0.56	715.7	4.15	3.23	2.87
First Trust Preferred Securities & Income	FPE	0.85	5,740.2	4.11	5.46	6.72
iShares Core International Aggregate Bond	IAGG	0.09	3,263.4	4.06	5.03	4.39
SPDR FTSE Intl Govt Infl-Prot Bond	WIP	0.50	366.8	4.06	2.92	4.26
SPDR DoubleLine Total Return Tactical	TOTL	0.55	3,249.2	3.31	3.69	3.35
Janus Henderson Short Duration Income	VNLA	0.26	2,798.7	2.91	2.94	-
RiverFront Strategic Income	RIGS	0.47	118.9	2.71	3.38	4.54
SPDR DoubleLine Short Dur TR Tactical	STOT	0.45	147.1	2.40	2.62	-
FlexShares Ready Access Variable Income	RAVI	0.25	463.7	1.95	2.41	1.94
Invesco Ultra Short Duration	GSY	0.23	3,043.2	1.68	2.45	2.18
BlackRock Short Maturity Bond	NEAR	0.25	4,323.6	1.24	2.18	1.87
Invesco Global Short Term HiYld Bond	PGHY	0.35	199.6	1.13	2.40	4.46
Franklin Liberty Intl Aggregate Bond	FLIA	0.25	225.5	0.93	-	-
IQ Ultra Short Duration	ULTR	0.25	201.4	0.49	-	-
Aware Ultra-Short Duration Enh Income	AWTM	0.23	226.6	0.22	-	-
FormulaFolios Tactical Income	FFTI	1.04	221.8	-0.99	2.00	-
Hartford Core Bond	HCRB	0.29	126.9	-	-	-
Janus Henderson AAA CLO	JAAA		120.6	-	-	-
<b>INTERNATIONAL FIXED INCOME: DEVELOPED</b>						
Invesco International Corporate Bond	PICB	0.50	123.1	9.10	4.03	4.71
iShares International Treasury Bond	IGOV	0.35	1,130.4	8.19	3.29	4.51
iShares US & Intl High Yield Corp Bond	GHYG	0.40	184.3	3.91	4.36	6.32
<b>INTERNATIONAL FIXED INCOME: EMERGING</b>						
iShares China Large-Cap	FXI	0.74	4,018.8	8.63	3.34	7.49
iShares J.P. Morgan EM Corporate Bond	CEMB	0.50	230.1	5.52	5.44	6.63
VanEck Vectors EM High Yield Bond	HYEM	0.40	434.5	3.59	4.46	6.53
Vanguard EM Government Bond	VWOB	0.25	1,986.9	3.50	5.06	6.17
iShares JPM USD Emerging Markets Bond	EMB	0.39	19,094.8	3.20	4.48	5.98
SPDR Bloomberg Barclays EM Local Bond	EBND	0.30	936.7	1.51	2.10	4.79
iShares JPM EM High Yield Bond	EMHY	0.50	319.5	0.79	2.85	5.76
Invesco Emerging Markets Sovereign Debt	PCY	0.50	2,832.1	-0.39	3.64	5.25
iShares JPM EM Local Currency Bond	LEMB	0.30	507.6	-0.48	-0.15	3.13
VanEck Vectors JPM EM Local Currency	EMLC	0.30	3,307.3	-0.53	0.97	4.13
First Trust EM Local Currency Bond	FEMB	0.85	200.6	-1.80	1.42	3.51
WisdomTree Emerging Markets Local Debt	ELD	0.55	128.2	-2.25	1.32	4.33
<b>GLOBAL FIXED INCOME: CORPORATE - PREFERRED STOCK</b>						
Principal Spectrum Pref Securities Active	PREF	0.55	199.0	6.07	5.68	-
Global X SuperIncome Preferred	SPFF	0.58	195.5	4.89	4.72	3.87
First Trust Institutional Pref Sec/Income	FPEI	0.85	294.8	4.23	5.00	-
<b>GLOBAL FIXED INCOME: HIGH YIELD</b>						
Fidelity High Yield Factor	FDHY	0.45	154.8	8.17	-	-
Franklin Liberty HiYld Corp	FLHY	0.40	224.8	5.22	-	-
First Trust Tactical High Yield	HYLS	1.23	2,182.7	3.64	5.27	5.80
SPDR Blackstone / GSO Senior Loan	SRLN	0.70	1,917.8	1.18	3.51	3.94
First Trust Senior Loan	FTSL	0.86	1,305.3	1.01	3.27	3.72
<b>COMMODITIES: BROAD MARKET</b>						
First Trust Global Tactical Commodity Strat	FTGC	0.95	204.7	-4.07	-3.10	-2.18
Teucrium Corn	CORN	3.71	136.5	-4.39	-5.91	-8.47
Aberdeen Std All Commodity Strat K-1 Free	BCI	0.25	297.4	-7.32	-3.22	-
iPath Bloomberg Commodity ETN	DJP	0.70	498.2	-9.41	-4.41	-1.44
Invesco Opt Yld Diversifd Commodity No K-1	PDBC	0.59	2,571.6	-12.44	-4.31	-0.16
Invesco DB Commodity	DBC	0.89	1,118.1	-12.60	-3.89	0.22
iShares Commodities Select Strategy	COMT	0.48	213.5	-21.36	-5.39	0.58
iShares S&P GSCI Commodity	GSG	0.85	753.4	-28.13	-9.43	-5.56
<b>COMMODITIES: AGRICULTURE</b>						
Invesco DB Agriculture	DBA	0.89	587.4	-6.04	-5.75	-4.88
<b>COMMODITIES: ENERGY</b>						
Invesco DB Oil	DBO	0.78	436.2	-25.87	-5.49	-4.82
United States 12 Month Oil	USL	0.88	204.7	-29.67	-6.65	-3.39
United States Natural Gas	UNG	1.28	374.5	-37.13	-24.06	-21.20

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
United States Brent Oil	BNO	0.88	342.5	-42.83	-10.95	-4.25
United States Oil	USO	0.79	3,743.6	-69.78	-30.38	-21.43
<b>COMMODITIES: INDUSTRIAL METALS</b>						
Invesco DB Base Metals	DBB	0.80	164.7	15.60	-0.54	9.18
<b>COMMODITIES: PRECIOUS METALS</b>						
Aberdeen Standard Physical Silver	SIVR	0.30	754.6	26.33	10.90	9.61
iShares Silver Trust	SLV	0.50	12,587.7	26.20	10.72	9.39
Aberdeen Standard Physical Palladium	PALL	0.60	370.5	22.08	32.49	33.66
Aberdeen Standard Phys Precious Metals	GLTR	0.60	746.9	18.81	12.67	11.61
GraniteShares Gold Trust	BAR	0.17	1,074.6	16.94	11.49	-
SPDR Gold MiniShares Trust	GLDM	0.18	3,459.9	16.91	-	-
iShares Gold Trust	IAU	0.25	30,203.2	16.90	11.43	10.52
Aberdeen Standard Physical Gold	SGOL	0.17	2,516.2	16.83	11.29	10.44
Perth Mint Physical Gold	AAAU	0.18	496.6	16.77	-	-
Invesco DB Precious Metals	DBP	0.78	146.0	16.72	9.85	8.91
SPDR Gold Trust	GLD	0.40	68,326.9	16.63	11.23	10.34
VanEck Merk Gold	OUNZ	0.25	402.7	16.63	11.31	10.32
Invesco DB Gold	DGL	0.78	151.0	14.49	9.81	9.01
Aberdeen Standard Physical Platinum	PPLT	0.60	1,155.5	-0.21	0.29	2.52
<b>CURRENCY: DEVELOPED</b>						
Invesco CurrencyShares Euro	FXE	0.40	303.2	5.48	-0.76	1.62
Invesco CurrencyShares Swiss Franc	FXF	0.40	277.2	5.40	1.48	1.31
Invesco CurrencyShares Australian Dollar	FXA	0.40	162.2	4.27	-0.67	0.87
Invesco CurrencyShares Japanese Yen	FXJ	0.40	254.3	3.51	2.16	2.82
Invesco CurrencyShares British Pound	FXB	0.40	135.5	0.34	-0.67	-2.66
Invesco CurrencyShares Canadian Dollar	FXC	0.40	136.5	-0.11	0.14	0.66
<b>ASSET ALLOCATION</b>						
WisdomTree 90/60 US Balanced	NTSX	0.20	384.6	20.87	-	-
Amplify BlackSwan Growth/Treasury Core	SWAN	0.49	751.1	14.42	-	-
Aptus Defined Risk	DRSK	0.78	510.5	14.15	-	-
iShares Core Aggressive Allocation	AOA	0.25	1,137.3	8.64	7.52	9.28
ClearShares OCIO	OCIO	0.62	117.8	8.38	5.91	-
iShares Core Growth Allocation	AOR	0.25	1,537.2	8.32	7.01	8.13
Cambria Tail Risk	TAIL	0.59	396.4	7.78	-1.88	-
iShares Core Conservative Allocation	AOK	0.25	823.9	7.61	6.14	6.28
iShares Core Moderate Allocation	AOM	0.25	1,426.1	7.59	6.36	6.86
SPDR SSGA Global Allocation	GAL	0.35	251.3	4.90	5.56	6.75
DeltaShares S&P 500 Managed Risk	DMRL	0.35	385.1	2.11	7.07	-
SPDR SSGA Income Allocation	INKM	0.50	119.8	0.12	3.96	5.74
Invesco CEF Income Composite	PCF	2.55	776.5	0.02	4.80	8.13
Principal Active Income	YLD	0.49	230.6	-0.39	3.32	6.03
Amplify High Income	YYY	2.28	248.3	-3.26	2.36	6.63
iShares Mstar Multi-Asset Income	IYLD	0.60	270.2	-3.69	2.40	5.09
DeltaShares S&P Intl Managed Risk	DMRI	0.50	180.2	-7.74	-1.54	-
Invesco Zacks Multi-Asset Income	CVY	0.94	123.3	-15.30	-0.89	4.18
Multi-Asset Diversified Income	MDIV	0.73	472.7	-16.77	-2.03	1.55
Cabana Target Drawdown 10	TDSC	0.69	538.2	-	-	-
Cabana Target Drawdown 7	TDSB	0.68	351.6	-	-	-
Cabana Target Drawdown 13	TDSB	0.68	163.6	-	-	-
<b>ALTERNATIVES: ABSOLUTE RETURN</b>						
RPAR Risk Parity	RPAR	0.50	908.2	15.06	-	-
IQ Hedge Multi-Strategy Tracker	QAI	0.78	759.6	3.51	2.99	2.85
Core Alternative	CCOR	1.09	139.8	2.18	4.41	-
IQ Merger Arbitrage	MNA	0.77	745.0	2.14	3.17	4.39
First Trust Long/Short Equity	FTLS	1.60	302.8	0.47	3.99	6.00
WisdomTree Managed Futures Strategy	WTMF	0.65	111.7	-3.55	-1.44	-2.24
AGFIQ US Market Neutral Anti-Beta	BTAL	2.11	149.4	-12.23	0.93	-0.32
<b>ALTERNATIVES: TACTICAL TOOLS</b>						
iPath Ser B S&P 500 VIX Short Futures ETN	VXX	0.89	934.6	13.62	-	-
ProShares VIX Short-Term Futures	VIXY	0.85	275.5	13.19	-19.06	-43.75
<b>LEVERAGED</b>						
MicroSectors FANG + 3X Leveraged ETN	FNGU	0.95	995.1	260.17	-	-
MicroSectors FANG + 2X Leveraged ETN	FNGO	0.95	156.5	179.54	-	-
ProShares UltraPro QQQ	TQQQ	0.95	9,281.1	82.58	51.31	50.95
ProShares Ultra QQQ	QLD	0.95	3,589.1	71.99	42.45	38.98

FUND NAME	TICKER	EXP RATIO %	AUM (\$M)	YTD %	3YR %	5YR %
ProShares Ultra Technology	ROM	0.95	702.5	65.54	44.21	44.95
ProShares Ultra Semiconductors	USD	0.95	150.1	57.52	33.41	46.27
Direxion Daily CSI 300 China A Sh Bull 2X	CHAU	1.21	117.9	53.65	10.24	11.40
UBS AG FI Enhanced Large Cap Growth ETN	FBGX	1.29	139.7	52.93	34.38	31.99
Credit Suisse FI Large Cap Growth Enh ETN	FLGE	1.52	273.1	50.97	30.98	31.58
Direxion Daily S&P Biotech Bull 3X	LABU	1.04	297.8	50.66	5.40	-1.61
Direxion Daily Semiconductor Bull 3X	SOXL	0.96	1,704.1	47.92	41.51	71.95
Direxion Daily 20+ Year Treasury Bull 3X	TMF	1.05	286.7	44.97	22.22	15.21
Direxion Daily Technology Bull 3X	TECL	1.08	1,896.5	44.70	46.85	55.20
DB Gold Double Long ETN	DGP	0.75	123.9	28.35	17.93	16.44
ProShares Ultra NASDAQ Biotechnology	BIB	0.95	197.5	28.06	13.16	2.40
ProShares Ultra Gold	UGL	0.95	238.3	21.83	15.23	14.71
ProShares Ultra Silver	AGQ	0.93	539.0	19.81	5.79	6.00
ProShares Ultra S&P 500	SSO	0.91	2,929.2	13.20	17.38	21.67
ProShares Ultra Health Care	RXL	0.95	111.9	10.91	16.81	17.13
ProShares Ultra Russell2000	UWM	0.95	530.9	-0.78	2.60	11.95
ProShares UltraPro S&P500	UPRO	0.93	1,698.8	-0.96	15.77	25.86
Direxion Daily S&P 500 Bull 3X	SPXL	1.01	1,625.3	-1.39	15.76	25.64
ProShares Ultra Dow30	DDM	0.95	392.1	-3.92	8.64	20.01
Direxion Daily Healthcare Bull 3x	CURE	1.08	127.1	-5.46	13.86	17.10
ProShares Ultra MidCap400	MVW	0.95	149.6	-6.08	1.59	11.88
Direxion Daily FTSE China Bull 3X	YINN	1.37	299.2	-8.68	-14.17	0.76
Virtus InfraCap US Preferred Stock	PFFA	2.01	204.8	-9.90	-	-
Direxion Daily MSCI EM Bull 3x	EDC	1.33	189.6	-12.79	-11.38	8.67
ProShares Ultra VIX Short-Term Futures	UVXY	0.95	1,225.6	-13.50	-45.06	-75.80
ProShares UltraPro Dow30	UDOW	0.95	753.2	-24.40	2.21	22.82
ProShares UltraPro Russell2000	URTY	0.95	275.4	-27.42	-9.62	7.31
Direxion Daily Small Cap Bull 3x	TNA	1.12	1,283.9	-27.64	-9.76	6.99
ProShares Ultra Financials	UYG	0.95	561.6	-28.01	-1.81	9.95
Direxion Daily Homebuilders/Supp Bull 3X	NAIL	0.99	417.9	-30.28	-19.39	7.52
Direxion Daily Financial Bull 3x	FAS	0.99	1,865.5	-45.42	-7.20	10.78
Direxion Daily Gold MinersBull 2X	NUGT	1.17	975.2	-63.10	-22.83	-8.55
ProShares Ultra Bloomberg Natural Gas	BOIL	0.95	131.1	-64.34	-56.53	-49.86
ProShares Ultra Oil & Gas	DIG	0.95	122.6	-72.42	-41.06	-27.46
Direxion Daily Aerospace/Def Bull 3X	DFEN	0.99	309.5	-72.52	-27.98	-
Credit Suisse Mo Pay 2xLev Mort REIT ETN	REML	1.30	149.4	-75.67	-31.48	-
Direxion Daily Regional Banks Bull 3X	DPST	0.99	137.9	-82.20	-49.54	-25.29
Direxion Daily Junior Gold MinersBull 2X	JNUG	1.12	670.5	-87.86	-47.89	-30.10
Direxion Daily Energy Bull 2x	ERX	1.06	456.5	-92.27	-64.16	-47.08
Direxion Daily MSCI Brazil Bull 2X	BRZU	1.29	216.0	-93.07	-57.13	-28.66
ProShares Ultra Bloomberg Crude Oil	UCO	0.95	926.9	-93.70	-60.79	-48.44
MicroSectors US Big Oil 3X Leveraged ETN	NRGU	0.95	222.5	-94.67	-	-
Direxion Daily S&P Oil/Gas Exp/Pr Bull 2X	GUSH	1.17	530.2	-97.74	-85.44	-73.48
<b>INVERSE</b>						
Invesco DB US DollarBullish	UUP	0.79	351.7	-4.43	1.93	-0.36
ProShares Short Dow30	DOG	0.95	346.7	-17.77	-12.01	-14.17
ProShares Short 20+ Year Treasury	TBF	0.94	238.1	-20.32	-10.39	-8.34
Direxion Daily S&P 500 Bear 1X	SPDN	0.50	152.4	-21.69	-13.96	-
ProShares Short S&P500	SH	0.90	2,101.7	-22.17	-14.33	-14.15
ProShares Short Russell2000	RWM	0.95	254.9	-24.80	-12.29	-13.63
Direxion Daily CSI 300 China A Sh Bear 1X	CHAD	0.85	143.8	-31.28	-14.97	-14.92
ProShares Short VIX Short-Term Futures	SVXY	1.38	405.1	-36.61	-54.92	-18.76
ProShares Short QQQ	PSQ	0.95	569.5	-38.21	-24.19	-21.30
ProShares UltraShort 20+ Year Treasury	TBT	0.92	486.2	-39.15	-22.00	-17.75
ProShares UltraShort Dow30	DXD	0.95	138.6	-40.74	-27.61	-29.46
ProShares UltraShort S&P500	SDS	0.91	843.7	-46.13	-31.02	-29.22
ProShares UltraPro Short Dow30	SDOW	0.95	518.1	-62.85	-43.97	-44.40
ProShares UltraShort QQQ	QID	0.95	231.8	-66.51	-46.81	-41.23
Direxion Daily S&P 500 Bear 3X	SPXS	1.07	599.8	-66.83	-47.56	-44.07
ProShares UltraPro Short S&P500	SPXU	0.93	747.1	-66.84	-47.40	-43.79
Direxion Daily Financial Bear 3X	FAZ	1.07	224.6	-68.26	-47.28	-46.10
Direxion Daily Small Cap Bear 3X	TZA	1.07	435.7	-74.39	-46.74	-45.81
ProShares UltraPro Short Russell2000	SRTY	0.95	112.3	-74.70	-47.44	-46.08
ProShares UltraPro Short QQQ	SQQQ	0.95	1,380.8	-84.14	-65.23	-58.25

# THE LAST WORD

## A MOVING TARGET



BY HEATHER BELL  
Editor

Innovation is the lifeblood of ETFs, driving their creation and ongoing evolution. But the key to innovation adoption is education on the part of issuers and practitioners. How else were the originators of the **SPDR S&P 500 ETF Trust (SPY)** going to convince investors to put their money into a brand new product that offered a bold twist on the ho-hum mutual fund structure?

If you don't understand a product, don't invest in it. Seems simple enough, but with innovation a constant in the ETF space, an educator's job is never done in this industry.

The problem is that the goal posts keep moving. With almost all of the low-hanging fruit in the plain vanilla space long plucked from the tree, most of the product development we see today comes with added layers of complexity, and complexity means more homework.

### Misunderstood Leverage

When leveraged and inverse ETFs first hit the market in 2006, the issues of erosion, compounding and daily resets were confusing to many investors. That led to multiple lawsuits against issuers of such funds, despite the ETFs behaving exactly as promised in their prospectuses. There was an ignorance gap that ended up in courts.

Is there actually a "problem" with leveraged and inverse ETFs? No, they do exactly what they're designed to do, for better or worse. The issue is in understanding the structure. When you're dealing with 300%/300% exposure, just one day of adverse conditions can largely wipe out an entire investment.

The March 2020 market crash made that lesson abundantly clear. The education hurdle in this part of the market is always critical.

### Today's Biggest Concern

Right now there are two new and novel parts of the ETF market that are crying out for additional investor education: nontransparent active ETFs and defined outcome ETFs.

Portfolio nontransparency in an otherwise massively transparent ETF indus-

try is innovation enough, but it's come to market through no less than five different models currently available from the NYSE, Fidelity, T. Rowe Price, Precidian and Blue Tractor. All have different strategies and subtleties embedded in their methodologies, raising the bar on the due diligence that's needed to understand what each type of active ETF a product is.

Once you nail down the mechanics of each model, you still need to determine whether you're comfortable with the level of disclosure the model offers, and given that it's early days for these products, you should monitor how they trade. There's a lot to learn about this latest innovation before committing assets to the strategy.

### Defined Outcome Education

With defined outcome ETFs, there are several issuers offering such funds: Innovator, First Trust, AllianzIM and TrueMark. There are subtle differences between the different approaches, but they all use flexible exchange-traded options. Most look to re-create the performance of the S&P 500 Index within ranges established by upside caps and downside buffers, thereby offering a smoother ride.

What's not to like about a more predictable outcome in an otherwise volatile market? But again, the expected outcomes and the inner workings of these funds can be complicated, especially if the options market isn't your typical terrain. The SEC requires issuers to show on their websites what outcomes to expect when the ETFs are bought outside the reset days—that's an investor protection mandate aimed at education.

But as we well know, the educational burden doesn't rest only with regulators or issuers. It rests with everyone involved with any part of the ETF ecosystem, including the end investor.

The good news is that information is typically readily available in this part of the financial world. But the ever-shifting sands of innovation in the ETF space and the constant influx of new-to-ETF investors mean that educational efforts will always be ongoing. ●

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