ETF Report

THE MAGAZINE FOR ETF INVESTORS

MARCH 2021

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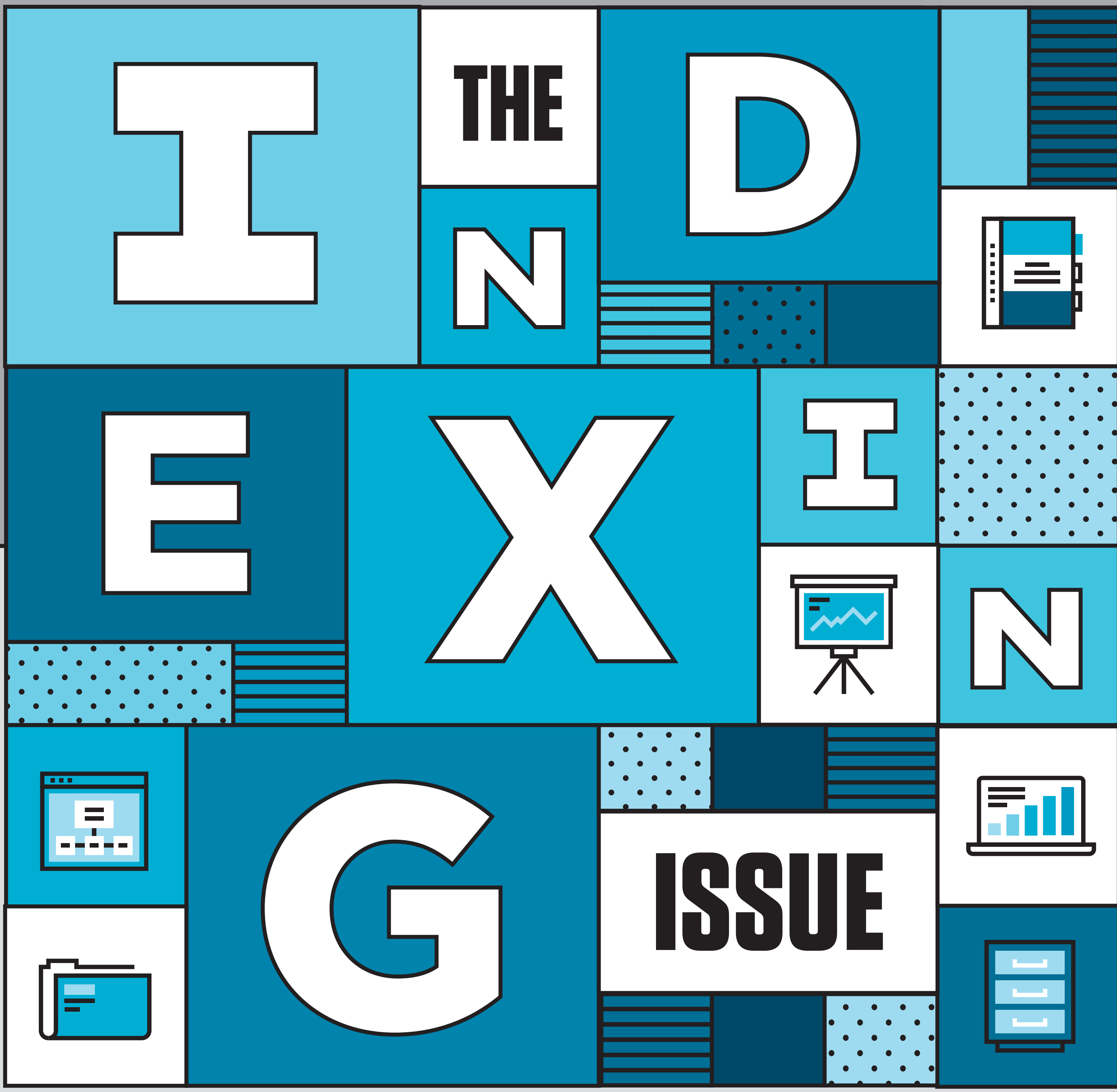

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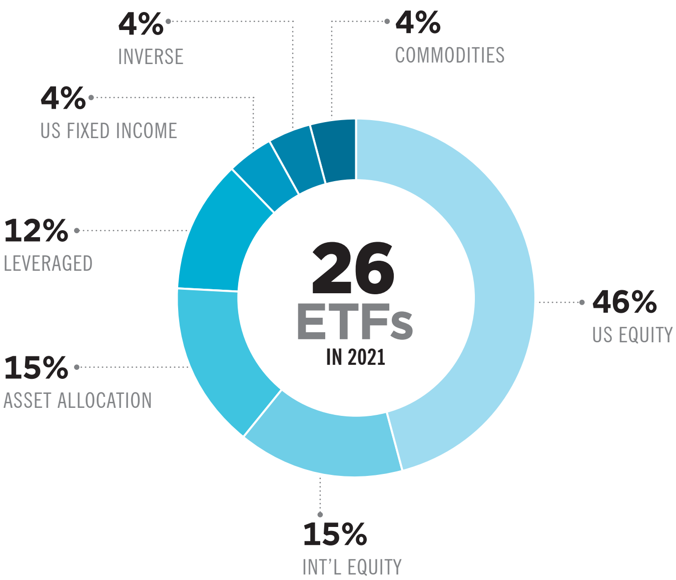
ETF Launches



Featured ETF

TMAT — Main Thematic Innovation ETF

Main Management rolled out its second ETF in late January. The **Main Thematic Innovation ETF (TMAT)** is actively managed and invests primarily in other ETFs in order to capture the theme of disruptive innovation.

TMAT comes with an expense ratio of 1.65%.

Main Management is, at its core, a firm driven by fundamental investment principles that strives for growth at a reasonable price across its strategies. TMAT looks to target disruptive and innovative themes with large market demand, seeking out those that seem to have been underestimated by the market, the prospectus says.

According to the document, the fund managers set price targets for different positions that may be frequently revised upward, and holds those positions until that price target is achieved or the opportunity dries up.

The firm points out that the targeted themes may take years to develop, meaning some positions potentially can be held for decades. The themes under consideration currently include everything from genomics to artificial intelligence to cloud computing to pet care.

The portfolio generally holds five to 15 ETFs. TMAT can also implement options strategies in the form of covered calls and covered puts to smooth performance or enhance returns, according to its prospectus.

TMAT Quick View

ISSUER	SEGMENT	EXPENSE RATIO	STRUCTURE	INCEPTION
Main Management	Equity: Global - Total Market	1.65%	Open-Ended Fund	1/29/2021

ETF LAUNCH ACTIVITY

LAUNCHES

U.S. EQUITY
AllianzIM US Large Cap Buffer10 Jan
AllianzIM US Large Cap Buffer20 Jan
FT Cboe Vest Fund of Deep Buffers
FT Cboe Vest US Equity Buffer - Jan
FT Cboe Vest US Eq Deep Buffer - Jan
Innovator Double Stacker 9 Buffer - Jan
Innovator Double Stacker - January
Innovator Triple Stacker - January
Morgan Creek - Exos SPAC Originated
Overlay Shares Hedged LrgCap Equity
TrueShares Low Volatility Equity Inc
TrueShares Structured Outcome - Jan

U.S. FIXED INCOME
Overlay Shares Short Term Bond

INT'L EQUITY
Franklin Exponential Data
IQ Healthy Hearts
KraneShares SSE Star Market 50 Index
Main Thematic Innovation

COMMODITIES
FT Cboe Vest Gold Strat Qrtrly Buffer

ASSET ALLOCATION
Amplify BlackSwan ISWN
Euclid Capital Growth
Global X Adaptive US Risk Mgmt
Merlyn.AI Best-of-Breed Core Momntm

LEVERAGED
Direxion Daily Cloud Computing Bull 2X
ProShares Ultra Nasdaq Cloud Computing
ProShares Ultra Nasdaq Cybersecurity

INVERSE
Direxion Daily Cloud Computing Bear 2X

CLOSURES

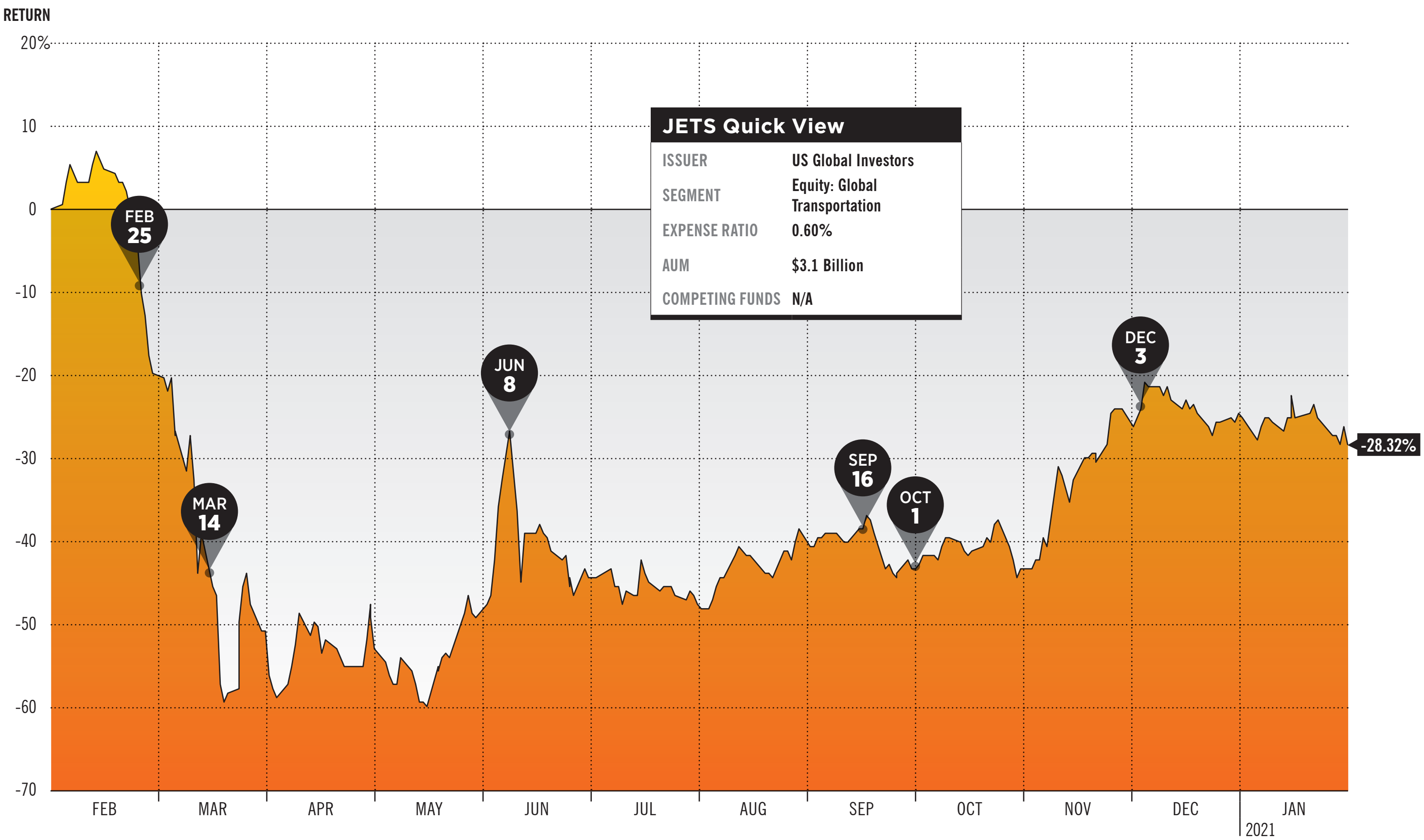
Principal Active Global Dividend Income
FlexShares Curr Hdg DM ex-US Factor Tilt
FlexShares Curr Hdg Mstar EM Factor Tilt

Source: ETF.com. Data and information as of 1/31/2021. The above sidebar covers launches and closures for the month of January 2021.

By Heather Bell

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 $3.1 billion **US Global Jets ETF (JETS)**, which covers the airline industry. Although it has performed poorly in the last 12 months, it has seen strong inflows as investors bet on a post-pandemic turnaround. All the companies mentioned below are holdings in JETS, unless otherwise noted (*).



FEB 25 American Airlines stock falls to its lowest levels since 2013, with investors viewing it as more vulnerable to the effects of the pandemic than its peers.

MAR 14 President Trump imposes an initial 30-day travel ban on foreigners from most European nations due to the coronavirus pandemic.

JUN 8 United Airlines stock rises more than other airline stocks as hopes grow of a revival in air travel as the pandemic continues to run its course.

SEP 16 In the largest debt deal in aviation history, Delta Air Lines announces it's looking to borrow $9 billion to make it through the pandemic and protect employee jobs.

OCT 1 With the expiration of the CARES payroll support program, airlines begin furloughing 30,000 workers and cutting flights.

DEC 3 Southwest Airlines warns 6,800 employees of potential furloughs in the spring, which would be a first in the generally profitable airline's 50-year history.

Source: Bloomberg; data for 1/31/2020-1/31/2021

Compiled by Heather Bell

Data At A Glance

Monthly Flows

Below are the ETFs that experienced the top and bottom flows in January 2021, as well as the net flows for major asset classes.

TOP GAINERS

TICKER	FUND	ISSUER	NET FLOWS ($M)	AUM ($M)
XLF	Financial Select Sector SPDR Fund	SSGA	5,240.37	29,854.57
IUSB	iShares Core Total USD Bond Market ETF	BlackRock	3,659.50	9,647.96
EFV	iShares MSCI EAFE Value ETF	BlackRock	3,273.04	10,481.03
VTI	Vanguard Total Stock Market ETF	Vanguard	3,190.15	208,151.02
ARKK	ARK Innovation ETF	ARK	3,165.59	23,096.40
IEMG	iShares Core MSCI Emerging Markets ETF	BlackRock	3,155.05	74,849.31
BND	Vanguard Total Bond Market ETF	Vanguard	2,623.50	70,302.36
ARKG	ARK Genomic Revolution ETF	ARK	2,416.20	10,833.85
XLE	Energy Select Sector SPDR Fund	SSGA	1,813.44	16,381.03
ICLN	iShares Global Clean Energy ETF	BlackRock	1,638.56	6,678.23

BIGGEST LOSERS

TICKER	FUND	ISSUER	NET FLOWS ($M)	AUM ($M)
SPY	SPDR S&P 500 ETF Trust	SSGA	-9,497.14	322,648.11
HYG	iShares iBoxx USD High Yield Corporate Bond ETF	BlackRock	-4,207.21	21,596.07
QQQ	Invesco QQQ Trust	Invesco	-3,481.51	152,046.80
USMV	iShares MSCI USA Min Vol Factor ETF	BlackRock	-2,788.83	30,209.60
LQD	iShares iBoxx USD Investment Grade Corp Bond ETF	BlackRock	-2,380.37	52,112.71
IVV	iShares Core S&P 500 ETF	BlackRock	-2,309.23	238,741.93
IYR	iShares U.S. Real Estate ETF	BlackRock	-1,584.17	3,858.00
QUAL	iShares MSCI USA Quality Factor ETF	BlackRock	-1,455.18	20,038.32
SHV	iShares Short Treasury Bond ETF	BlackRock	-1,378.14	16,453.87
TLT	iShares 20+ Year Treasury Bond ETF	BlackRock	-1,216.09	17,141.41

ASSET CLASSES

	NET FLOWS ($M)	AUM ($M)	% OF AUM
U.S. Equity	7,773.98	3,164,691.35	0.25%
International Equity	36,160.12	1,120,966.24	3.23%
U.S. Fixed Income	15,557.76	982,081.47	1.58%
International Fixed Income	4,178.58	127,290.48	3.28%
Commodities	838.35	142,769.71	0.59%
Currency	83.31	1,994.25	4.18%
Leveraged	-1,098.24	47,228.94	-2.33%
Inverse	1,380.60	11,629.82	11.87%
Asset Allocation	371.87	13,762.60	2.70%
Alternatives	439.74	6,074.55	7.24%

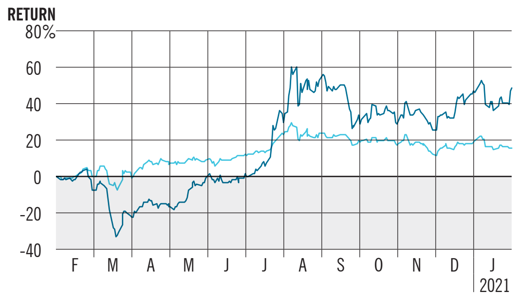
Interesting Charts Of Past 12 Months

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

GLD SPDR Gold Trust

SLV iShares Silver Trust

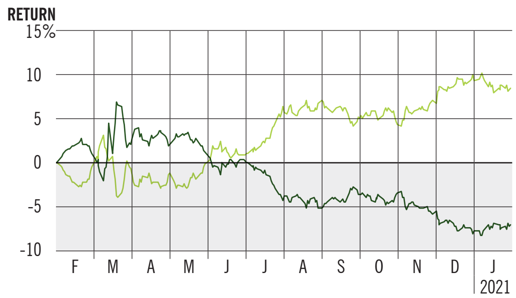
While gold has exhibited strong performance over the past 12 months, silver has had a much bumpier—but ultimately higher-flying—ride.



FXE Invesco CurrencyShares Euro Trust

UUP Invesco DB U.S. Dollar Index Bullish Fund

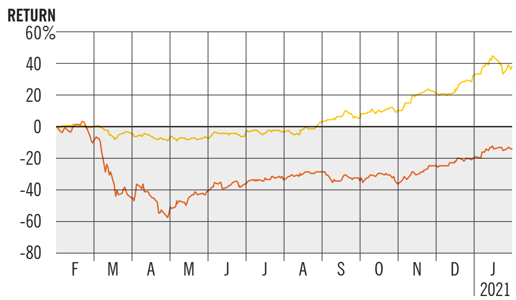
The euro has strengthened dramatically while the U.S. dollar has weakened in an equally stark fashion.



SOYB Teucrium Soybean Fund

GSB iPath S&P GSCI Total Return Index ETN

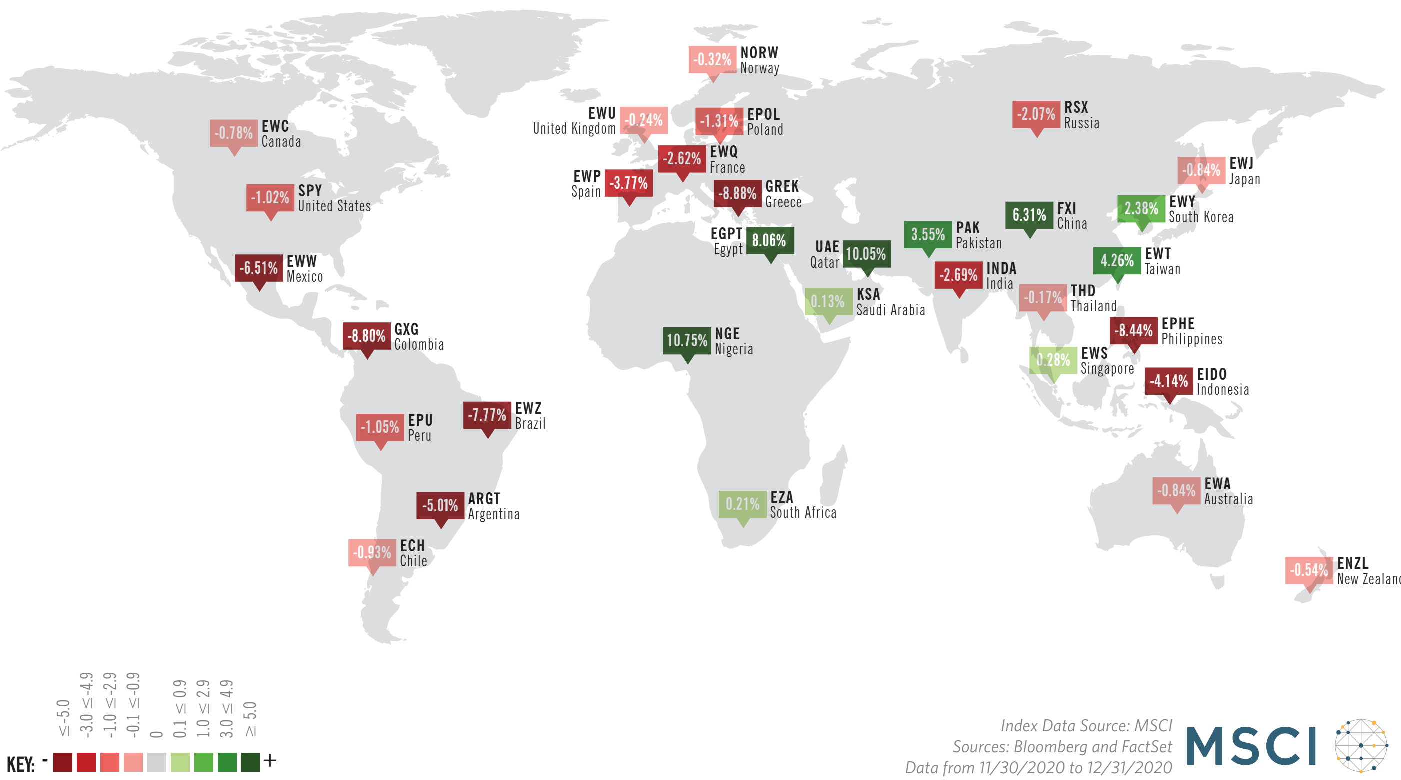
Soybean futures outperformed the broad commodity space by a wide margin during the past year.



Sources: FactSet, Bloomberg; data as of 1/31/2021

Countries

January was a very mixed month for country ETFs, with the strongest performers in developing markets. The top performer was the **Global X MSCI Nigeria ETF (NGE)**, with a return of 10.75%; followed by the **iShares MSCI UAE ETF (UAE)** and the **VanEck Vectors Egypt Index ETF (EGPT),** up 10.05% and 8.06%, respectively. The worst-performing fund was the **Global X MSCI Greece ETF (GREK)**, down 8.88%, while the **Global X MSCI Colombia ETF (GXG)** decreased by 8.8% and the **iShares MSCI Philippines ETF (EPHE)** was down 8.44%. When it came to outflows, the **SPDR S&P 500 ETF Trust (SPY)** claimed the top spot, hemorrhaging $9.5 billion. The **iShares China Large-Cap ETF (FXI)** lost $251.6 million, while the **iShares MSCI France ETF (EWQ)** gave up $81.6 million. Inflows were less dramatic, with the **iShares MSCI Taiwan ETF (EWT)** pulling in $373.6 million, the **iShares MSCI India ETF (INDA)** gaining $248.3 million and the **iShares MSCI Canada ETF (EWC)** adding $227.4 million.



Index Data Source: MSCI
Sources: Bloomberg and FactSet
Data from 11/30/2020 to 12/31/2020

TOP INFLOWS

TICKER	FUND	NET FLOWS ($M)	AUM ($M)
EWT	iShares MSCI Taiwan	373.6	6,287.8
INDA	iShares MSCI India	248.3	4,945.0
EWC	iShares MSCI Canada	227.4	2,892.5
EWU	iShares MSCI United Kingdom	88.4	3,014.2
EWW	iShares MSCI Mexico	66.7	1,353.5

TOP OUTFLOWS

TICKER	FUND	NET FLOWS ($M)	AUM ($M)
SPY	SPDR S&P 500	-9,497.1	321,893.3
FXI	iShares China Large-Cap	-251.6	4,260.8
EWQ	iShares MSCI France	-81.6	789.2
EWA	iShares MSCI Australia	-68.8	1,751.1
EWJ	iShares MSCI Japan	-52.0	13,739.0

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
www.etf.com/etfanalytics/etf-comparison-tool

Facts & Costs

TICKER	FUND
IWM	**iShares Russell 2000 ETF**

ISSUER

BlackRock

AUM	EXPENSE RATIO	AVERAGE DAILY $ VOLUME	NUMBER OF HOLDINGS
$67.66B	**0.20%**	**$5.01B**	**2,034**

AVERAGE SPREAD (%)	AVERAGE SPREAD ($)	MEDIAN TRACKING DIFFERENCE (12 MO)	MAX LT/ST CAPITAL GAINS RATE
0.01%	**$0.01**	**-0.05%**	**20.00%/39.60%**

Performance

1 MONTH	3 MONTHS	YTD	1 YEAR	3 YEARS	5 YEARS
7.16%	27.53%	15.18%	36.42%	15.33%	19.59%

Facts & Costs

TICKER	FUND
IJR	**iShares Core S&P Small-Cap ETF**

ISSUER

BlackRock

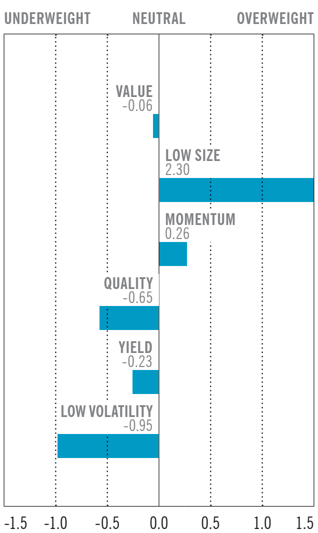
AUM	EXPENSE RATIO	AVERAGE DAILY $ VOLUME	NUMBER OF HOLDINGS
$65.89B	**0.07%**	**$429.94M**	**604**

AVERAGE SPREAD (%)	AVERAGE SPREAD ($)	MEDIAN TRACKING DIFFERENCE (12 MO)	MAX LT/ST CAPITAL GAINS RATE
0.02%	**$0.02**	**-0.00%**	**20.00%/39.60%**

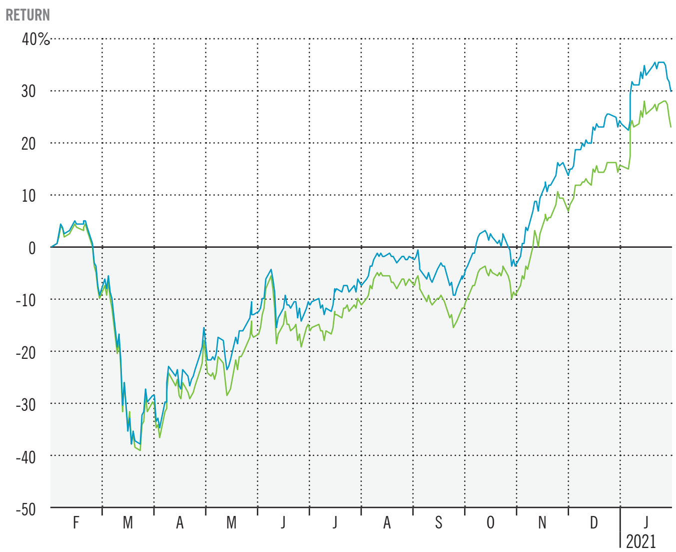
Performance

1 MONTH	3 MONTHS	YTD	1 YEAR	3 YEARS	5 YEARS
6.85%	26.71%	15.76%	29.07%	12.91%	17.87%

MSCI IWM Factors

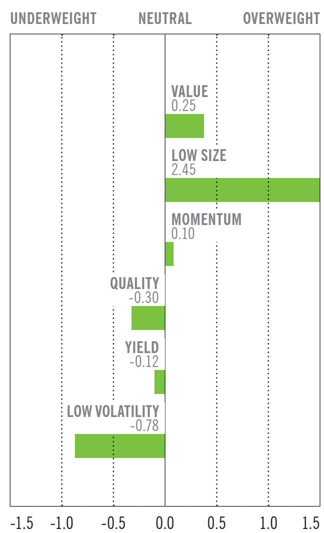


Performance



Source: Bloomberg, 1/31/2020-1/31/2021

MSCI IJR Factors



IWM TOP 10 SECTORS

Financials	21.17%
Healthcare	20.44%
Technology	14.94%
Consumer Cyclicals	14.31%
Industrials	13.21%
Basic Materials	4.38%
Energy	3.70%
Consumer Non-Cyclicals	3.69%
Utilities	2.82%
Telecommunications Services	1.09%

IWM TOP 10 HOLDINGS

Plug Power Inc.	0.82%
Penn National Gaming, Inc.	0.63%
Novavax, Inc.	0.57%
Caesars Entertainment Inc	0.49%
Sunrun Inc.	0.41%
Darling Ingredients Inc.	0.40%
Lithia Motors, Inc. Class A	0.34%
II-VI Incorporated	0.33%
Redfin Corporation	0.32%
Natera, Inc.	0.32%

IJR TOP 10 SECTORS

Financials	23.68%
Industrials	18.78%
Consumer Cyclicals	15.73%
Technology	14.95%
Healthcare	12.00%
Basic Materials	5.64%
Consumer Non-Cyclicals	4.25%
Energy	3.11%
Utilities	1.59%
Telecommunications Services	1.59%

IJR TOP 10 HOLDINGS

BlackRock Cash Funds Treasury SL Agency Shares	1.42%
Cleveland-Cliffs Inc	0.78%
MicroStrategy Incorporated Class A	0.70%
NeoGenomics, Inc.	0.66%
3D Systems Corporation	0.60%
Omnicell, Inc.	0.56%
Saia, Inc.	0.56%
Crocs, Inc.	0.55%
Chart Industries, Inc.	0.55%
Power Integrations, Inc.	0.55%

Source: ETF.com and Bloomberg. Data and information as of 2/15/2021.

ETF Stock Finder

The ETF.com Stock Finder Tool helps you find which ETFs hold a certain stock and how much of it they own.
www.etf.com/etfanalytics/etf-stock-finder

Each month, we look at selected stocks based on their performance and importance to investors.
This month, we highlight GameStop Corp. Class A (GME), Microsoft Corporation (MSFT) and Caterpillar Inc. (CAT).

Stock

GME

GameStop Corp. Class A

ETFs Holding GME	GME Shares in ETFs
62	10.7 Million

Biggest Holder	Largest Allocation
IJR iShares Core S&P Small-Cap ETF	GAMR Wedbush ETFMG Video Game Tech ETF

Most GME Exposure

Ticker	Fund	% of Allocation
GAMR	Wedbush ETFMG Video Game Tech ETF	27.02%
XRT	SPDR S&P Retail ETF	19.98%
RETL	Direxion Daily Retail Bull 3x Shares	16.37%
XSVM	Invesco S&P SmallCap Value with Momentum ETF...	14.99%
RWJ	Invesco S&P SmallCap 600 Revenue ETF	12.96%

Most GME Shares

Ticker	Fund	# of Allocation
IJR	iShares Core S&P Small-Cap ETF	3.64M
IWM	iShares Russell 2000 ETF	1.42M
IWN	iShares Russell 2000 Value ETF	594.24K
IJS	iShares S&P Small-Cap 600 Value ETF	459.02K
FNDX	Schwab Fundamental U.S. Large Company Index ...	431.93K

Top-Performing ETFs With GME

Ticker	Fund	30-day % Change
RETL	Direxion Daily Retail Bull 3x Shares	161.52%
XRT	SPDR S&P Retail ETF	40.87%
GAMR	Wedbush ETFMG Video Game Tech ETF	40.84%
RWJ	Invesco S&P SmallCap 600 Revenue ETF	32.26%
PSCD	Invesco S&P SmallCap Consumer Discretionary ...	31.13%

Top ETF Strategies Using GME

Strategy	# of ETFs
Vanilla ETFs	25
Value ETFs	8
Multi-factor ETFs	7
Fundamental ETFs	7
Equal ETFs	4

Stock

MSFT

Microsoft Corporation

ETFs Holding MSFT	MSFT Shares in ETFs
319	550.1 Million

Biggest Holder	Largest Allocation
SPY SPDR S&P 500 ETF Trust	XLK Technology Select Sector SPDR Fund

Most MSFT Exposure

Ticker	Fund	% of Allocation
XLK	Technology Select Sector SPDR Fund	20.24%
ACVF	American Conservative Values ETF	18.69%
IYW	iShares U.S. Technology ETF	16.29%
FTEC	Fidelity MSCI Information Technology Index E...	15.87%
AVDG	AVDR U.S. LargeCap ESG ETF	15.85%

Most MSFT Shares

Ticker	Fund	# of Allocation
SPY	SPDR S&P 500 ETF Trust	77.39M
QQQ	Invesco QQQ Trust	61.71M
IVV	iShares Core S&P 500 ETF	56.34M
VOO	Vanguard S&P 500 ETF	42.14M
VTI	Vanguard Total Stock Market ETF	39.49M

Top-Performing ETFs With MSFT

Ticker	Fund	30-day % Change
GAMR	Wedbush ETFMG Video Game Tech ETF	40.84%
PRNT	3D Printing ETF	25.75%
KOMP	SPDR S&P Kensho New Economies Composite ETF...	15.85%
DRIV	Global X Autonomous & Electric Vehicles ETF...	14.04%
ROBT	First Trust Nasdaq Artificial Intelligence a...	13.38%

Top ETF Strategies Using MSFT

Strategy	# of ETFs
Active Management ETFs	57
Vanilla ETFs	52
Multi-factor ETFs	49
Fundamental ETFs	34
ESG ETFs	27

Stock

CAT

Caterpillar Inc.

ETFs Holding CAT	CAT Shares in ETFs
197	45.0 Million

Biggest Holder	Largest Allocation
SPY SPDR S&P 500 ETF Trust	DIVO Amplify CWP Enhanced Dividend Income ETF

Most CAT Exposure

Ticker	Fund	% of Allocation
DIVO	Amplify CWP Enhanced Dividend Income ETF	4.95%
DJD	Invesco Dow Jones Industrial Average Dividen...	4.00%
DIA	SPDR Dow Jones Industrial Average ETF Trust...	3.92%
XLI	Industrial Select Sector SPDR Fund	3.83%
EDOW	First Trust Dow 30 Equal Weight ETF	3.32%

Most CAT Shares

Ticker	Fund	# of Allocation
SPY	SPDR S&P 500 ETF Trust	5.56M
DIA	SPDR Dow Jones Industrial Average ETF Trust...	5.48M
IVV	iShares Core S&P 500 ETF	4.05M
XLI	Industrial Select Sector SPDR Fund	3.29M
VIG	Vanguard Dividend Appreciation ETF	3.19M

Top-Performing ETFs With CAT

Ticker	Fund	30-day % Change
ARKQ	ARK Autonomous Technology & Robotics ETF	18.04%
SQEW	LeaderShares Equity Skew ETF	6.63%
PRF	Invesco FTSE RAFI U.S. 1000 ETF	5.63%
RNDV	First Trust US Equity Dividend Select ETF...	5.59%
FNDB	Schwab Fundamental U.S. Broad Market Index E...	5.47%

Top ETF Strategies Using CAT

Strategy	# of ETFs
Vanilla ETFs	44
Multi-factor ETFs	29
Active Management ETFs	21
ESG ETFs	21
Value ETFs	18

Source: ETF.com. Data and information as of 2/15/2021.

By Debbie Carlson

Contributor to ETF.com
& ETF Report

Costs and profits have changed greatly over the last few decades

ECONOMICS OF INDEXING

When Bob Tull, president of Procure Holdings, worked at Morgan Stanley in the early 1980s, the firm spent $1 million a month to store 80 megabits of data. “We ended up killing the project we were working on because of the cost of storage,” he reminisced.

“Now I have 18 terabytes of data sitting on drives behind me, and it costs me about, all together, $2,000,” he added.

Speedier internet connections, more powerful and faster computers, automation, cloud computing and a host of other technologies now allow more data to be collected, sorted and stored, all with greater accuracy, causing indexing costs to plummet.

Some costs are higher, especially those related to data science and management. Cheaper technology lets new index entrants compete with legacy providers and pressures investment-product pricing. Despite that, indexing is now a money-making venture in ways it never was before.

‘ONCE AN INDEX IS BORN, IT NEVER DIES’

NEW REVENUE STREAMS

Originally, index providers sold benchmark data to asset managers, insurance companies and others, usually for a fixed fee. That remains a big revenue generator for the major legacy players, says Jeremy Zhou, head of index solutions at FactSet.

The increase in passive investing allowed index providers to sell licenses for investable products to issuers of exchange-traded funds, mutual funds, derivatives and other products. Many index providers would take a small percentage of the expense ratio asset managers charged for their license fee.

When fees were high, say, around 70 basis points, the index provider might charge anywhere from 8% to 12% of that fee for the license, Zhou notes. However, expense ratios have dropped precipitously over the years, especially for plain vanilla funds, and the percentage of what providers receive also fell.

However, Zhou explains that what index providers may have lost in total basis points, they’ve made up in scale since assets under management in the industry have risen sharply. It’s likely the fees index providers first charged some of the original plain vanilla funds have evolved over time, especially those with very high AUM, he adds.

Geography affects fees, too, Zhou observes. In crowded markets such as the U.S. and Europe, competition keeps fees low, but in the Asia-Pacific region, where active funds still dominate over ETFs, costs matter less than launching new products to get market share.

TECHNOLOGICAL IMPACT

Ron Bundy, managing director of indexes at Morningstar, says that new entrants took advantage of falling technology costs to build infrastructure. While the sunk costs are significant, as providers must guarantee the timeliness, quality and accuracy of data, once an index provider reaches scale, the marginal cost of adding a pure-beta type of index is almost zero. Morningstar also sells index data to asset managers.

Index providers can now calculate more than tens of thousands of indexes at the same cost they spent to calculate a few core index products. While investors benefit from greater access to more investable index products, “it’s also caused a proliferation of product, which can be confusing to investors at times,” Bundy said.

Timo Pfeiffer, chief markets officer for Solactive, explains that technology helped it enter the field, and strategic pricing keeps it competitive. For standard benchmark products, Solactive usually offers an index license for a flat fee, no matter the size of the fund’s assets under management.

For a standard market-cap, plain vanilla benchmark ETF that has an expense ratio of around 5 basis points, Solactive’s flat fee rates start at around $10,000 per year, he notes. The standard package includes an index with market-cap exposure, plus whatever’s needed to replicate that exposure, such as tracking corporate actions and running rebalances.

It may charge a flat fee and a 2 or 3 basis point license fee for more complex indexes like ESG, since there’s more work involved, or if asset managers want additional services such as providing content like webinars or running research.

David Barclay, CEO of CRSP Indexes, a research center of the University of Chicago affiliated with the Booth School of Business, says fees depend on several factors, including the fund manager’s size and how long they’ve been in the industry.

And David LaValle, CEO of Alerian, says creating esoteric indexes versus a simple market-cap-weighted index can take more data management. More esoteric products, or data sets that require cleaning up of inaccurate information, take longer and may require more work.

“Ultimately, you’re somewhat going back to the process of ensuring that you’re getting a starting universe that’s

INDEX PROVIDERS MAKE MORE ON SELLING BENCHMARK DATA

accurate," LaValle said.

INDEX PROVIDER COSTS

Barclay notes some costs have shifted, and costs of personnel have risen. That's especially the case if an index provider maintains the data itself. CRSP data sets go back to the 1960s, and internally they've run their indexes for more than 10 years.

He observes his costs have "far more than doubled" in the 10 years, as CRSP maintains the quality and accuracy of the information, which includes subscribing to multiple data sources in order to compare information among data vendors.

CRSP is unique, because it offers services to both the financial industry and researchers, and because of the academic nature of its work, "once an index is born, it never dies," Barclay said.

Solactive's Pfeiffer also vouched for internal data costs, noting more than half of the firm's staff is in technology functions.

Complex index funds such as ESG, private market and multi-asset data use alternative data, and index providers often work with third parties to gather data from nontraditional sources such as satellites or web scraping blogs and other sites.

BENCHMARKING FEES JUMP

Index providers make more on selling benchmark data, according to all the sources, and those prices have risen significantly in the last 10-15 years. While index providers and asset managers benefit from the assets flowing into ETFs, asset managers have difficulty passing through the benchmarking costs.

Solactive makes its benchmark data cheaper than investment product data, charging "in the four digits" area per index.

"For benchmarking, to put it in very simple terms, it's a line that gets extended on a daily basis by one number," he said. "So should I charge more or less for that?"

Some asset managers have sought to avoid paying index provider fees by self-indexing, but Morningstar's Bundy observes that hasn't gained as much adoption in the industry, as asset managers run into issues with accuracy, timeliness and the conflict of interest of a firm calculating its own index, benchmarking to it and running the investment product.

Because of more competition and self-indexing, traditional index providers say the onus is on them to deliver more value to their partners by offering services like support, sales, distribution, content creation and research in an effort to drive distribution and growth in value in the products.

"As an indexer, I'm pitching business," Alerian's LaValle explained. "I need to be able to answer the question that the asset manager is asking: 'Why can't I do this myself?'"

Some of the newer entrants are gaining new customers lured by good data and cheaper prices. Bundy notes one of the many reasons Vanguard could lower its fees was changing index providers, switching to CRSP for many of their indexes, including the $1 trillion Vanguard Total Stock Market Index mutual fund.

But there hasn't necessarily been a mass exodus by asset managers from more expensive index providers.

"It's hard to change inertia. Once you're using one brand of index, it's difficult to move away, even though other indexes are available that basically do identical [work] for identical service," Bundy said. ●

3 Factors Contributing to Growth of Indexes

1. Improved technology lowers costs of storage & calculation
2. More services for lower costs
3. Explosive growth of ETFs

By Debbie Carlson
Contributor to ETF.com
& ETF Report

The nature of indexes has shifted significantly over the past 25 years

EVOLUTION OF INDEXING

To paraphrase an old advertisement, "Indexes, you've come a long way, baby."

No longer just decided by a committee of business journalists, indexes come in many flavors: rules-based, fundamentally weighted, smart beta, thematic, direct and others, all to measure and present data to satisfy almost any investor.

While actively managed exchange-traded funds are elbowing their way into the ETF ecosystem, passive indexes still dominate for their low costs and sheer quantity. And as technology advances, it leads to more ways to create indexes, including using artificial intelligence (AI) in methodologies.

INDEXING & ETFs GROW TOGETHER

Index-based investment products started with a mutual fund now known as the Vanguard 500 Index Fund, but as Todd Rosenbluth, director of ETF research at CFRA, explains, the true rise of index investing coincided with the ETF market's growth.

For the first decade of ETFs' existence, market-cap-weighted index ETFs were largely all that existed (with the **Invesco QQQ Trust (QQQ)** a notable exception due to its tiered cap-weighting methodology).

The first investments based on fundamentally weighted indexes arrived in 2003, with the now-named **Invesco S&P 500 Equal Weight ETF (RSP)**; its underlying benchmark is still one of the best-known of these types of indexes.

Christian Magoon, founder and CEO of Amplify ETFs, says the second generation of indexes was inspired by investment professionals who used fundamental data in their strategies, which didn't often align with market-cap or price weighting.

The dot-com crash in early 2000 exposed the flaws in market-cap weighting, Magoon says: "I think that resonated specifically because of the big tech bubble. When that popped, it subjected the S&P—and particularly the Nasdaq-100—to some significant drawdowns."

AFTER THE BUBBLE BURST

Using fundamentals versus price wasn't a new idea, he notes, but investors weren't interested, because it underperformed market-cap weighting. However, the bursting of the dot-com bubble increased acceptance of looking at indexes differently, and it spurred innovation.

Not long after the bubble burst, index providers started using academic research, specifically the factor studies from Eugene Fama and Kenneth French, who highlighted market anomalies around value and size, Rosenbluth observes.

Using fundamental weighting and the smart beta strategies, whether single or multifactor, also ushered in new ways to think about indexing. "This brought us to a world where indexes are essentially created for ETF purposes. It's a significant shift from thinking about indexes as 'how the market is doing,'" Magoon said.

While RSP is considered by many to be the first smart beta ETF, one of the first and most strongly promoted funds to rely on a fundamentals-focused smart beta strategy was the $4.4 billion **Invesco FTSE RAFI U.S. 1000 ETF (PRF)**, which relied on an index using a methodology developed by Rob Arnott and his firm Research Affiliates. PRF's underlying index represented a turning point in smart beta indexes, opening the floodgates for strategies like First Trust's AlphaDEX methodology and, eventually, factor-based ETFs.

THEMATICS TAKE THE STAGE

Smaller entrants developed many of the newer ideas in indexing, since they weren't glued to the traditional index providers' classification system, such as the Global Industry Classification Standard, Magoon explains. These newer indexes took advantage of market opportunities. Indexers drilled down from sectors and styles to industries, and knitted together companies based on a theme.

It's why thematics are interesting in the indexing world, says Elisabeth Kashner, director of ETF Research at FactSet: "They take old indexing rules and break them. A thematics index looks for similarities that don't fit well in a traditional hierarchy. It's a different organizational scheme."

That's allowed investors to bypass a broad-based technology ETF to find one based on a niche, such as 5G or blockchain. Magoon says Amplify's digital payments ETF, the **Amplify CrowdBureau Online Lending and Digital Banking ETF (LEND)**, contains some banking services stocks, software and IT stocks as well as investment banking stocks.

Thematics offer a connection between investors who want the focused exposure of individual securities with the diversification benefits of an indexed-based approach, he adds.

Kashner notes that index providers now might look at different permutations to create an index, such as laying a factor on top of a classification scheme or overlaying an equal weighting.

"The easy ground has long since been covered. The new opportunities are in ever-smaller niches or ever-cleverer ways to combine things," she added.

NOT JUST FOR EQUITIES

Indexing is no longer just the purview of equities; fixed income is also getting the

EVOLUTION OF INDEXING

MAY 1896
Dow Jones Industrial Average is first calculated

MARCH 1957
S&P 500 is first calculated with 500 stocks

JANUARY 1985
Nasdaq-100 is first calculated

JANUARY 1993
SPDR S&P 500 ETF Trust (SPY) launches

MARCH 1999
Invesco QQQ Trust (QQQ) launches

JULY 2002
iShares launches first fixed income ETFs

OCTOBER 2002
Dot-com market crashes

APRIL 2003
Invesco S&P 500 Equal Weight ETF (RSP) launches

DECEMBER 2005
Invesco FTSE RAFI U.S. 1000 ETF (PRF) launches

SEPTEMBER 2008
Stock market crashes due to subprime mortgage crisis

APRIL 2016
Sprott BUZZ Social Media Insights ETF (BUZ), first ETF powered by artificial intelligence launches

MARCH 2020
Stock market crashes due to COVID-19 pandemic

NOVEMBER 2020
Goldman Sachs Innovate Equity ETF (GINN) debuts

indexing treatment. Buying individual bonds means limited liquidity, diversification and transparency, but fixed income indexes solve that problem by offering diversification of securities, credit-quality, issuers, maturity and other aspects, Rosenbluth points out, and investors can trade them on an exchange.

While some investors may still be hesitant to use fixed income indexed ETFs because of unfounded fears that there might be too much money chasing these vehicles, he thinks that, as these get more customized, they may attract more users.

ESG & DIRECT INDEXING

Direct indexing has been around for a while, and it's recently become popular as interest in environmental, social and governance investing grows, and for its greater tax efficiency. Direct indexing lets investors buy the individual equities, rather than using an ETF.

Jason Escamilla, CEO of Impact Advisor, says that for investors in high-tax states with taxable-account holdings, direct investing allows much easier tax-loss harvesting, because he can trim individual stock holdings, rather than a basket of ETFs.

"You open up a wide range of tax opportunities," he said, including moving appreciated holdings into donor-advised funds.

Additionally, the customization is fine-tuned, which is particularly important for ESG investors who might want to give greater weight to certain ESG factors over others. "The beauty of direct indexing is you can pick what your definition of responsible investing is, and build that into the algorithm," Escamilla added, noting he can also offer this service to his submillion accounts.

DIRECT INDEXING HAS BEEN AROUND FOR A WHILE

ARTIFICIAL INTELLIGENCE A MIXED BAG

In the past few years, some ETF issuers rolled out funds that rely on indexes built with machine learning, natural language processing and artificial intelligence, but to limited success.

Goldman Sachs teamed up with now-closed investment strategist Motif to launch five thematic ETFs that relied on machine learning. They were folded into a single fund after Motif's shutdown. The **Goldman Sachs Innovate Equity ETF (GINN)** now has almost $400 million. The **Rogers AI Global Macro ETF (BIKR)** launched in 2018 and relied on an AI-driven algorithm. It closed after roughly a year of trading due to low asset levels.

More recently, ProShares rolled out the **ProShares MSCI Transformational Changes ETF (ANEW)** in late 2020; it currently has roughly $35 million in assets. The fund, like many newer thematic ETFs, uses natural language processing to seek out companies fitting within the parameters of its themes.

Merlyn.AI, however, has more successfully incorporated artificial intelligence into the indexes underlying all the products in its suite of four ETFs. Some of them have gathered significant assets. The **Merlyn.AI Bull-Rider Bear-Fighter ETF (WIZ)** launched in 2019 and had $106 million in AUM in early 2021, while the **Merlyn.AI SectorSurfer Momentum ETF (DUDE)**, which launched in the last days of 2020, had $123 million.

MITIGATING THE NOISE

The ETFs use signal processing, which includes use of a double exponential moving average filter, to eliminate the noise around the momentum factor. Additionally, the firm uses genetic algorithms—algorithms inspired by Charles Darwin's theory of natural selection—to evaluate hundreds of ETFs to select a portfolio of between three and eight ETFs. Machine learning helps the algorithm learn to improve ETF selection as market conditions change.

Scott Juds, chairman and CEO of Merlyn.AI, credits the early ETF success to having started the signal-generation strategy based on a subscription model back in 2010. User feedback allowed him to tweak the strategy well enough to eventually create an index. Running the models for a few years "warmed up the audience," he said.

Julia Bonafede, co-founder of Rosetta Analytics, which uses AI-driven investment strategies, says employing AI and machine learning to build indexes is still in its infancy, and may take some getting used to by investors. After all, she points out, multifactor risk models took some time to catch on before acceptance.

To start using AI-built indexes, "investors are going to have to take the leap from a risk standpoint, and that depends on the governance structure of the fund," she noted.

Even as indexes evolve, some advisors think the newer ones aren't necessarily more advanced, but more specialized. Don Bennyhoff, investment committee chairman and director of investor education at Portfolio Solutions, wonders if the industry needs so many specialized indexed ETFs.

"It's pretty hard to improve upon that plain vanilla type of approach," he said. "Last I checked, the vanilla is still the favorite flavor of ice cream for America." ●

An Overview Of Indexing

By Debbie Carlson

Contributor to ETF.com
& ETF Report

Indexing started in journalism as a way for newspaper editors to give readers a snapshot of the market's performance, starting with the Dow Jones Transportation Average in 1884.

Active managers used them as a measuring stick for their success or failures, but they were never considered moneymakers. The birth of modern finance gave academic underpinning to the idea that indexes could be a proxy for a market portfolio, explains Aye Soe, global head of product management for S&P Dow Jones Indices.

The first index-tracking product available to individual investors was the now-called Vanguard 500 Index mutual fund in 1976. Rich Powers, head of ETF and index product management at Vanguard, says that the asset manager was "more or less a lone wolf" since very few fund houses offered index funds.

It wasn't until the 1990s that exchange-traded funds arrived on the scene, with the **SDPR S&P 500 Trust ETF (SPY)** the first. "Investors know exactly what they're getting in an ETF, and with that evolution, the index basically becomes the portfolio," said Sean Wasserman, vice president, global head of index and advisor solutions at Nasdaq.

ETFs and indexes took off in the 2000s, Soe said, "when people realized you can access a lot more strategies and themes than just broad-based market portfolios."

Now indexes are an industry unto themselves, and they're key to ETFs because their methodology dictates the selection and weighting an ETF may attempt to track. Roughly 80% of the existing 2,400-plus U.S.-listed ETFs track indexes. Following are rundowns on four of the top index providers.

TOP 20 ETFs & THEIR INDEXES

TICKER	FUND	INDEX	EXPENSE RATIO	AUM	INCEPTION
SPY	SPDR S&P 500 ETF Trust	S&P 500	0.09%	$330.50B	1/22/93
IVV	iShares Core S&P 500 ETF	S&P 500	0.03%	$251.48B	5/15/00
VTI	Vanguard Total Stock Market ETF	CRSP U.S. Total Market	0.03%	$215.12B	5/24/01
VOO	Vanguard S&P 500 ETF	S&P 500	0.03%	$195.21B	9/7/10
QQQ	Invesco QQQ Trust	NASDAQ-100 Index	0.20%	$159.51B	3/10/99
VEA	Vanguard FTSE Developed Markets ETF	FTSE Developed All Cap ex US Index Net TR US RIC - TR Net of RIC	0.05%	$90.89B	7/20/07
AGG	iShares Core U.S. Aggregate Bond ETF	Bloomberg Barclays U.S. Aggregate Bond Index	0.06%	$86.21B	9/22/03
IEFA	iShares Core MSCI EAFE ETF	MSCI EAFE IMI	0.08%	$85.65B	10/18/12
VWO	Vanguard FTSE Emerging Markets ETF	FTSE Emerging Markets All Cap China A Inclusion Index	0.10%	$77.85B	3/4/05
IEMG	iShares Core MSCI Emerging Markets ETF	MSCI Emerging Markets Investable Market Index	0.11%	$77.60B	10/18/12
VUG	Vanguard Growth ETF	CRSP US Large Growth	0.04%	$70.67B	1/26/04
BND	Vanguard Total Bond Market ETF	Bloomberg Barclays U.S. Aggregate Float Adjusted Index	0.04%	$70.53B	4/3/07
GLD	SPDR Gold Trust	Gold Spot	0.40%	$66.80B	11/18/04
IWM	iShares Russell 2000 ETF	Russell 2000 Index	0.20%	$66.05B	5/22/00
IWF	iShares Russell 1000 Growth ETF	Russell 1000 Growth	0.20%	$65.48B	5/22/00
VTV	Vanguard Value ETF	CRSP US Large Value	0.04%	$64.89B	1/26/04
IJR	iShares Core S&P Small-Cap ETF	S&P Small Cap 600	0.07%	$63.55B	5/22/00
IJH	iShares Core S&P Mid-Cap ETF	S&P Mid Cap 400	0.07%	$56.81B	5/22/00
EFA	iShares MSCI EAFE ETF	MSCI EAFE Index	0.32%	$53.57B	8/14/01
VIG	Vanguard Dividend Appreciation ETF	NASDAQ US Dividend Achievers Select Index	0.06%	$53.49B	4/21/06

- S&P DOW JONES INDICES
- CRSP
- NASDAQ
- FTSE RUSSELL
- MSCI
- BLOOMBERG
- NO INDEX

Source: FactSet; data as of 2/10/2021

S&P Dow Jones Indices

S&P Dow Jones Indices is the world's largest provider of financial market indexes, and its most important index is the most widely followed one, the S&P 500. According to the firm, there's more than $11.2 trillion indexed or benchmarked to the index, with $4.6 trillion of it passively managed.

There are 14 U.S.-listed ETFs that follow the S&P 500 Index, and SPY remains the biggest by assets under management. Total ETF assets following the S&P 500 are around $760 billion.

The S&P 500 launched in 1957, and is one of the few indexes wherein components are decided by committee, rather than rules. The S&P 500 committee uses eight criteria for eligibility, including market cap, liquidity and being based in the U.S.

Over the years, S&P has gathered other well-known indexes under its umbrella, including the Dow Jones indexes, which includes a commodities franchise with the S&P GSCI, as well as the Dow Jones Industrial Average, the S&P 500 VIX volatility indexes, several fixed income indexes and multi-asset indexes. The company states more than one-quarter of all ETFs are linked to an S&P Dow Jones Index.

"We've really grown to where we have a footprint in almost every asset class," Soe said.

Soe says they've seen greater interest in their S&P 500 equal-weight index, as represented by the **Invesco S&P 500 Equal Weight ETF (RSP)**, especially as discussion around midcap and small cap indexes grows after years of the market-cap-weighted indexes dominating investing.

Nasdaq

The Nasdaq Composite debuted in 1971 as the first electronic stock market, as a way to showcase the performance of the overall market. In 1985, the Nasdaq-100 was launched as a growth index containing the 100 largest nonfinancial U.S. companies listed on the exchange.

The biggest ETF that tracks the Nasdaq-100, the **Invesco QQQ Trust (QQQ)**, was originally created by the exchange in 1999, after seeing the success of SPY, Wasserman notes. With the advent of ETFs, the exchange saw how the vehicles could provide investors exposure to Nasdaq's listed companies.

Given that QQQ debuted in 1999 as the dot-com era dawned, ETFs "really catapulted us into space," Wasserman says, by getting the brand wider exposure at a time when investor demand for technology stocks was strong.

There are now nine ETFs tracking the Nasdaq-100, with total assets under management around $169 billion.

"The Nasdaq-100 provides that unique blend of U.S. large cap growth heavily tilted toward technology, which is really capturing the essence of the overall U.S. economy," Wasserman explained.

He notes one area where Nasdaq sees new developments is in the options space: "We're just scratching the surface in terms of investor adoption of the options-based strategies on the Nasdaq-100."

FTSE Russell

Most of the major indexes are focused on large cap stocks, but the Russell family of indexes was launched in 1984 to measure U.S. market segments. The Russell 3000 is the broad-market index and includes the popular Russell 2000 small cap index. FTSE acquired Russell in 2014.

There are nine ETFs following the Russell 2000 Index, with total assets reaching $70 billion. The largest by AUM is the **iShares Russell 2000 ETF (IWM).**

Ken O'Keeffe, global head of ETFs, says the Russell indexes were historically used for a better understanding of the small cap space versus the large cap, as well as value and growth. The FTSE 100 gives a view of how U.K. equities differ from the U.S., since it represents the 100 biggest market-cap companies listed in London. There's about $16 trillion benchmarked to FTSE Russell indexes, O'Keeffe says, with ETFs making up about $860 billion of that total.

He says the index provider is looking now toward working with clients to create indexes that meet their specific needs: "The days of licensing the Russell 1000, 2000, 3000, FTSE emerging and developed [indexes] is pretty much all done."

Some of those indexes include environmental, social and governance indexes, including one for Vanguard that's part of the FTSE Global Choice Index Series, as well as fixed income indexes for Goldman Sachs, such as the FTSE Goldman Sachs Investment Grade Corporate Bond Index, which underlies a $770 million ETF.

"There's a greater demand for ways to meet a slightly different investment outcome," O'Keeffe said. "Where we're helpful to clients is helping them understand what makes an index more investable."

MSCI

MSCI is best known for its international indexes, which started in 1969 with the MSCI World Index. Raman Aylur Subramanian, head of equity solutions research for Americas and EMEA at MSCI, says with the creation of modern portfolio theory in the 1950s, the capital asset pricing model in the 1960s, and a general idea about market portfolios, some sophisticated investors were interested in looking beyond their home market to invest in Europe and other regions.

In the late 1960s, the World Index was the only non-North American developed-market index accessible to investors, and the accessibility philosophy carries through today. "As we build an index as a benchmark, we want to ensure that countries or stocks are both investable and accessible," Subramanian said.

MSCI indexes followed the opening of global markets, he says, including the emerging markets in 1987, while the All-Country World Index launched in 1995. Until then, there was no index that included all countries, including emerging markets.

Subramanian says the ACWI IMI Index is the most prominent index for investors, as it acts as a performance benchmark for many of the institutional investors.

There's now $12 trillion in AUM benchmarked to MSCI indexes, with more than 1,300 equity ETFs based on MSCI indexes. Some of the biggest international ETFs use MSCI indexes, particularly the iShares brand, including the $15 billion **iShares MSCI ACWI ETF (ACWI)**.

The fastest growth they are seeing is in the MSCI ESG and climate indexes, which Subramanian says is one of the biggest shifts he's seen in investor behavior: "What we're seeing is investors saying, 'I want to capture market beta, but I want to capture the 'good' side of market beta, rather than the 'bad' side."

ETF Report presents its comprehensive ETF Industry Directory. If you're in need of help with anything to do with ETFs—from an authorized participant for the fund you hope to launch to a designer for that website you're renovating—you can likely find the contact information here for someone who can provide a solution. If you're in the ETF industry and would like to be included, or your contact info needs updating, please contact support@etf.com.

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Qontigo is a financial intelligence innovator and a leader in the modernization of investment management, from risk to return.

The combination of the group's world-class indices and best-of-breed analytics, with its technological expertise and customer-driven innovation, enables our clients to achieve competitive advantage in a rapidly changing marketplace.

Created in 2019 through the combination of Axioma, DAX and STOXX, Qontigo is part of Deutsche Börse Group, headquartered in Eschborn, with key locations in New York, Zug and London.

In recent years, Qontigo has increased its focus on sustainable investing and on expanding the offering of solutions that help a growing investor base incorporate environmental, social and governance (ESG) criteria into portfolio construction and analysis.

STOXX, Qontigo's index arm, has facilitated ESG investing since 2011 with indices that meet a wide range of sustainable criteria. That range has grown at a noticeable pace in the most recent years, with new products that track climate, low carbon and ESG integration strategies. The most prominent recent examples are the launches of the EURO STOXX 50 ESG & DAX 50 ESG indices.

Yet the index work is far from done, we are currently working on innovative offerings designed to strengthen the achievement of real-world outcomes in investments.

One of our biggest upcoming projects will see the adoption of ESG parameters across our Axioma analytics toolbox, to help users make well-informed, responsible investment choices. This will be a timely and much expected incorporation as the move toward ESG integration in the asset management industry gains further momentum.

At Qontigo, our mission is to innovate in the world of investing and portfolio analytics, and a large part of that effort and resources is dedicated to building a sustainable future.

We are committed to constructing a responsible marketplace and foster real ESG investment opportunities, to the benefit of participants and the wider society.

Qontigo's global client base includes the world's largest financial products issuers, capital owners and asset managers.

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ETF DATA

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

- Data as of 01/31/2021
- 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 $123 million and above
- Source: ETF.com

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
U.S. EQUITY: TOTAL MARKET						
SPDR S&P Kensho New Economies	KOMP	0.20	2,076.8	12.02	-	-
AI Powered Equity	AIEQ	0.80	140.3	8.71	16.04	-
Renaissance IPO	IPO	0.60	893.6	5.54	34.43	31.61
Innovator IBD 50	FFTY	0.80	235.7	5.04	7.80	16.03
Invesco Dynamic Market	PWC	0.58	125.3	4.71	4.67	12.09
First Trust US Equity Opportunities	FPX	0.58	2,016.2	3.68	19.79	21.89
VictoryShares MSCI USA Value Momentum	ULVM	0.20	528.1	2.82	3.15	-
Schwab Fundamental US Broad Market	FNDB	0.25	274.9	2.74	8.41	13.83
Vident Core US Equity	VUSE	0.48	372.5	2.73	2.63	10.62
ERShares Entrepreneur 30	ENTR	0.49	151.5	2.48	21.50	-
Invesco Raymond James SB-1 Equity	RYJ	0.76	125.7	2.38	5.41	12.61
Etho Climate Leadership US	ETHO	0.48	131.0	1.66	16.07	19.76
iShares MSCI USA Momentum Factor	MTUM	0.15	14,656.4	1.59	15.12	19.90
ALPS Barron's 400	BFOR	0.65	126.3	1.49	6.29	13.56
FlexShares Morningstar US Market Factor Tilt	TILT	0.25	1,449.5	1.34	9.85	15.51
WisdomTree US Multifactor	USMF	0.28	144.3	1.25	8.58	-
Invesco BuyBack Achievers	PKW	0.62	1,036.5	1.02	7.56	13.32
Fidelity NASDAQ Composite	ONEQ	0.21	3,823.6	0.87	21.83	24.32
Avantis US Equity	AVUS	0.15	638.0	0.52	-	-
iShares US Tech Breakthrough Multisector	TECB	0.40	353.6	0.43	-	-
Global X Adaptive US Factor	AUSF	0.27	155.3	0.39	-	-
American Century STOXX US Quality Growth	QGRO	0.29	232.1	0.32	-	-
iShares MSCI USA Multifactor	LRGF	0.20	897.6	0.32	6.89	13.08
Global X Millennials Thematic	MILN	0.50	144.5	0.27	22.96	-
American Century STOXX US Quality Value	VALQ	0.29	174.3	0.20	3.34	-
FlexShares Quality Dividend Defensive	QDEF	0.37	467.1	0.13	6.17	11.61
FlexShares Quality Dividend	QDF	0.37	1,441.5	-0.08	5.24	11.64
IQ Candriam ESG US Equity	IQSU	0.09	355.3	-0.25	-	-
iShares Core S&P Total US Stock Market	ITOT	0.03	32,904.1	-0.27	12.29	16.69
Global X Conscious Companies	KRMA	0.43	435.1	-0.29	11.72	-
Vanguard Total Stock Market	VTI	0.03	208,151.0	-0.33	12.39	16.73
Xtrackers MSCI USA ESG Leaders Equity	USSG	0.10	3,182.8	-0.34	-	-
iShares MSCI USA ESG Select	SUSA	0.50	2,457.9	-0.36	13.62	17.74
Schwab US Broad Market	SCHB	0.03	18,530.8	-0.41	12.29	16.62
FlexShares STOXX US ESG Impact	ESG	0.32	157.6	-0.41	12.53	-
iShares Russell 3000	IWV	0.20	10,644.0	-0.47	12.13	16.47
VictoryShares US Multi-Factor Minimum Vol	VSMV	0.35	146.7	-0.49	7.67	-
Vanguard Russell 3000	VTHR	0.10	873.6	-0.53	12.29	16.61
iShares ESG Aware MSCI USA	ESGU	0.15	13,285.0	-0.53	13.31	-
Vanguard ESG US Stock	ESGV	0.12	3,236.3	-0.54	-	-
iShares MSCI USA Equal Weighted	EUSA	0.15	287.4	-0.57	9.31	14.80
Goldman Sachs MarketBeta US Equity	GSUS	0.07	288.0	-0.57	-	-
iShares Dow Jones US	IYY	0.20	1,474.6	-0.66	11.99	16.37
JPMorgan BetaBuilders US Equity	BBUS	0.02	309.4	-0.67	-	-
iShares ESG MSCI USA Leaders	SUSL	0.10	2,990.6	-0.68	-	-
SPDR Portfolio S&P 1500	SPTM	0.03	4,336.0	-0.69	11.50	16.14
VanEck Vectors Morningstar Wide Moat	MOAT	0.48	4,222.0	-0.71	11.97	19.12
Motley Fool 100	TMFC	0.50	404.2	-0.79	21.34	-
Legg Mason Low Volatility High Dividend	LVHD	0.27	698.2	-0.82	4.34	9.05
WisdomTree US Total Dividend	DTD	0.28	820.0	-0.84	5.70	11.60
RiverFront Dynamic US Dividend Advantage	RFDA	0.52	134.8	-0.87	6.57	-
FlexShares US Quality Low Volatility	QLV	0.22	126.0	-0.97	-	-
iShares MSCI USA Size Factor	SIZE	0.15	896.6	-1.02	10.25	14.46
iShares MSCI KLD 400 Social	DSI	0.50	2,643.0	-1.03	12.49	16.29
TrimTabs US Free Cash Flow Quality	TTAC	0.59	188.5	-1.13	9.52	-
Timothy Plan US Large/Mid Cap Core	TPLC	0.52	164.1	-1.17	-	-
Invesco Defensive Equity	DEF	0.50	253.9	-1.44	7.69	12.87
Goldman Sachs Hedge Industry VIP	GVIP	0.45	173.3	-1.58	16.90	-
iShares Core Dividend Growth	DGRO	0.08	15,156.2	-1.58	9.25	14.92
SPDR MSCI USA StrategicFactors	QUS	0.15	837.6	-1.64	10.52	15.43
WisdomTree US Quality Dividend Growth	DGRW	0.28	5,245.9	-1.66	9.25	15.41
Invesco Dividend Achievers	PFM	0.53	534.2	-2.40	7.62	11.89
Invesco DWA Momentum	PDP	0.62	1,944.1	-2.42	16.19	17.82
iShares MSCI USA Min Vol Factor	USMV	0.15	30,209.6	-2.73	8.72	12.14
iShares MSCI USA Quality Factor	QUAL	0.15	20,038.3	-2.83	11.15	14.99
Franklin Liberty US Low Volatility	FLLV	0.29	125.6	-2.90	11.12	-
Vanguard Dividend Appreciation	VIG	0.06	52,878.8	-2.92	10.63	14.77
U.S. EQUITY: TOTAL MARKET GROWTH						
Janus Henderson Sm/Mid Cap Growth Alpha	JSMD	0.30	161.3	3.30	17.18	-
First Trust Multi Cap Growth AlphaDEX	JSMD	0.63	211.0	2.79	15.95	18.51
iShares Core S&P US Growth	IUSG	0.05	10,353.6	-0.37	16.98	19.99
American Century Focused Dynamic Growth	FDG	0.45	223.1	-0.76	-	-
U.S. EQUITY: TOTAL MARKET VALUE						
Alpha Architect US Quantitative Value	QVAL	0.49	152.1	6.42	-0.83	9.47
iShares MSCI USA Value Factor	VLUE	0.15	10,705.8	3.30	3.75	12.42
Vanguard US Value Factor	VFVA	0.14	186.4	3.16	-	-
iShares Core S&P US Value	IUSV	0.05	7,624.1	-1.40	4.80	11.49
U.S. EQUITY: EXTENDED CAP						
Invesco FTSE RAFI US 1500 Small-Mid	PRFZ	0.39	1,808.5	4.51	7.29	14.12
Vanguard Extended Market	VXF	0.06	14,433.3	2.70	15.16	18.85
iShares Russell 2500	SMMD	0.24	212.8	2.51	10.51	-
U.S. EQUITY: LARGE CAP						
Pacer US Cash Cows 100	COWZ	0.49	246.3	3.64	6.76	-
Invesco FTSE RAFI US 1000	PRF	0.39	4,431.3	2.94	7.39	13.11
Invesco S&P 500 Downside Hedged	PHDG	0.39	142.3	2.75	6.93	8.99
Schwab Fundamental US Large Company	FNDX	0.25	5,632.9	2.72	8.55	13.77
Invesco Russell 1000 Dynamic Multifactor	OMFL	0.29	1,327.8	2.27	16.10	-
Invesco S&P 500 High Dividend Low Volatility	SPHD	0.30	3,061.8	2.01	1.13	7.41
Fidelity Momentum Factor	FDMO	0.29	125.9	1.99	11.94	-
SPDR Portfolio S&P 500 High Dividend	SPYD	0.07	2,807.9	1.97	0.74	8.10
Invesco NASDAQ Next Gen 100	QQQJ	0.15	823.0	1.52	-	-
SPDR Russell 1000 Yield Focus	ONEY	0.20	482.7	1.46	5.61	12.23
Main Sector Rotation	SECT	0.80	671.7	1.26	8.46	-
Global X NASDAQ 100 Covered Call	QYLD	0.60	1,772.4	1.13	8.52	11.33
VictoryShares Nasdaq Next 50	QQQN	0.18	127.0	0.85	-	-
ALPS Sector Dividend Dogs	SDOG	0.40	1,037.6	0.85	1.69	9.73
ProShares Large Cap Core Plus	CSM	0.46	438.0	0.85	7.08	13.05
Invesco RAFI Strategic US	IUS	0.19	158.5	0.74	-	-
Nationwide Risk-Managed Income	NUSI	0.68	194.8	0.65	-	-
WisdomTree US Dividend ex-Financials	DTN	0.38	519.9	0.65	1.18	8.02
First Trust Large Cap Core AlphaDEX	FEX	0.59	1,022.7	0.60	7.74	14.11
6 Meridian Hedged Equity-Option Strategy	SIXH	0.81	205.4	0.60	-	-
Davis Select US Equity	DUSA	0.63	317.8	0.44	7.20	-
Global X S&P 500 Covered Call	XYLD	0.60	134.7	0.41	3.53	9.09

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Invesco NASDAQ 100	QQQM	0.15	446.5	0.36	-	35.73
Invesco QQQ Trust	QQQ	0.20	152,046.8	0.26	23.89	25.85
SPDR Russell 1000 Momentum Focus	ONEO	0.20	253.1	0.19	5.62	12.08
Hartford Multifactor US Equity	ROUS	0.19	324.0	0.15	4.54	12.15
First Trust Lunt US Factor Rotation	FCTR	0.65	135.5	0.08	-	-
Invesco S&P 500 Revenue	RWL	0.39	856.6	0.02	6.79	12.85
FT Cboe Vest US Equity Buffer - February	FFEB	0.85	186.7	0.02	-	-
Innovator S&P 500 Power Buffer - April	PAPR	0.79	137.5	0.00	-	-
Invesco Russell 1000 Equal Weight	EQAL	0.20	569.8	-0.03	8.57	13.99
FT Cboe Vest US Equity Deep Buffer - Feb	DFEB	0.85	360.8	-0.09	-	-
6 Meridian Mega Cap Equity	SIXA	0.82	123.4	-0.11	-	-
First Trust NASDAQ-100 Ex-Technology Sector	QQXT	0.60	147.7	-0.15	15.51	16.28
VictoryShares US Lrg Cap High Div Vol Wtd	CDL	0.35	186.4	-0.17	3.32	10.51
Pacer Trendpilot 100	PTNQ	0.65	808.3	-0.21	16.99	19.42
Direxion NASDAQ-100 Equal Weighted	QQQE	0.35	376.3	-0.22	18.22	21.24
Invesco S&P 500 BuyWrite	PBP	0.49	163.7	-0.26	1.39	5.61
JPMorgan US Momentum Factor	JMOM	0.12	153.1	-0.31	13.86	-
JPMorgan Diversified Return US Equity	JPUS	0.18	618.0	-0.37	6.62	12.53
VictoryShares US EQ Income Enh Vol Wtd	CDC	0.35	681.3	-0.41	6.86	12.32
First Trust Nasdaq-100 Equal Weighted	QQEW	0.59	1,209.3	-0.42	17.89	20.96
iShares S&P 100	OEF	0.20	7,087.7	-0.50	12.93	16.76
Invesco S&P 500 Quality	SPHQ	0.15	2,402.8	-0.59	11.30	14.94
ALPS Equal Sector Weight	EQL	0.28	169.7	-0.62	8.43	13.13
Invesco S&P 500 High Beta	SPHB	0.25	603.2	-0.63	10.08	19.09
Day Hagan/Ned Davis Research Smart Sector	SSUS	0.79	143.0	-0.64	-	-
BNY Mellon US Large Cap Core Equity	BKLC	0.00	190.6	-0.76	-	-
Overlay Shares Large Cap Equity	OVL	0.79	126.0	-0.76	-	-
Invesco S&P 500 Top 50	XLG	0.20	1,714.3	-0.78	13.98	17.52
Goldman Sachs ActiveBeta US Large Cap	GSLC	0.09	11,772.0	-0.78	11.48	15.52
Innovator S&P 500 Power Buffer - September	PSEP	0.79	294.3	-0.79	-	-
iShares Russell 1000	IWB	0.15	25,919.6	-0.79	12.32	16.55
Schwab US Large-Cap	SCHX	0.03	26,034.9	-0.80	12.47	16.70
Invesco S&P 500 Equal Weight	RSP	0.20	19,239.9	-0.82	8.37	13.80
WisdomTree US LargeCap	EPS	0.08	462.8	-0.82	9.13	15.05
Vanguard Large-Cap	VV	0.04	21,723.0	-0.85	12.49	16.74
Xtrackers S&P 500 ESG	SNPE	0.10	431.1	-0.85	-	-
Schwab 1000	SCHK	0.05	1,450.0	-0.86	12.27	-
Vanguard Russell 1000	VONE	0.08	2,245.5	-0.86	12.32	16.54
IQ Chaikin US Large Cap	CLRG	0.25	284.3	-0.89	4.68	-
SPDR Russell 1000 Low Volatility Focus	ONEV	0.20	464.8	-0.89	8.18	13.13
FT Cboe Vest US Equity Buffer - November	FNOV	0.85	188.5	-0.91	-	-
Inspire 100	BIBL	0.35	163.4	-0.93	11.21	-
SPDR Portfolio S&P 500	SPLG	0.03	7,935.9	-0.93	11.91	16.44
Vanguard Mega Cap	MGC	0.07	3,355.8	-0.96	12.89	17.09
iShares Russell Top 200	IWL	0.15	866.4	-0.97	13.14	17.19
Innovator S&P 500 Power Buffer - January	PJAN	0.79	369.6	-1.01	-	-
SPDR S&P 500 Trust	SPY	0.09	322,648.1	-1.02	11.58	16.05
Vanguard S&P 500	VOO	0.03	181,391.1	-1.02	11.63	16.10
iShares Core S&P 500	IVV	0.04	238,741.9	-1.03	11.61	16.13
Distillate US Fundamental Stability & Value	DSTL	0.39	251.2	-1.05	-	-
Innovator S&P 500 Power Buffer - December	PDEC	0.79	197.4	-1.06	-	-
Pacer Trendpilot US Large Cap	PTLC	0.60	1,849.1	-1.07	3.38	9.47
Barclays ETN+ Shiller CAPE ETN	CAPE	0.45	321.4	-1.07	12.48	17.83
John Hancock Multifactor Large Cap	JHML	0.29	996.4	-1.08	10.52	16.08
Goldman Sachs Equal Weight US Large Cap	GSEW	0.09	554.8	-1.09	9.40	-
Innovator S&P 500 Buffer - January	BJAN	0.80	152.8	-1.10	-	-
HCM Defender 500	LGH	1.23	135.2	-1.12	-	-
Innovator S&P 500 Power Buffer - October	POCT	0.80	167.2	-1.15	-	-
Goldman Sachs JUST US Large Cap Equity	JUST	0.20	200.0	-1.16	-	-
Xtrackers Russell US Multifactor	DEUS	0.17	178.9	-1.16	6.62	12.46
VictoryShares US 500 Volatility Wtd	CFA	0.35	653.6	-1.16	7.92	14.28
WisdomTree US LargeCap Dividend	DLN	0.28	2,613.2	-1.21	6.54	12.12
SPDR S&P 500 Fossil Fuel Reserves Free	SPYX	0.20	930.5	-1.22	12.20	16.54
Global X S&P 500 Catholic Values	CATH	0.29	462.7	-1.30	11.27	-
Fidelity Quality Factor	FQAL	0.29	168.8	-1.32	10.24	-
Amplify CWP Enhanced Dividend Income	DIVO	0.49	215.4	-1.34	9.05	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
VictoryShares US 500 Enhanced Volatility Wtd	CFO	0.35	775.9	-1.43	7.71	14.17
Principal US Mega-Cap	USMC	0.12	1,771.0	-1.43	10.72	-
JPMorgan Equity Premium Income	JEPI	0.35	297.4	-1.60	-	-
iShares Morningstar Large-Cap	JKD	0.20	844.7	-1.61	11.24	15.95
Aptus Drawdown Managed Equity	ADME	0.79	205.2	-1.69	3.10	-
Franklin LibertyQ US Equity	FLQL	0.15	1,503.4	-1.77	9.49	-
Invesco S&P 500 Low Volatility	SPLV	0.25	8,016.0	-1.82	6.46	10.20
JPMorgan US Quality Factor	JQUA	0.12	435.5	-1.83	10.63	-
SPDR Dow Jones Industrial Average Trust	DIA	0.16	25,873.3	-1.92	6.96	15.33
SPDR SSGA Gender Diversity	SHE	0.20	190.1	-1.99	9.73	-
ProShares S&P 500 Dividend Aristocrats	NOBL	0.35	7,063.0	-2.05	8.08	12.56
First Trust Rising Dividend Achievers	RDVY	0.50	2,045.4	-2.13	9.73	17.08
O?Shares US Quality Dividend	OUSA	0.48	606.9	-2.18	7.27	11.34
Aptus Collared Income Opportunity	ACIO	0.79	182.9	-2.41	-	-
Fidelity Low Volatility Factor	FDLO	0.29	391.4	-2.48	11.11	-
First Trust Capital Strength	FTCS	0.58	6,972.6	-2.80	8.30	13.64
VictoryShares Dividend Accelerator	VSDA	0.35	318.3	-3.56	10.68	-
First Trust Horizon Managed Vol Domestic	HUSV	0.70	177.9	-3.74	7.27	-
SPDR SSGA US Large Cap Low Volatility	LGLV	0.12	568.6	-3.80	9.54	13.18

U.S. EQUITY: LARGE CAP GROWTH

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Invesco Dynamic Large Cap Growth	PWB	0.56	760.2	0.41	15.77	18.69
Nuveen ESG Large-Cap Growth	NULG	0.35	573.0	0.12	22.33	-
First Trust Large Cap Growth AlphaDEX	FTC	0.60	1,055.0	0.12	14.36	16.92
Invesco S&P 500 GARP	SPGP	0.34	280.2	-0.04	14.66	19.49
SoFi Select 500	SFY	0.00	163.8	-0.36	-	-
SPDR Portfolio S&P 500 Growth	SPYG	0.04	9,635.1	-0.45	17.45	20.01
iShares S&P 500 Growth	IVW	0.18	32,209.9	-0.49	17.32	19.91
iShares Morningstar Large-Cap Growth	JKE	0.25	1,843.5	-0.52	19.74	21.57
Vanguard S&P 500 Growth	VOOG	0.10	4,997.5	-0.57	17.32	19.92
Vanguard Russell 1000 Growth	VONG	0.08	5,527.1	-0.68	19.80	22.12
Invesco S&P 500 Pure Growth	RPG	0.35	2,754.1	-0.71	13.27	17.38
Schwab US Large-Cap Growth	SCHG	0.04	13,505.6	-0.72	20.04	22.22
iShares Russell 1000 Growth	IWF	0.20	64,201.0	-0.79	19.67	21.99
iShares Russell Top 200 Growth	IWY	0.20	3,458.2	-0.86	20.18	22.53
Vanguard Mega Cap Growth	MGK	0.07	9,965.6	-0.97	20.16	22.17
Vanguard Growth	VUG	0.04	68,158.8	-1.01	19.85	21.57

U.S. EQUITY: LARGE CAP VALUE

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Invesco S&P 500 Pure Value	RPV	0.35	1,248.6	2.44	-0.66	9.14
First Trust Large Cap Value AlphaDEX	FTA	0.60	789.3	1.27	1.88	11.24
JPMorgan US Value Factor	JVAL	0.12	156.9	1.21	5.93	-
Fidelity Value Factor	FVAL	0.29	275.6	-0.02	7.75	-
Invesco Dynamic Large Cap Value	PWV	0.56	659.3	-0.70	1.49	9.06
Vanguard Value	VTV	0.04	63,227.7	-0.79	4.80	11.67
Vanguard Russell 1000 Value	VONV	0.08	3,528.2	-0.86	4.33	10.61
iShares Russell 1000 Value	IWD	0.20	43,648.3	-0.94	4.24	10.55
Schwab US Large-Cap Value	SCHV	0.04	8,194.9	-0.99	4.45	10.91
Vanguard Mega Cap Value	MGV	0.07	3,583.6	-1.00	5.28	11.75
iShares Morningstar Large-Cap Value	JKF	0.25	551.9	-1.18	3.28	10.21
iShares Russell Top 200 Value	IWX	0.20	933.4	-1.23	4.13	10.42
SPDR Portfolio S&P 500 Value	SPYV	0.04	7,863.5	-1.54	4.77	11.39
iShares S&P 500 Value	IVE	0.18	18,647.3	-1.59	4.60	11.11
Vanguard S&P 500 Value	VOOV	0.10	1,646.1	-1.60	4.64	11.18
American Century Focused Large Cap Value	FLV	0.42	175.7	-1.74	-	-
Nuveen ESG Large-Cap Value	NULV	0.35	691.0	-1.88	4.68	-

U.S. EQUITY: MID CAP

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Invesco S&P Midcap Momentum	XMMO	0.34	928.5	3.51	21.98	25.19
First Trust Mid Cap Core AlphaDEX	FNX	0.60	818.8	2.17	8.98	14.62
Invesco S&P Midcap Quality	XMHQ	0.25	143.8	2.07	13.30	16.92
SPDR Portfolio S&P 400 Mid Cap	SPMD	0.05	3,863.3	1.53	7.99	14.04
iShares Core S&P Mid-Cap	IJH	0.07	55,344.4	1.49	7.90	13.93
Invesco S&P MidCap 400 Revenue	RWK	0.39	302.1	1.46	6.23	12.59
SPDR S&P Midcap 400 Trust	MDY	0.23	18,751.8	1.44	7.73	13.70
WisdomTree US MidCap	EZM	0.38	647.0	1.40	4.32	11.77
Vanguard S&P Mid-Cap 400	IVOO	0.10	1,180.1	1.40	7.83	13.87
WisdomTree US MidCap Dividend	DON	0.38	2,646.2	1.23	2.13	9.15
JPMorgan BetaBuilders US Mid Cap Equity	BBMC	0.07	1,462.5	1.20	-	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Pacer Trendpilot US Mid Cap	PTMC	0.60	436.7	0.92	1.84	8.13
Schwab US Mid-Cap	SCHM	0.04	8,272.8	0.84	9.33	14.75
Invesco S&P MidCap Low Volatility	XMLV	0.25	1,710.6	0.27	4.18	9.75
JPMorgan Diversified Ret US Mid Cap Equity	JPME	0.24	267.8	-0.01	6.34	-
John Hancock Multifactor Mid Cap	JHMM	0.42	2,011.8	-0.02	9.34	15.16
ProShares S&P MidCap 400 Div Aristocrats	REGL	0.41	860.6	-0.16	7.12	12.74
iShares Russell Mid-Cap	IWR	0.20	25,234.1	-0.29	10.00	14.71
Vanguard Mid-Cap	VO	0.04	42,234.2	-0.47	10.25	14.95
iShares Morningstar Mid-Cap	JKG	0.25	811.1	-1.04	8.12	13.36
Invesco Zacks Mid-Cap	CZA	0.69	212.5	-1.37	4.82	12.48
U.S. EQUITY: MID CAP GROWTH						
Invesco S&P MidCap 400 Pure Growth	RFG	0.35	392.7	5.04	10.13	13.74
First Trust Mid Cap Growth AlphaDEX	FNY	0.70	496.6	3.62	18.09	20.32
Vanguard S&P Mid-Cap 400 Growth	IVOG	0.15	858.7	1.93	10.58	15.45
iShares S&P Mid-Cap 400 Growth	IJK	0.25	7,809.2	1.91	10.48	15.40
SPDR S&P 400 Mid Cap Growth	MDYG	0.15	2,003.1	1.79	10.55	15.56
iShares Morningstar Mid-Cap Growth	JKH	0.30	1,544.3	-0.30	21.57	22.55
iShares Russell Mid-Cap Growth	IWP	0.25	15,216.8	-0.38	17.90	20.17
Vanguard Mid-Cap Growth	VOT	0.07	10,186.4	-1.03	17.01	18.90
Nuveen ESG Mid-Cap Growth	NUMG	0.40	263.8	-1.50	19.89	-
U.S. EQUITY: MID CAP VALUE						
iShares S&P Mid-Cap 400 Value	IJJ	0.25	6,092.7	1.14	4.56	11.63
SPDR S&P 400 Mid Cap Value	MDYV	0.15	1,590.9	1.14	4.72	11.79
iShares Morningstar Mid-Cap Value	JKI	0.30	377.6	1.08	1.45	10.00
Vanguard S&P Mid-Cap 400 Value	IVOV	0.15	554.2	1.06	4.65	11.72
Nuveen ESG Mid-Cap Value	NUMV	0.40	158.9	0.84	3.90	-
iShares Russell Mid-Cap Value	IWS	0.25	11,887.2	-0.24	4.33	10.72
Vanguard Mid-Cap Value	VOE	0.07	11,363.5	-0.26	3.38	10.68
U.S. EQUITY: SMALL CAP						
Invesco S&P SmallCap 600 Revenue	RWJ	0.39	365.8	25.30	14.13	17.64
Invesco DWA SmallCap Momentum	DWAS	0.60	454.5	6.91	16.71	19.56
Goldman Sachs ActiveBeta US Small Cap	GSSC	0.20	265.6	6.71	10.49	-
Principal US Small-Cap Multi-Factor	PSC	0.38	988.1	6.35	7.83	-
Vanguard S&P Small-Cap 600	VIOO	0.10	1,340.1	6.25	9.00	15.20
SPDR S&P 600 Small Cap	SLY	0.15	1,501.7	6.20	8.97	15.13
iShares Core S&P Small-Cap	IJR	0.07	61,529.3	6.17	9.01	15.18
SPDR Portfolio S&P 600 Small Cap	SPSM	0.05	3,764.7	6.15	8.89	15.17
JPMorgan Diversified Return US Small Cap	JPSE	0.29	177.6	5.58	9.81	-
Nuveen ESG Small-Cap	NUSC	0.40	650.7	5.45	13.33	-
VictoryShares MSCI USA SmCap Val Mom	USVM	0.24	295.1	5.05	7.92	-
First Trust Small Cap Core AlphaDEX	FYX	0.63	757.8	5.04	10.22	15.56
Invesco S&P SmallCap Momentum	XSMO	0.39	142.2	4.99	15.55	18.87
Vanguard Russell 2000	VTWO	0.10	3,696.5	4.88	11.14	16.47
iShares Russell 2000	IWM	0.20	62,965.9	4.85	11.00	16.41
WisdomTree US SmallCap	EES	0.38	489.5	4.55	4.86	13.39
IQ Chaikin US Small Cap	CSML	0.35	181.2	4.33	3.37	-
iShares ESG Aware MSCI USA Small-Cap	ESML	0.17	582.1	4.13	-	-
Schwab US Small-Cap	SCHA	0.04	14,399.3	3.98	10.49	15.72
Schwab Fundamental US Small Company	FNDA	0.25	3,925.7	3.70	6.40	12.97
iShares MSCI USA Small-Cap Multifactor	SMLF	0.30	773.0	3.31	6.71	13.42
iShares Morningstar Small-Cap	JKJ	0.25	225.3	2.61	6.05	12.71
WisdomTree US Smallcap Quality Div Growth	DGRS	0.38	153.7	2.60	6.77	12.68
VictoryShares US Small Cap High Div Vol Wtd	CSB	0.35	134.9	2.21	8.71	14.18
John Hancock Multifactor Small Cap	JHSC	0.42	558.7	2.15	6.53	-
iShares MSCI USA Small-Cap Min Vol Factor	SMMV	0.20	884.2	2.04	7.12	-
Vanguard Small-Cap	VB	0.05	40,281.7	2.01	10.97	15.89
WisdomTree US SmallCap Dividend	DES	0.38	1,623.4	1.88	0.83	9.07
SPDR SSGA US Small Cap Low Volatility	SMLV	0.12	212.6	1.57	5.15	10.82
Invesco S&P SmallCap Low Volatility	XSLV	0.25	1,482.6	0.76	-1.00	7.20
ProShares Russell 2000 Dividend Growers	SMDV	0.41	686.9	-0.02	3.51	9.61
O'Shares US Small-Cap Quality Dividend	OUSM	0.48	127.0	-0.98	6.57	-
U.S. EQUITY: SMALL CAP GROWTH						
Invesco S&P SmallCap 600 Pure Growth	RZG	0.35	135.7	9.89	9.41	16.10
First Trust Small Cap Growth AlphaDEX	FYC	0.70	343.8	8.12	15.30	18.98
iShares S&P Small-Cap 600 Growth	IJT	0.25	6,055.0	6.22	12.25	16.95

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
SPDR S&P 600 Small Cap Growth	SLYG	0.15	2,143.7	6.19	12.39	17.09
Vanguard S&P Small-Cap 600 Growth	VIOG	0.16	461.7	6.19	12.29	17.08
iShares Morningstar Small-Cap Growth	JKK	0.30	810.4	4.82	20.09	22.56
iShares Russell 2000 Growth	IWO	0.24	12,432.0	4.78	16.53	20.19
Vanguard Russell 2000 Growth	VTWG	0.15	667.7	4.68	16.55	20.22
MFAM Small-Cap Growth	MFMS	0.85	182.0	2.54	-	-
Vanguard Small-Cap Growth	VBK	0.07	15,092.9	2.17	18.59	20.80
U.S. EQUITY: SMALL CAP VALUE						
Invesco S&P SmallCap Value w/ Momentum	XSVM	0.39	129.2	23.37	14.35	17.52
Vanguard S&P Small-Cap 600 Value	VIOV	0.15	836.3	6.38	5.31	13.04
SPDR S&P 600 Small Cap Value	SLYV	0.15	3,162.4	6.32	5.29	14.00
iShares S&P Small-Cap 600 Value	IJS	0.25	7,258.0	6.25	5.20	12.86
Invesco S&P SmallCap 600 Pure Value	RZV	0.35	174.4	5.73	0.04	8.50
Avantis US Small Cap Value	AVUV	0.25	643.3	5.15	-	-
Vanguard Russell 2000 Value	VTWV	0.15	584.3	5.06	5.01	12.52
iShares Russell 2000 Value	IWN	0.24	13,162.2	5.05	4.86	12.16
First Trust Small Cap Value AlphaDEX	FYT	0.72	157.2	2.65	6.18	12.73
Vanguard Small-Cap Value	VBR	0.07	19,541.4	2.04	4.51	11.66
iShares Morningstar Small Cap Value	JKL	0.30	337.5	1.96	0.31	8.86
U.S. EQUITY: MICRO CAP						
iShares Micro-Cap	IWC	0.60	1,125.3	14.00	12.70	17.28
First Trust Dow Jones Select MicroCap	FDM	0.60	127.6	4.98	3.46	11.85
U.S. EQUITY: BASIC MATERIALS						
Invesco S&P 500 Equal Weight Materials	RTM	0.40	454.8	-1.09	8.10	17.30
First Trust Materials AlphaDEX	FXZ	0.67	211.0	-1.23	3.23	14.45
iShares US Basic Materials	IYM	0.44	574.0	-1.98	3.44	13.88
Vanguard Materials	VAW	0.10	2,485.2	-2.37	4.69	14.71
Materials Select Sector SPDR	XLB	0.12	6,103.3	-2.42	6.12	15.05
Fidelity MSCI Materials	FMAT	0.08	259.3	-2.52	4.64	14.66
SPDR S&P Metals & Mining	XME	0.35	979.0	-3.26	-2.43	20.39
U.S. EQUITY: CONSUMER CYCLICALS						
SPDR S&P Retail	XRT	0.35	163.9	36.83	24.94	18.25
ProShares Online Retail	ONLN	0.58	1,219.2	9.07	-	-
Amplify Online Retail	IBUY	0.65	1,695.9	8.43	40.99	-
iShares US Home Construction	ITB	0.44	2,248.0	5.68	11.84	19.97
Global X E-commerce	EBIZ	0.50	188.1	5.15	-	-
SPDR S&P Homebuilders	XHB	0.35	1,415.3	4.61	11.60	15.64
Invesco Dynamic Leisure and Entertainment	PEJ	0.63	870.1	3.87	-2.85	5.31
First Trust Consumer Discretionary AlphaDEX	FXD	0.63	1,432.3	3.16	6.96	11.26
Vanguard Consumer Discretionary	VCR	0.10	5,168.9	2.95	20.62	21.48
ProShares Long Online/Short Stores	CLIX	0.65	249.7	2.44	28.53	-
Fidelity MSCI Consumer Discretionary	FDIS	0.08	1,373.2	2.42	21.30	21.89
Consumer Discretionary Select Sector SPDR	XLY	0.12	18,916.0	0.77	15.97	18.52
VanEck Vectors Retail	RTH	0.35	202.9	-0.12	16.64	17.79
Invesco S&P 500 Equal Wt Consumer Discr	RCD	0.40	374.1	-0.65	6.45	10.20
iShares US Consumer Services	IYC	0.44	1,273.2	-2.21	13.15	16.12
U.S. EQUITY: CONSUMER NON-CYCLICALS						
First Trust Consumer Staples AlphaDEX	FXG	0.63	234.2	1.53	3.15	5.59
iShares US Consumer Goods	IYK	0.44	749.8	-0.70	12.59	12.62
Invesco S&P 500 Equal Wt Consumer Staples	RHS	0.40	481.8	-2.25	5.23	7.35
Fidelity MSCI Consumer Staples	FSTA	0.08	868.4	-4.03	6.76	8.02
Vanguard Consumer Staples	VDC	0.10	5,452.3	-4.10	6.71	8.00
Consumer Staples Select Sector SPDR	XLP	0.12	12,023.1	-4.98	6.45	7.66
U.S. EQUITY: ENERGY						
First Trust NASDAQ Clean Edge Green Energy	QCLN	0.60	3,093.0	13.73	58.07	42.20
First Trust Natural Gas	FCG	0.60	123.3	11.45	-22.20	-11.95
SPDR S&P Oil & Gas Exploration & Production	XOP	0.35	2,576.8	9.95	-22.84	-9.55
SPDR S&P Oil & Gas Equipment & Services	XES	0.35	148.5	7.74	-33.98	-19.69
InfraCap MLP	AMZA	2.41	166.3	7.36	-26.90	-10.06
JPMorgan Alerian MLP ETN	AMJ	0.85	1,776.3	5.90	-13.61	-3.28
Global X MLP	MLPA	0.46	693.6	5.65	-14.57	-3.41
Barclays ETN+ Select MLP ETN	ATMP	0.95	156.4	5.43	-11.28	-0.07
Alerian MLP	AMLP	0.87	4,333.7	5.42	-14.43	-4.10
First Trust Energy AlphaDEX	FXN	0.64	175.1	5.11	-15.53	-6.24
Vanguard Energy	VDE	0.10	3,686.7	4.96	-15.86	-4.26

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
iShares US Oil & Gas Exploration & Production	IEO	0.44	180.9	4.77	-15.32	-3.38
Fidelity MSCI Energy	FENY	0.08	653.0	4.73	-15.99	-4.67
Global X MLP & Energy Infrastructure	MLPX	0.45	617.0	4.56	-6.23	3.50
iShares US Energy	IYE	0.44	533.3	3.95	-15.90	-4.73
Energy Select Sector SPDR	XLE	0.12	16,381.0	3.75	-14.83	-3.40
iShares US Oil Equipment & Services	IEZ	0.44	146.4	3.56	-30.81	-16.93
Tortoise North American Pipeline	TPYP	0.40	335.2	3.00	-3.77	5.11
ETRACS Alerian MLP Infrastr ETN Ser B	MLPB	0.85	171.0	2.86	-16.42	-5.49
First Trust North American Energy Infrastr	EMLP	0.96	1,752.4	2.05	-0.13	5.64
U.S. EQUITY: FINANCIALS						
First Trust Nasdaq Bank	FTXO	0.60	132.2	5.62	-4.43	-
SPDR S&P Regional Banking	KRE	0.35	2,691.0	4.66	-1.83	10.69
SPDR S&P Bank	KBE	0.35	2,915.5	2.18	-2.81	9.98
VanEck Vectors BDC Income	BIZD	10.24	304.2	2.04	5.55	9.11
First Trust Financials AlphaDEX	FXO	0.62	755.1	1.93	5.34	12.80
Invesco KBW High Dividend Yield Financial	KBWD	1.24	301.1	1.58	-1.16	7.02
iShares US Regional Banks	IAT	0.44	311.8	1.52	-1.84	10.79
Invesco KBW Bank	KBWB	0.35	1,617.6	-0.16	-3.01	11.32
iShares US Broker-Dealers & Securities Exch	IAI	0.44	202.6	-0.31	8.00	18.98
Invesco S&P 500 Equal Weight Financials	RYF	0.40	195.0	-0.92	3.33	13.77
Fidelity MSCI Financials	FNCL	0.08	926.0	-1.49	1.29	12.44
Vanguard Financials	VFH	0.10	7,528.3	-1.52	1.28	12.45
Financial Select Sector SPDR	XLF	0.12	29,854.6	-1.80	1.29	12.69
iShares US Financials	IYF	0.44	1,557.9	-2.35	3.42	11.96
iShares US Financial Services	IYG	0.44	1,226.7	-3.13	3.21	14.63
SPDR S&P Insurance	KIE	0.35	346.6	-4.11	2.69	10.04
Invesco KBW Property & Casualty Insurance	KBWP	0.35	256.1	-4.42	4.54	9.55
U.S. EQUITY: HEALTH CARE						
ALPS Medical Breakthroughs	SBIO	0.50	276.0	9.38	17.33	20.80
SPDR S&P Biotech	XBI	0.35	7,593.4	8.59	18.03	25.02
Invesco Dynamic Pharmaceuticals	PJP	0.56	374.7	8.14	5.43	5.62
Invesco Dynamic Biotechnology & Genome	PBE	0.58	281.6	7.92	13.26	14.70
Principal Healthcare Innovators	BTEC	0.42	163.6	7.71	23.56	-
SPDR S&P Health Care Services	XHS	0.35	136.5	6.79	17.06	15.26
Invesco S&P SmallCap Health Care	PSCH	0.29	512.8	6.22	18.11	23.09
iShares NASDAQ Biotechnology	IBB	0.47	10,878.7	6.04	12.31	12.78
First Trust NYSE Arca Biotechnology	FBT	0.55	2,139.2	4.33	7.59	15.35
SPDR S&P Health Care Equipment	XHE	0.35	777.8	4.13	19.52	25.03
Invesco DWA Healthcare Momentum	PTH	0.60	785.4	3.43	28.06	30.48
Vanguard Health Care	VHT	0.10	13,845.8	2.37	13.41	15.43
Fidelity MSCI Health Care	FHLC	0.08	2,569.1	2.32	13.36	15.37
iShares US Healthcare Providers	IHF	0.44	1,146.7	2.23	14.72	17.04
iShares US Healthcare	IYH	0.44	2,577.2	2.03	12.25	14.44
iShares US Medical Devices	IHI	0.44	8,756.4	1.87	20.72	24.18
Health Care Select Sector SPDR	XLV	0.12	25,873.2	1.40	11.35	13.55
Invesco S&P 500 Equal Weight Health Care	RYH	0.40	784.0	1.35	11.77	14.07
First Trust Health Care AlphaDEX	FXH	0.61	1,437.8	0.66	13.53	15.16
iShares US Pharmaceuticals	IHE	0.44	365.5	0.21	5.97	6.21
SPDR S&P Pharmaceuticals	XPH	0.35	291.8	-0.33	5.83	4.50
U.S. EQUITY: INDUSTRIALS						
Invesco DWA Industrials Momentum	PRN	0.60	210.2	5.95	15.89	19.12
Invesco Dynamic Building & Construction	PKB	0.59	195.7	2.33	7.48	14.28
First Trust Nasdaq Transportation	FTXR	0.60	854.9	1.40	3.28	-
First Trust Industrials/Prod Dur AlphaDEX	FXR	0.64	1,149.1	-1.85	6.61	16.21
SPDR S&P Transportation	XTN	0.35	469.0	-2.13	2.51	13.02
SPDR S&P Aerospace & Defense	XAR	0.35	1,237.4	-2.59	9.11	19.29
Vanguard Industrials	VIS	0.10	4,088.8	-2.95	5.24	13.77
Fidelity MSCI Industrials	FIDU	0.08	594.4	-3.02	5.77	14.31
iShares Transportation Average	IYT	0.44	1,597.2	-3.36	3.84	12.80
Invesco S&P 500 Equal Weight Industrials	RGI	0.40	415.6	-3.79	7.87	15.83
iShares US Industrials	IYJ	0.44	1,288.8	-3.98	7.55	15.58
Industrial Select Sector SPDR	XLI	0.12	15,673.0	-4.27	4.13	13.42
Invesco Aerospace & Defense	PPA	0.59	675.9	-4.81	4.72	15.45
iShares US Aerospace & Defense	ITA	0.44	2,650.0	-5.95	-3.07	11.57

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
U.S. EQUITY: TECHNOLOGY						
SPDR S&P Semiconductor	XSD	0.35	1,175.6	5.15	35.68	35.01
Invesco S&P SmallCap Information Tech	PSCT	0.29	428.1	4.28	18.27	21.04
Invesco Dynamic Semiconductors	PSI	0.57	473.2	4.03	27.56	36.43
First Trust Cloud Computing	SKYY	0.60	6,200.3	3.98	26.97	29.96
VanEck Vectors Semiconductor	SMH	0.35	4,470.9	3.75	30.39	37.15
Invesco DWA Technology Momentum	PTF	0.60	388.3	3.75	37.01	32.33
SPDR FactSet Innovative Technology	XITK	0.45	409.2	3.41	39.02	37.33
Invesco Dynamic Software	PSJ	0.56	660.1	3.24	32.19	32.51
iShares PHLX Semiconductor	SOXX	0.48	5,296.8	3.23	30.15	38.04
SPDR S&P NYSE Technology	XNTK	0.35	694.0	1.87	27.76	32.07
First Trust Dow Jones Internet	FDN	0.52	10,633.6	1.77	21.02	26.73
Invesco NASDAQ Internet	PNQI	0.60	1,021.8	1.46	21.22	26.67
Direxion Work From Home	WFH	0.45	147.1	0.89	-	-
iShares US Technology	IYW	0.44	6,986.0	0.82	26.31	28.88
First Trust NASDAQ-100 Technology Sector	QTEC	0.57	3,307.5	0.62	22.32	29.88
WisdomTree Cloud Computing	WCLD	0.45	1,342.2	0.30	-	-
HCM Defender 100	QQH	1.14	156.0	0.21	-	-
SPDR S&P Software & Services	XSW	0.35	368.7	0.19	27.87	28.68
First Trust Technology AlphaDEX	FXL	0.61	2,556.2	-0.30	26.47	30.41
iShares Expanded Tech Sector	IGM	0.48	3,201.2	-0.59	24.11	28.30
Fidelity MSCI Information Technology	FTEC	0.08	5,400.9	-0.70	25.96	28.90
Vanguard Information Technology	VGT	0.10	41,739.4	-0.70	27.08	29.61
Technology Select Sector SPDR	XLK	0.12	38,389.9	-0.84	25.16	27.47
Invesco S&P 500 Equal Weight Technology	RYT	0.40	2,387.9	-1.40	18.57	25.36
iShares Expanded Tech-Software Sector	IGV	0.48	5,704.1	-1.48	27.37	30.21
U.S. EQUITY: TELECOMMUNICATIONS						
iShares US Telecommunications	IYZ	0.44	412.2	1.89	3.89	4.79
Vanguard Communication Services	VOX	0.10	3,247.0	-0.19	10.73	9.50
Fidelity MSCI Communication Services	FCOM	0.08	648.0	-0.20	14.87	14.08
Communication Services Select Sector SPDR	XLC	0.12	11,646.4	-0.89	-	-
U.S. EQUITY: UTILITIES						
Fidelity MSCI Utilities	FUTY	0.08	1,075.6	-0.84	9.89	10.10
Utilities Select Sector SPDR	XLU	0.12	11,999.3	-0.88	10.42	10.08
Vanguard Utilities	VPU	0.10	4,356.9	-1.04	9.73	10.09
iShares US Utilities	IDU	0.44	787.6	-1.04	9.28	9.45
Invesco S&P 500 Equal Weight Utilities	RYU	0.40	206.5	-1.53	9.01	8.92
First Trust Utilities AlphaDEX	FXU	0.62	175.1	-1.97	6.11	7.28
U.S. EQUITY: REAL ESTATE						
Pacer Benchmark Data/Infrastructure Real Est	SRVR	0.60	1,048.5	1.03	-	-
Real Estate Select Sector SPDR	XLRE	0.12	2,262.2	0.55	8.03	8.48
JPMorgan BetaBuilders MSCI US REIT	BBRE	0.11	978.8	0.28	-	-
iShares Core US REIT	USRT	0.08	1,631.3	0.12	4.85	5.46
Vanguard Real Estate	VNQ	0.12	32,411.1	0.04	6.45	6.38
Fidelity MSCI Real Estate	FREL	0.09	1,209.6	-0.16	6.37	7.42
Schwab US REIT	SCHH	0.07	4,761.3	-0.16	1.41	2.85
SPDR Dow Jones REIT	RWR	0.25	1,397.3	-0.17	2.69	3.57
iShares US Real Estate	IYR	0.44	3,858.0	-0.43	6.07	7.14
iShares Cohen & Steers REIT	ICF	0.34	1,967.3	-0.45	6.24	5.61
iShares Residential/Multisector Real Estate	REZ	0.48	419.9	-0.81	8.18	5.81
Invesco KBW Premium Yield Equity REIT	KBWY	0.35	205.0	-1.04	-7.98	0.93
Pacer Benchmark Industrial Real Estate SCTR	INDS	0.60	140.3	-1.44	-	-
VanEck Vectors Mortgage REIT Income	MORT	0.41	250.7	-1.79	-1.41	6.58
iShares Mortgage Real Estate	REM	0.48	1,320.6	-2.39	-0.70	6.40
U.S. EQUITY: HIGH DIVIDEND YIELD						
Global X SuperDividend US	DIV	0.46	535.5	5.46	-4.06	1.51
Invesco High Yield Equity Dividend Achievers	PEY	0.52	755.8	0.58	2.56	10.09
iShares Select Dividend	DVY	0.39	14,937.0	0.56	2.46	9.14
Invesco S&P Ultra Dividend Revenue	RDIV	0.39	756.8	-0.33	1.19	9.22
Vanguard High Dividend Yield	VYM	0.06	31,755.1	-0.57	4.09	10.48
SPDR S&P Dividend	SDY	0.35	18,419.7	-0.62	5.96	11.48
Schwab US Dividend Equity	SCHD	0.06	17,126.1	-0.90	9.45	14.57
iShares Core High Dividend	HDV	0.08	5,825.3	-1.13	1.78	7.20
WisdomTree US High Dividend	DHS	0.38	758.0	-1.16	1.46	7.12
First Trust Morningstar Dividend Leaders	FDL	0.45	1,406.9	-1.32	2.84	8.13

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
First Trust Value Line Dividend	FVD	0.70	10,165.3	**-1.45**	5.72	10.33
GLOBAL EQUITY						
ARK Innovation	ARKK	0.75	23,096.4	**10.40**	51.96	54.34
Goldman Sachs Innovate Equity	GINN	0.50	394.3	**3.18**	-	-
iShares MSCI Global Impact	SDG	0.49	378.7	**2.93**	17.96	-
Davis Select Worldwide	DWLD	0.63	358.4	**2.34**	6.11	-
AdvisorShares DW FSM All Cap World	DWAW	1.24	144.6	**1.95**	-	-
ProShares Pet Care	PAWZ	0.50	254.6	**1.06**	-	-
First Trust Dorsey Wright Dynamic Focus 5	FVC	0.71	218.5	**0.90**	4.90	-
SPDR Portfolio MSCI Global Stock Market	SPGM	0.09	500.7	**0.89**	8.12	13.59
First Trust Dorsey Wright Focus 5	FV	0.87	2,397.8	**0.79**	11.58	15.16
iShares Global 100	IOO	0.40	2,880.4	**0.02**	11.22	15.40
Vanguard Total World Stock	VT	0.08	17,802.5	**-0.23**	8.07	13.82
iShares MSCI ACWI Low Carbon Target	CRBN	0.20	656.0	**-0.25**	8.50	13.83
iShares MSCI ACWI	ACWI	0.31	14,569.8	**-0.31**	8.07	13.69
ClearBridge All Cap Growth	CACG	0.53	207.0	**-1.06**	14.06	-
iShares MSCI Global Min Vol Factor	ACWV	0.32	5,636.2	**-1.72**	5.44	9.35
GLOBAL EQUITY EX-U.S.						
Davis Select International	DINT	0.68	297.7	**1.96**	-	-
First Trust Dorsey Wright Intl Focus 5	IFV	1.06	283.6	**1.73**	0.54	8.78
First Trust Intl Equity Opportunities	FPXI	0.70	915.5	**1.63**	22.33	24.73
Vident International Equity	VIDI	0.59	481.4	**1.05**	-2.68	8.05
SPDR MSCI ACWI ex-US	CWI	0.30	1,468.4	**0.94**	3.26	10.39
Invesco International Dividend Achievers	PID	0.53	533.2	**0.91**	0.76	8.16
Vanguard ESG International Stock	VSGX	0.17	1,656.0	**0.44**	-	-
Vanguard FTSE All-World ex-US	VEU	0.08	31,123.0	**0.38**	3.33	10.55
iShares MSCI ACWI ex US	ACWX	0.32	3,816.4	**0.28**	2.99	10.16
Vanguard Total International Stock	VXUS	0.08	40,087.4	**0.25**	3.02	10.31
iShares Core MSCI Total International Stock	IXUS	0.11	25,709.0	**0.18**	3.07	10.45
WisdomTree Global ex-US Qual Div Growth	DNL	0.58	342.0	**0.11**	9.62	14.51
American Century Quality Diversified Intl	QINT	0.39	137.0	**-0.14**	-	-
FlexShares International Quality Dividend	IQDF	0.47	531.1	**-0.37**	-0.50	7.66
iShares International Dividend Growth	IGRO	0.15	189.5	**-0.49**	3.86	-
Vanguard FTSE All-World ex-US Small-Cap	VSS	0.11	6,016.9	**-0.64**	1.73	9.92
Avantis International Small Cap Value	AVDV	0.36	429.2	**-0.65**	-	-
Vanguard Intl Dividend Appreciation	VIGI	0.20	3,157.4	**-0.87**	7.28	-
INTERNATIONAL EQUITY: BLENDED DEVELOPMENT						
iShares Asia 50	AIA	0.50	2,954.2	**7.46**	11.48	21.54
iShares MSCI All Country Asia ex Japan	AAXJ	0.70	6,386.3	**4.36**	6.36	15.50
Fidelity Blue Chip Growth	FBCG	0.59	245.0	**0.67**	-	-
ClearBridge Large Cap Growth ESG	LRGE	0.59	134.3	**-1.96**	17.21	-
INTERNATIONAL EQUITY: DEVELOPED						
ARK Israel Innovative Technology	IZRL	0.49	176.8	**9.60**	17.35	-
BlueStar Israel Technology	ITEQ	0.75	199.5	**3.48**	29.30	27.38
iShares MSCI Netherlands	EWN	0.51	303.4	**2.37**	10.16	14.97
iShares MSCI Sweden	EWD	0.51	431.8	**2.24**	7.70	12.05
iShares MSCI Hong Kong	EWH	0.51	1,489.8	**1.70**	0.77	10.31
WisdomTree Japan Hedged Equity	DXJ	0.48	1,593.9	**1.56**	-0.33	5.67
WisdomTree Intl Hedged Quality Div Growth	IHDG	0.58	876.4	**0.80**	8.90	10.58
WisdomTree Intl Div ex-Financials	DOO	0.58	141.5	**0.73**	0.22	6.09
Xtrackers MSCI Japan Hedged Equity	DBJP	0.45	198.3	**0.72**	3.98	7.60
JPMorgan BetaBuilders Dev Asia ex-Japan	BBAX	0.19	2,983.6	**0.70**	-	-
iShares Currency Hedged MSCI Japan	HEWJ	0.51	333.6	**0.56**	3.90	7.56
ALPS International Sector Dividend Dogs	IDOG	0.50	157.7	**0.53**	0.23	7.47
Fidelity Dividend for Rising Rates	FDRR	0.29	320.0	**0.52**	8.44	-
Schwab Fundamental Intl Large Company	FNDF	0.25	5,495.8	**0.44**	0.27	8.32
iShares MSCI Intl Small-Cap Multifactor	ISCF	0.40	158.2	**0.43**	1.93	10.61
Pacer Global Cash Cows Dividend	GCOW	0.60	131.0	**0.42**	0.07	-
First Trust Dev Markets ex-US AlphaDEX	FDT	0.80	367.8	**0.41**	-2.51	7.62
iShares MSCI Singapore	EWS	0.51	666.9	**0.28**	-4.24	6.05
WisdomTree Dyn Currency Hedged Intl	DDWM	0.40	143.5	**0.21**	-0.12	6.98
Invesco FTSE RAFI Developed Markets ex-US	PXF	0.45	1,039.8	**0.16**	-0.81	7.87
First Trust Europe AlphaDEX	FEP	0.80	461.6	**0.16**	-0.35	9.27
iShares MSCI Pacific ex-Japan	EPP	0.49	2,199.0	**0.15**	2.64	10.46
iShares MSCI Europe Small-Cap	IEUS	0.40	181.7	**0.13**	3.46	10.95
iShares MSCI Saudi Arabia	KSA	0.74	656.0	**0.13**	6.25	10.84
JPMorgan Diversified Return International	JPIN	0.37	874.8	**0.09**	0.72	6.86
Invesco FTSE RAFI Dev Mkts ex-US Sm-Mid	PDN	0.49	374.7	**0.07**	0.94	9.54
iShares Currency Hedged MSCI EAFE	HEFA	0.70	2,381.4	**0.07**	4.46	8.43
WisdomTree Intl Quality Dividend Growth	IQDG	0.42	174.9	**0.05**	6.09	-
Fidelity High Dividend	FDVV	0.29	672.9	**0.03**	6.64	-
WisdomTree International MidCap Dividend	DIM	0.58	145.6	**0.02**	-1.22	7.15
Schwab Fundamental Intl Small Company	FNDC	0.39	2,182.6	**-0.03**	-0.11	9.17
iShares MSCI Intl Value Factor	IVLU	0.30	596.9	**-0.09**	-3.78	5.09
WisdomTree Europe Hedged Equity	HEDJ	0.58	1,915.6	**-0.11**	2.58	7.60
IQ 500 International	IQIN	0.25	237.5	**-0.16**	-	-
Xtrackers MSCI EAFE Hedged Equity	DBEF	0.35	3,672.8	**-0.24**	4.28	8.27
iShares MSCI United Kingdom	EWU	0.51	2,996.1	**-0.24**	-4.12	2.91
FlexShares STOXX Global ESG Impact	ESGG	0.42	157.7	**-0.27**	9.45	-
Franklin FTSE United Kingdom	FLGB	0.09	159.2	**-0.31**	-2.78	-
iShares MSCI Israel	EIS	0.62	162.4	**-0.36**	7.04	8.23
Invesco RAFI Strategic Developed ex-US	ISDX	0.23	287.2	**-0.38**	-	-
iShares MSCI EAFE Small-Cap	SCZ	0.40	11,892.6	**-0.38**	2.79	10.67
Hartford Multifactor Dev Mkts (ex-US)	RODM	0.29	1,989.8	**-0.39**	0.10	7.62
iShares Core MSCI Pacific	IPAC	0.10	1,114.2	**-0.40**	3.64	10.52
IQ 50 Percent Hedged FTSE International	HFXI	0.20	293.2	**-0.41**	3.62	9.07
Vanguard FTSE Pacific	VPL	0.08	4,968.7	**-0.41**	3.91	11.15
SPDR Portfolio Developed World ex-US	SPDW	0.04	9,739.6	**-0.44**	3.12	9.64
WisdomTree Japan SmallCap Dividend	DFJ	0.58	179.1	**-0.45**	-2.64	8.14
Knowledge Leaders Developed World	KLDW	0.75	174.9	**-0.45**	7.13	13.13
iShares MSCI New Zealand	ENZL	0.51	189.3	**-0.54**	14.25	18.08
WisdomTree International Equity	DWM	0.48	599.1	**-0.55**	-1.61	6.05
iShares MSCI EAFE Value	EFV	0.40	10,481.0	**-0.57**	-3.39	5.42
iShares MSCI Intl Multifactor	INTF	0.30	927.0	**-0.59**	-1.16	6.71
SPDR S&P International Small Cap	GWX	0.40	791.0	**-0.60**	0.95	9.77
Franklin FTSE Japan	FLJP	0.09	557.1	**-0.60**	3.90	-
WisdomTree Europe SmallCap Dividend	DFE	0.58	288.5	**-0.64**	-0.97	7.72
FlexShares Mstar DM ex-US Factor Tilt	TLTD	0.39	585.2	**-0.64**	-0.30	8.12
WisdomTree Intl LargeCap Dividend	DOL	0.48	346.7	**-0.65**	-1.62	5.71
Goldman Sachs ActiveBeta International	GSIE	0.25	2,229.4	**-0.66**	2.52	8.67
Schwab International Small-Cap Equity	SCHC	0.11	3,058.8	**-0.66**	1.58	9.48
Invesco S&P International Dev Low Volatility	IDLV	0.25	804.1	**-0.67**	-1.75	5.22
Xtrackers MSCI Europe Hedged Equity	DBEU	0.45	427.0	**-0.67**	3.99	8.08
Vanguard FTSE Developed Markets	VEA	0.05	89,469.3	**-0.72**	2.83	9.37
iShares Core MSCI EAFE	IEFA	0.08	84,562.4	**-0.74**	2.43	9.04
SPDR MSCI EAFE StrategicFactors	QEFA	0.30	552.7	**-0.74**	3.56	8.89
iShares Core MSCI Intl Developed Markets	IDEV	0.07	4,700.8	**-0.75**	2.75	-
Schwab International Equity	SCHF	0.06	23,804.9	**-0.75**	2.77	9.33
Xtrackers MSCI Kokusai Equity	KOKU	0.09	850.2	**-0.76**	-	-
iShares MSCI Canada	EWC	0.51	2,923.5	**-0.78**	3.15	10.27
iShares MSCI EAFE	EFA	0.32	53,009.7	**-0.78**	2.25	8.55
iShares MSCI World	URTH	0.24	1,112.5	**-0.82**	8.55	13.59
iShares MSCI Australia	EWA	0.51	1,714.4	**-0.84**	4.07	10.61
JPMorgan BetaBuilders Europe	BBEU	0.09	3,744.9	**-0.84**	-	-
iShares MSCI Japan	EWJ	0.51	13,529.7	**-0.84**	3.76	9.57
JPMorgan BetaBuilders International Equity	BBIN	0.07	3,103.5	**-0.85**	-	-
JPMorgan BetaBuilders Japan	BBJP	0.19	7,464.4	**-0.89**	-	-
Vanguard FTSE Europe	VGK	0.08	14,495.9	**-0.90**	1.68	8.26
WisdomTree Intl SmallCap Dividend	DLS	0.58	1,359.8	**-0.92**	-2.44	7.63
Avantis International Equity	AVDE	0.23	524.3	**-0.93**	-	-
iShares Currency Hedged MSCI Eurozone	HEZU	0.54	515.0	**-0.93**	3.67	8.18
iShares Core MSCI Europe	IEUR	0.10	3,944.3	**-0.96**	1.64	8.25
iShares ESG Aware MSCI EAFE	ESGD	0.20	4,295.1	**-0.96**	2.90	-
JPMorgan BetaBuilders Canada	BBCA	0.19	4,364.8	**-0.97**	-	-
iShares MSCI Germany	EWG	0.51	2,558.4	**-0.98**	-1.10	7.83
VictoryShares MSCI Intl Value Momentum	UIVM	0.35	422.1	**-0.99**	-3.82	-
iShares MSCI Intl Momentum Factor	IMTM	0.30	715.6	**-1.01**	6.74	11.16
iShares MSCI Kokusai	TOK	0.25	177.6	**-1.07**	8.60	13.69
IQ Candriam ESG International Equity	IQSI	0.15	148.6	**-1.07**	-	-
Franklin FTSE Europe	FLEE	0.09	241.9	**-1.08**	0.84	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
iShares MSCI EAFE Min Vol Factor	EFAV	0.32	10,246.6	-1.12	1.73	5.88
John Hancock Multifactor Dev Intl	JHMD	0.39	473.8	-1.16	1.15	-
ProShares MSCI EAFE Dividend Growers	EFAD	0.51	131.7	-1.20	4.62	7.43
Goldman Sachs MarketBeta International	GSID	0.20	310.8	-1.25	-	-
SPDR MSCI EAFE Fossil Fuel Reserves Free	EFAX	0.20	171.6	-1.28	2.72	-
First Trust RiverFront Dynamic Dev Intl	RFDI	0.83	149.6	-1.37	0.07	-
iShares MSCI EAFE Growth	EFG	0.40	10,042.1	-1.41	7.27	11.08
iShares MSCI Intl Quality Factor	IQLT	0.30	2,803.8	-1.43	6.67	10.44
iShares Europe	IEV	0.60	1,601.3	-1.44	0.95	7.39
iShares MSCI Switzerland	EWL	0.51	1,792.3	-1.45	8.01	11.00
Invesco DWA Developed Markets Momentum	PIZ	0.81	198.3	-1.49	5.35	9.88
SPDR Portfolio Europe	SPEU	0.09	155.7	-1.54	2.71	7.86
iShares MSCI Eurozone	EZU	0.51	4,940.1	-1.75	0.46	8.33
SPDR Euro STOXX 50	FEZ	0.29	1,872.2	-2.30	0.52	7.76
iShares MSCI France	EWQ	0.51	797.9	-2.62	1.16	9.25
iShares MSCI Italy	EWI	0.51	162.6	-3.70	-2.47	6.65
iShares MSCI Spain	EWP	0.51	582.3	-3.77	-6.94	3.21
iShares MSCI Denmark	EDEN	0.53	172.5	-4.00	12.19	13.46
Global X MSCI Greece	GREK	0.57	146.0	-8.88	-9.61	4.18

INTERNATIONAL EQUITY: EMERGING

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
KraneShares CSI China Internet	KWEB	0.76	4,090.7	13.02	10.88	22.20
KraneShares MSCI China Environment	KGRN	0.80	160.7	9.19	25.36	-
Invesco Golden Dragon China	PGJ	0.70	285.1	8.92	12.71	20.43
WisdomTree China ex-SOE	CXSE	0.32	868.9	8.52	16.08	29.48
SPDR S&P China	GXC	0.59	2,037.5	8.16	6.93	19.10
iShares MSCI China	MCHI	0.62	7,096.3	8.09	6.83	19.14
First Trust Chindia	FNI	0.60	294.9	7.30	14.71	21.02
iShares China Large-Cap	FXI	0.74	4,123.0	6.31	0.38	12.43
Invesco BLDRS Emerging Markets 50 ADR	ADRE	0.18	206.0	5.01	8.92	18.94
iShares ESG MSCI EM Leaders	LDEM	0.16	849.3	4.75	-	-
SPDR S&P Emerging Asia Pacific	GMF	0.49	753.8	4.61	7.41	16.63
iShares MSCI BRIC	BKF	0.70	188.2	4.57	4.71	17.48
iShares MSCI Emerging Markets Asia	EEMA	0.49	838.2	4.29	6.42	16.10
iShares MSCI Taiwan	EWT	0.62	6,159.0	4.26	15.56	19.99
iShares Currency Hedged MSCI EM	HEEM	0.70	214.8	3.97	6.48	13.04
WisdomTree Emerging Markets ex-SOE	XSOE	0.32	4,068.2	3.88	7.99	18.79
SPDR MSCI EM Fossil Fuel Reserves Free	EEMX	0.30	150.1	3.77	4.33	-
iShares MSCI China A	CNYA	0.65	648.4	3.64	10.51	-
KraneShares Bosera MSCI China A Share	KBA	0.60	912.0	3.57	9.67	14.26
iShares ESG Aware MSCI EM	ESGE	0.25	6,935.6	3.36	4.95	-
Schwab Emerging Markets Equity	SCHE	0.11	8,970.0	3.23	3.92	14.27
iShares MSCI Emerging Markets Multifactor	EMGF	0.50	700.4	3.22	1.26	12.78
Xtrackers Harvest CSI 300 China A-Shares	ASHR	0.65	2,563.9	3.20	7.86	14.33
iShares MSCI Emerging Markets	EEM	0.70	29,618.7	3.17	3.73	14.14
Vanguard FTSE Emerging Markets	VWO	0.10	75,720.8	3.13	4.05	13.86
iShares Core MSCI Emerging Markets	IEMG	0.11	74,849.3	2.89	4.02	14.21
PIMCO RAFI Dynamic Multi-Factor EM	MFEM	0.49	645.2	2.76	2.41	-
SPDR Portfolio Emerging Markets	SPEM	0.11	5,704.7	2.70	3.53	14.14
SPDR MSCI Emerging Markets StrategicFactors	QEMM	0.30	149.5	2.66	1.97	10.90
Avantis Emerging Markets Equity	AVEM	0.33	475.0	2.63	-	-
Invesco DWA Emerging Markets Momentum	PIE	0.90	211.0	2.47	4.63	12.57
iShares MSCI South Korea	EWY	0.62	7,694.9	2.38	5.52	14.95
Goldman Sachs ActiveBeta EM	GEM	0.45	1,932.0	2.20	2.54	12.72
John Hancock Multifactor Emerging Markets	JHEM	0.49	738.6	1.99	-	-
FlexShares Mstar EM Factor Tilt	TLTE	0.59	280.6	1.17	-0.01	11.49
iShares MSCI EM Min Vol Factor	EEMV	0.25	4,133.4	0.98	1.10	8.34
Invesco FTSE RAFI Emerging Markets	PXH	0.50	1,243.5	0.76	-1.76	13.30
VictoryShares MSCI EM Value Momentum	UEVM	0.45	287.5	0.71	-3.60	-
iShares MSCI Turkey	TUR	0.62	302.3	0.60	-14.01	-3.92
iShares MSCI India Small Cap	SMIN	0.81	232.5	0.38	-5.04	8.75
iShares MSCI Emerging Markets ex China	EMXC	0.58	377.4	0.33	2.34	-
Schwab Fundamental EM Large Company	FNDE	0.39	3,717.2	0.25	-1.52	12.89
iShares MSCI South Africa	EZA	0.62	424.6	0.21	-8.92	4.74
iShares MSCI Emerging Markets Small-Cap	EEMS	0.71	267.6	-0.13	0.48	9.55
iShares MSCI Thailand	THD	0.62	458.0	-0.17	-6.00	7.29
SPDR S&P Emerging Markets Dividend	EDIV	0.49	289.6	-0.18	-4.48	7.76
First Trust Emerging Mkts SmCap AlphaDEX	FEMS	0.80	154.2	-0.34	-0.30	13.92
First Trust Emerging Markets AlphaDEX	FEM	0.80	501.8	-0.40	-3.13	11.42
SPDR S&P Emerging Markets Small Cap	EWX	0.65	582.5	-0.70	0.59	10.65
JPMorgan Diversified Return EM	JPEM	0.44	245.1	-0.87	-1.77	9.55
iShares MSCI Chile	ECH	0.62	473.1	-0.93	-17.01	0.32
iShares MSCI Peru	EPU	0.62	170.8	-1.05	-5.44	14.36
WisdomTree Emerging Markets High Div	DEM	0.63	1,755.3	-1.29	-1.86	10.59
Invesco S&P Emerging Markets Low Volatility	EELV	0.29	276.8	-1.30	-3.02	5.39
iShares MSCI Poland	EPOL	0.59	284.9	-1.31	-12.26	4.13
WisdomTree EM SmallCap Dividend	DGS	0.63	1,775.6	-1.55	-1.66	11.26
iShares Emerging Markets Dividend	DVYE	0.49	725.1	-1.77	-1.08	10.94
iShares India 50	INDY	0.93	660.1	-1.79	2.79	10.53
WisdomTree India Earnings	EPI	0.84	730.4	-1.92	0.85	10.20
VanEck Vectors Russia	RSX	0.67	1,650.7	-2.07	4.97	14.77
iShares MSCI Russia	ERUS	0.62	455.9	-2.65	4.42	15.02
iShares MSCI India	INDA	0.68	4,905.4	-2.69	2.45	9.48
iShares MSCI Indonesia	EIDO	0.62	358.0	-4.14	-7.28	2.38
iShares MSCI Malaysia	EWM	0.51	398.3	-6.08	-6.06	-0.49
iShares MSCI Mexico	EWW	0.51	1,322.0	-6.51	-6.81	-1.61
iShares Latin America 40	ILF	0.49	1,675.6	-7.46	-8.73	8.38
iShares MSCI Brazil	EWZ	0.62	6,264.2	-7.77	-7.42	14.15
iShares MSCI Philippines	EPHE	0.62	150.2	-8.44	-7.09	-0.89

INTERNATIONAL EQUITY: FRONTIER

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
iShares MSCI Frontier 100	FM	0.79	427.2	2.22	-3.08	7.91
VanEck Vectors Vietnam	VNM	0.66	445.9	-3.26	-4.19	5.11

GLOBAL EQUITY: SECTOR

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
WedbushMG Video Game Tech	GAMR	0.75	160.6	35.88	29.34	-
ETFMG Alternative Harvest	MJ	0.75	1,483.0	32.75	-15.25	2.97
3D Printing	PRNT	0.66	314.9	26.18	15.88	-
AdvisorShares Pure Cannabis	YOLO	0.75	269.3	23.94	-	-
SPDR S&P Kensho Clean Power	CNRG	0.45	395.0	20.81	-	-
Global X CleanTech	CTEC	0.50	183.7	15.62	-	-
Invesco WilderHill Clean Energy	PBW	0.70	3,153.0	15.57	71.26	45.10
AdvisorShares Pure US Cannabis	MSOS	0.74	587.3	14.49	-	-
ARK Autonomous Technology & Robotics	ARKQ	0.75	2,953.4	14.37	35.89	41.74
ALPS Clean Energy	ACES	0.55	1,092.3	14.31	-	-
VanEck Vectors Rare Earth/Strategic Metals	REMX	0.60	481.5	12.72	-2.32	20.54
SPDR S&P Kensho Smart Mobility	HAIL	0.45	184.9	12.50	26.53	-
Amplify Transformational Data Sharing	BLOK	0.70	531.4	9.81	24.67	-
iShares Robotics/AI Multisector	IRBO	0.47	346.2	9.76	-	-
iShares Genomics Immunology/Healthcare	IDNA	0.47	274.0	9.60	-	-
ARK Genomic Revolution	ARKG	0.75	10,833.9	9.30	57.44	45.84
ARK Next Generation Internet	ARKW	0.79	6,673.8	8.51	53.15	57.77
ROBO Global Healthcare Tech/Innovation	HTEC	0.68	171.6	8.19	-	-
Global X Autonomous & Electric Vehicles	DRIV	0.68	783.5	8.05	-	-
Roundhill Sports Betting & iGaming	BETZ	0.75	319.8	7.12	-	-
KraneShares Electric Vehicles/Future Mobility	KARS	0.70	140.4	7.08	21.68	-
First Trust Nasdaq AI & Robotics	ROBT	0.65	216.2	7.00	-	-
VanEck Vectors Low Carbon Energy	SMOG	0.62	323.1	6.67	41.12	30.23
First Trust Dow Jones International Internet	FDNI	0.65	123.0	6.48	-	-
Global X Telemedicine & Digital Health	EDOC	0.68	786.2	6.22	-	-
Invesco Global Clean Energy	PBD	0.75	467.0	6.19	41.85	31.70
Global X Social Media	SOCL	0.65	356.0	6.13	22.26	29.55
Global X Lithium & Battery Tech	LIT	0.75	2,869.9	5.96	22.47	32.15
ROBO Global Robotics and Automation	ROBO	0.95	1,937.3	5.86	12.92	24.30
Invesco Solar	TAN	0.69	4,795.6	5.77	63.68	36.04
VanEck Vectors Oil Services	OIH	0.35	760.6	5.58	-32.13	-18.09
iShares Global Clean Energy	ICLN	0.48	6,678.2	5.52	48.33	30.78
ARK Fintech Innovation	ARKF	0.75	2,744.9	4.87	-	-
O'Shares Global Internet Giants	OGIG	0.48	780.3	4.16	-	-
Global X Video Games & Esports	HERO	0.50	863.9	4.12	-	-
ETFMG Prime Cyber Security	HACK	0.60	2,188.1	3.94	22.60	22.45
VanEck Vectors Video Gaming and eSports	ESPO	0.55	847.4	3.73	-	-
iShares Self-Driving EV and Tech	IDRV	0.47	248.7	3.13	-	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Defiance Next Gen Connectivity	FIVG	0.30	1,047.5	3.13	-	-
iShares Global Energy	IXC	0.48	1,054.2	2.86	-13.01	-1.12
First Trust Indxx NextG	NXTG	0.70	903.7	2.85	10.87	18.02
VanEck Vectors Pharmaceutical	PPH	0.36	245.3	2.51	5.45	4.54
Global X Internet of Things	SNSR	0.68	379.4	2.45	17.32	-
Global X Robotics & Artificial Intelligence	BOTZ	0.68	2,611.4	2.16	9.48	-
iShares Exponential Technologies	XT	0.47	3,260.9	1.87	16.99	22.14
iShares Cybersecurity and Tech	IHAK	0.47	347.1	1.76	-	-
Global X Artificial Intelligence & Technology	AIQ	0.68	211.3	1.65	-	-
FlexShares Mstar Glb Upstr Natural Res	GUNR	0.46	3,590.7	1.44	1.60	12.46
iShares Global Comm Services	IXP	0.48	301.8	1.40	9.46	8.19
iShares North American Natural Resources	IGE	0.48	333.9	1.25	-9.90	0.60
VanEck Vectors Agribusiness	MOO	0.56	927.3	1.18	8.50	14.15
First Trust NASDAQ Technology Dividend	TDIV	0.50	1,398.7	1.11	13.21	18.85
ALPS Disruptive Technologies	DTEC	0.50	196.9	0.93	20.72	-
Invesco Cleantech	PZD	0.65	519.5	0.91	19.87	23.90
First Trust Global Wind Energy	FAN	0.62	476.4	0.77	22.00	20.29
SPDR S&P Global Natural Resources	GNR	0.40	1,527.4	0.67	-1.10	11.77
iShares Global Healthcare	IXJ	0.48	2,559.4	0.50	10.74	11.84
Invesco Global Listed Private Equity	PSP	1.58	192.6	0.37	6.75	14.25
Invesco S&P Global Water	CGW	0.59	850.4	0.36	11.40	13.97
First Trust Clean Edge Smart Grid Infrastr	GRID	0.70	182.2	0.27	16.95	22.99
Siren Nasdaq NexGen Economy	BLCN	0.68	214.6	0.10	18.36	-
SPDR S&P North American Natural Resources	NANR	0.35	441.0	0.03	-1.08	9.80
iShares Global Consumer Discretionary	RXI	0.48	443.8	0.02	11.04	14.72
Global X Renewable Energy Producers	RNRG	0.65	147.6	-0.06	18.23	17.38
Global X SuperDividend REIT	SRET	0.59	385.2	-0.11	-8.97	2.45
Invesco Global Water	PIO	0.75	240.3	-0.16	10.80	13.58
iShares Global Tech	IXN	0.48	5,064.9	-0.20	23.22	27.73
iShares Global REIT	REET	0.14	2,517.1	-0.42	2.16	4.29
ProShares DJ Brookfield Global Infrastructure	TOLZ	0.47	150.6	-0.44	1.36	6.62
iShares Global Timber & Forestry	WOOD	0.51	308.9	-0.53	3.08	15.19
First Trust Water	FIW	0.55	740.4	-0.59	14.34	20.81
Invesco Water Resources	PHO	0.60	1,364.9	-0.65	14.50	18.35
SPDR Dow Jones Global Real Estate	RWO	0.50	1,579.2	-0.81	0.77	3.34
iShares MSCI Glb Metals/Mining Producers	PICK	0.39	657.5	-0.90	4.10	23.79
iShares US Infrastructure	IFRA	0.40	175.0	-0.93	-	-
iShares Global Utilities	JXI	0.48	146.8	-1.02	10.12	9.51
First Trust NASDAQ Cybersecurity	CIBR	0.60	3,491.1	-1.04	22.98	23.58
FlexShares Global Quality Real Estate	GQRE	0.45	282.1	-1.05	-0.27	4.02
iShares Global Materials	MXI	0.48	618.9	-1.13	5.63	17.10
Davis Select Financial	DFNL	0.64	158.0	-1.24	-0.13	-
Global X Cybersecurity	BUG	0.50	271.1	-1.31	-	-
Global X Cloud Computing	CLOU	0.68	1,560.8	-1.40	-	-
FlexShares STOXX Global Broad Infrastructure	NFRA	0.47	2,223.2	-1.58	4.96	8.26
SPDR S&P Global Infrastructure	GII	0.40	356.0	-1.67	0.97	6.99
Global X US Infrastructure Development	PAVE	0.47	1,122.0	-1.93	7.01	-
iShares Global Financials	IXG	0.48	365.1	-1.97	-2.54	8.81
Global X Copper Miners	COPX	0.65	320.7	-2.17	3.74	26.18
iShares Global Infrastructure	IGF	0.48	2,992.1	-2.47	0.69	6.67
iShares Global Industrials	EXI	0.48	412.4	-2.80	3.79	12.00
Global X FinTech	FINX	0.68	1,095.4	-3.66	23.42	-
Global X Silver Miners	SIL	0.66	1,126.6	-4.03	12.43	21.40
iShares MSCI Global Gold Miners	RING	0.39	461.9	-4.09	15.07	19.82
VanEck Vectors Gold Miners	GDX	0.52	15,430.3	-4.19	13.91	20.09
iShares Global Consumer Staples	KXI	0.48	515.5	-4.34	3.80	6.13
US Global Jets	JETS	0.60	2,951.9	-4.47	-12.86	-0.48
ETFMG Prime Junior Silver Miners	SILJ	0.69	663.4	-4.78	12.66	27.12
iShares MSCI Global Silver/Metals Miners	SLVP	0.39	245.4	-4.80	17.46	27.08
Global X Uranium	URA	0.71	258.9	-5.28	2.39	5.38
Sprott Gold Miners	SGDM	0.50	248.1	-5.47	10.83	17.56
ETFMG Prime Mobile Payments	IPAY	0.75	1,041.0	-6.03	18.12	23.70
VanEck Vectors Junior Gold Miners	GDXJ	0.53	5,736.0	-7.67	15.14	23.19

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
GLOBAL EX-U.S. EQUITY: SECTOR						
VanEck Vectors Biotech	BBH	0.35	506.8	10.37	13.49	13.48
Global X Genomics & Biotechnology	GNOM	0.50	158.6	5.05	-	-
SPDR Dow Jones International Real Estate	RWX	0.59	902.2	-1.32	-1.66	3.40
iShares International Developed Real Estate	IFGL	0.48	247.9	-1.66	-0.66	5.30
Xtrackers International Real Estate	HAUZ	0.10	343.0	-1.78	-2.06	7.66
Vanguard Global ex-U.S. Real Estate	VNQI	0.12	4,953.3	-2.30	-1.81	6.31
INTERNATIONAL EQUITY: DEVELOPED SECTOR						
iShares MSCI Europe Financials	EUFN	0.48	1,038.5	-4.10	-9.20	2.52
INTERNATIONAL EQUITY: EMERGING SECTOR						
Invesco China Technology	CQQQ	0.70	1,635.0	12.39	13.15	25.08
Emerging Markets Internet & Ecommerce	EMQQ	0.86	1,786.2	8.71	18.48	27.75
Global X MSCI China Consumer Discretionary	CHIQ	0.65	627.8	6.63	26.06	31.29
KraneShares MSCI All China Health Care	KURE	0.65	198.3	5.61	-	-
Columbia Emerging Markets Consumer	ECON	0.59	192.9	3.87	1.43	8.30
KraneShares CICC China 5G & Semiconductor	KFVG	0.65	130.1	3.32	-	-
GLOBAL EQUITY: HIGH DIVIDEND YIELD						
First Trust Dow Jones Global Select Dividend	FGD	0.59	401.1	1.19	-1.29	6.57
Global X SuperDividend	SDIV	0.59	770.0	0.86	-9.26	0.54
SPDR S&P Global Dividend	WDIV	0.40	255.0	0.33	-1.21	6.24
GLOBAL EX-U.S. EQUITY: HIGH DIVIDEND YIELD						
Vanguard International High Dividend Yield	VYMI	0.27	1,859.7	0.49	-0.96	-
SPDR S&P International Dividend	DWX	0.45	605.8	-0.63	-0.66	7.25
INTERNATIONAL EQUITY: HIGH DIVIDEND YIELD						
iShares International Select Dividend	IDV	0.50	3,834.6	0.20	-0.02	7.23
First Trust Stoxx European Select Dividend	FDD	0.58	223.9	-0.62	0.48	6.57
Xtrackers MSCI EAFE High Dividend Yield	HDEF	0.20	573.7	-0.65	0.70	5.30
WisdomTree International High Dividend	DTH	0.58	176.3	-1.04	-3.21	4.89
U.S. FIXED INCOME: BROAD MARKET - BROAD MATURITIES						
iShares Core Total USD Bond Market	IUSB	0.07	9,648.0	-0.59	5.52	4.53
iShares ESG Advanced Total USD Bond Market	EUSB	0.12	166.2	-0.62	-	-
iShares Yield Optimized Bond	BYLD	0.56	200.2	-0.89	4.95	4.81
Fidelity Corporate Bond	FCOR	0.36	264.5	-1.50	7.29	7.07
U.S. FIXED INCOME: BROAD MARKET - LONG-TERM						
iShares Core 10+ Year USD Bond	ILTB	0.06	454.3	-2.89	9.25	8.47
U.S. FIXED INCOME: BROAD MARKET - SHORT-TERM						
VictoryShares USAA Core Short-Term Bond	USTB	0.34	251.3	0.10	3.80	-
iShares Core 1-5 Year USD Bond	ISTB	0.06	4,813.5	0.04	3.95	3.07
First Trust Enhanced Short Maturity	FTSM	0.40	5,059.4	0.01	1.89	1.68
First Trust Low Duration Strategic Focus	LDSF	0.77	148.2	-0.34	-	-
U.S. FIXED INCOME: GOVERNMENT/CREDIT - INTERMEDIATE						
Vident Core US Bond Strategy	VBND	0.39	399.3	-0.27	4.94	3.34
iShares Core 5-10 Year USD Bond	IMTB	0.08	125.3	-0.31	5.34	-
VictoryShares Core Intermediate-Term Bond	UITB	0.38	682.1	-0.37	6.62	-
U.S. FIXED INCOME: GOVERNMENT/CREDIT - LONG-TERM						
iShares Int Rate Hedged Long-Term Corporate	IGBH	0.54	631.0	-0.17	1.19	5.37
ProShares Inv Grade-Interest Rate Hedged	IGHG	0.30	480.1	-0.29	1.77	4.66
iShares iBonds Dec 2028 Term Corporate	IBDT	0.10	225.7	-0.85	-	-
iShares 10+ Year Inv Grade Corporate Bond	IGLB	0.20	2,498.6	-2.71	8.51	9.20
Vanguard Long-Term Corporate Bond	VCLT	0.05	5,895.5	-2.81	8.64	9.52
SPDR Portfolio Long Term Corporate Bond	SPLB	0.07	916.2	-2.84	8.46	9.46
U.S. FIXED INCOME: GOVERNMENT						
iShares Treasury Floating Rate Bond	TFLO	0.15	377.2	0.02	1.38	1.14
WisdomTree Floating Rate Treasury	USFR	0.15	1,102.9	0.00	1.45	1.23
iShares US Treasury Bond	GOVT	0.15	14,914.3	-0.46	5.21	3.00
Franklin Liberty US Treasury Bond	FLGV	0.09	419.2	-1.02	-	-
U.S. FIXED INCOME: TREASURY - SHORT TERM						
Vanguard Short-Term Treasury	VGSH	0.05	10,138.2	0.04	2.82	1.73
Schwab Short-Term US Treasury	SCHO	0.05	7,783.0	0.04	2.82	1.72
iShares 1-3 Year Treasury Bond	SHY	0.15	18,863.6	0.02	2.73	1.66
Invesco Treasury Collateral	CLTL	0.08	789.4	0.01	1.64	-
iShares 0-3 Month Treasury Bond	SGOV	0.03	825.2	0.00	-	-
SPDR Bloomberg Barclays 1-3 Month T-Bill	BIL	0.14	12,596.2	0.00	1.34	0.99
Goldman Sachs Access Treasury 0-1 Year	GBIL	0.12	2,377.1	0.00	1.48	-
iShares Short Treasury Bond	SHV	0.15	16,453.9	-0.01	1.58	1.18

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
SPDR Portfolio Short Term Treasury	SPTS	0.06	2,992.1	-0.03	2.79	1.63
Franklin Liberty Short Duration US Govt	FTSD	0.25	553.4	-0.05	2.40	1.65
U.S. FIXED INCOME: TREASURY - INTERMEDIATE						
iShares 3-7 Year Treasury Bond	IEI	0.15	11,324.3	-0.28	4.98	2.77
SPDR Portfolio Intermediate Term Treasury	SPTI	0.06	2,625.0	-0.42	5.49	3.13
Schwab Intermediate-Term US Treasury	SCHR	0.05	4,123.1	-0.43	5.40	3.00
Vanguard Intermediate-Term Treasury	VGIT	0.05	7,070.2	-0.45	5.40	2.99
iShares 7-10 Year Treasury Bond	IEF	0.15	13,905.8	-1.09	6.65	3.54
U.S. FIXED INCOME: TREASURY - LONG-TERM						
iShares 10-20 Year Treasury Bond	TLH	0.15	1,443.3	-2.97	7.80	4.34
Vanguard Long-Term Treasury	VGLT	0.05	2,355.1	-3.52	9.67	5.94
SPDR Portfolio Long Term Treasury	SPTL	0.06	2,946.4	-3.52	9.70	5.92
iShares 20+ Year Treasury Bond	TLT	0.15	17,141.4	-3.63	9.74	5.99
Vanguard Extended Duration Treasury	EDV	0.07	1,225.9	-4.70	12.16	7.61
PIMCO 25+ Year Zero Coupon US Treasury	ZROZ	0.15	362.6	-5.43	12.69	7.89
U.S. FIXED INCOME: AGENCIES						
iShares Agency Bond	AGZ	0.20	770.2	-0.06	4.50	2.97
U.S. FIXED INCOME: AGENCY MBS						
First Trust Low Duration Opportunities	LMBS	0.67	6,728.8	0.23	2.49	3.06
Janus Henderson Mortgage-Backed Securities	JMBS	0.32	673.0	0.22	-	-
SPDR Portfolio Mortgage Backed Bond	SPMB	0.06	3,018.0	0.15	4.19	2.68
iShares MBS	MBB	0.12	26,340.8	0.15	4.12	2.69
Vanguard Mortgage-Backed Securities	VMBS	0.05	13,745.7	0.07	4.01	2.66
iShares GNMA Bond	GNMA	0.20	508.3	-0.24	3.69	2.26
U.S. FIXED INCOME: TIPS						
Quadratic Int Rate Vol and Inflation Hedge	IVOL	0.99	1,327.1	2.02	-	-
FlexShares iBoxx 3 Year Target Duration TIPS	TDTT	0.18	1,347.8	0.71	4.63	3.18
PIMCO 1-5 Year US TIPS	STPZ	0.20	693.8	0.68	3.81	2.76
FlexShares iBoxx 5-Year Target Duration TIPS	TDTF	0.18	593.6	0.63	6.20	4.38
SPDR Bloomberg Barclays 1-10 Year TIPS	TIPX	0.15	609.9	0.57	5.32	3.90
iShares 0-5 Year TIPS Bond	STIP	0.05	3,421.6	0.51	3.78	2.80
Vanguard Short-Term Inflation-Protected Sec	VTIP	0.05	10,733.0	0.47	3.72	2.75
Schwab US TIPS	SCHP	0.05	14,655.3	0.29	6.27	4.77
PIMCO Broad US TIPS	TIPZ	0.20	143.4	0.28	6.30	4.99
iShares TIPS Bond	TIP	0.20	27,626.5	0.27	6.18	4.71
SPDR Portfolio TIPS	SPIP	0.12	2,405.6	0.13	6.41	4.88
PIMCO 15+ Year US TIPS	LTPZ	0.20	904.6	-0.98	11.06	9.41
U.S. FIXED INCOME: MUNICIPAL - BROAD MARKET						
First Trust Municipal High Income	FMHI	0.55	144.4	1.75	6.24	-
VanEck Vectors CEF Municipal Income	XMPT	2.02	167.4	0.80	8.71	5.81
Hartford Municipal Opportunities	HMOP	0.29	142.9	0.78	4.32	-
First Trust Managed Municipal	FMB	0.50	1,916.2	0.77	5.08	4.25
Invesco California AMT-Free Municipal Bond	PWZ	0.28	470.7	0.56	5.36	4.13
Invesco National AMT-Free Municipal Bond	PZA	0.35	2,279.6	0.53	5.33	4.19
IQ MacKay Municipal Insured	MMIN	0.31	371.3	0.45	5.40	-
Invesco Taxable Municipal Bond	BAB	0.28	2,365.3	0.42	7.80	6.40
iShares California Muni Bond	CMF	0.25	1,716.0	0.40	4.47	3.23
Vanguard Tax-Exempt Bond	VTEB	0.06	11,180.6	0.34	5.01	3.66
iShares National Muni Bond	MUB	0.25	21,130.5	0.34	4.86	3.41
iShares New York Muni Bond	NYF	0.25	502.5	0.27	4.22	3.02
SPDR Nuveen Bloomberg Barclays Municipal	TFI	0.23	3,475.9	0.15	5.15	3.56
U.S. FIXED INCOME: MUNICIPAL - SHORT-TERM						
VanEck Vectors Short Muni	SMB	0.20	256.4	0.44	3.30	2.10
VanEck Vectors Intermediate Muni	ITM	0.24	1,791.9	0.28	5.67	3.78
iShares iBonds Dec 2023 Term Muni Bond	IBML	0.18	298.9	0.20	3.09	-
PIMCO Short Term Municipal Bond Active	SMMU	0.35	304.4	0.17	2.72	1.86
iShares iBonds Dec 2022 Term Muni Bond	IBMK	0.18	376.0	0.12	2.42	1.63
SPDR Nuveen Bloomberg Short Term Muni	SHM	0.20	4,485.8	0.10	2.58	1.57
JPMorgan Ultra-Short Municipal Income	JMST	0.18	1,321.7	0.06	-	-
iShares Short-Term National Muni Bond	SUB	0.25	4,341.1	0.05	2.38	1.53
iShares iBonds Dec 2021 Term Muni Bond	IBMJ	0.18	320.8	0.02	1.77	1.20
BlackRock Short Maturity Municipal Bond	MEAR	0.25	291.4	-0.03	1.59	1.19
U.S. FIXED INCOME: MUNICIPAL - INTERMEDIATE						
PIMCO Intermediate Municipal Bond Active	MUNI	0.35	604.5	0.43	4.85	3.32
iShares iBonds Dec 2025 Term Muni Bond	IBMN	0.18	136.8	0.18	-	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
iShares iBonds Dec 2024 Term Muni Bond	IBMM	0.18	203.4	0.15	-	-
U.S. FIXED INCOME: MUNICIPAL - LONG-TERM						
VanEck Vectors Long Muni	MLN	0.24	242.0	0.90	6.43	4.67
Xtrackers Municipal Infrastr Revenue Bond	RVNU	0.15	123.5	0.82	6.06	4.79
U.S. FIXED INCOME: MUNICIPAL - HIGH YIELD						
VanEck Vectors Short High Yield Muni	SHYD	0.35	254.3	2.16	4.88	3.53
VanEck Vectors High Yield Muni	HYD	0.35	3,293.9	2.05	4.58	4.56
SPDR Nuveen Bloomberg Barclays HiYld Muni	HYMB	0.35	1,484.5	1.66	6.65	4.97
U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - BROAD MATURITIES						
Hartford Schroders Tax-Aware Bond	HTAB	0.40	124.4	0.40	-	-
Fidelity Low Duration Bond Factor	FLDR	0.15	244.7	-0.07	-	-
iShares Interest Rate Hedged Corporate Bond	LQDH	0.45	465.9	-0.37	2.33	4.64
Nuveen ESG US Aggregate Bond	NUBD	0.20	199.7	-0.45	5.39	-
Nuveen Enhanced Yield US Aggregate Bond	NUAG	0.20	314.4	-0.63	5.28	-
Franklin Liberty US Core Bond	FLCB	0.15	1,564.5	-0.65	-	-
Schwab US Aggregate Bond	SCHZ	0.04	8,782.3	-0.68	5.45	3.90
iShares ESG Aware US Aggregate Bond	EAGG	0.10	1,066.3	-0.71	-	-
Goldman Sachs Access US Aggregate Bond	GCOR	0.14	141.8	-0.74	-	-
iShares Core US Aggregate Bond	AGG	0.06	86,255.8	-0.74	5.41	3.94
SPDR Portfolio Aggregate Bond	SPAB	0.04	5,572.0	-0.75	5.39	3.96
JPMorgan US Aggregate Bond	JAGG	0.07	872.7	-0.75	-	-
WisdomTree Yield Enh US Aggregate Bond	AGGY	0.12	1,188.1	-0.77	5.27	4.58
Vanguard Total Bond Market	BND	0.04	70,302.4	-0.86	5.54	4.02
Principal Investment Grade Corporate Active	IG	0.26	336.6	-1.21	-	-
iShares Edge Inv Grade Enhanced Bond	IGEB	0.18	161.4	-1.22	7.26	-
PIMCO Investment Grade Corporate Bond	CORP	0.20	832.2	-1.23	6.80	6.34
iShares Broad USD Inv Grade Corporate Bond	USIG	0.15	5,997.5	-1.23	6.75	6.07
iShares Government/Credit Bond	GBF	0.20	286.4	-1.25	5.77	4.21
Overlay Shares Core Bond	OVB	0.80	128.1	-1.34	-	-
iShares ESG Aware USD Corporate Bond	SUSC	0.18	793.5	-1.41	6.53	-
SPDR Portfolio Corporate Bond	SPBO	0.06	331.0	-1.42	7.16	6.16
Vanguard Total Corporate Bond	VTC	0.05	928.9	-1.46	6.66	-
Franklin Liberty Investment Grade Corporate	FLCO	0.35	1,049.6	-1.49	6.67	-
Goldman Sachs Access Inv Grade Corp Bond	GIGB	0.14	776.9	-1.49	6.74	-
iShares Aaa-A Rated Corporate Bond	QLTA	0.15	1,426.0	-1.56	6.29	5.33
iShares iBoxx USD Inv Grade Corp Bond	LQD	0.15	52,112.7	-1.83	7.59	6.92
Vanguard Long-Term Bond	BLV	0.05	5,474.8	-2.92	10.25	9.79
U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - SHORT-TERM						
SPDR SSgA Ultra Short Term Bond	ULST	0.20	317.8	0.23	2.20	1.93
PGIM Ultra Short Bond	PULS	0.15	1,205.2	0.14	-	-
PIMCO Enhanced Short Maturity Active	MINT	0.37	14,560.1	0.08	2.20	2.12
Goldman Sachs Access Ultra Short Bond	GSST	0.16	242.6	0.04	-	-
PIMCO Enhanced Short Maturity Active ESG	EMNT	0.27	158.2	0.02	-	-
ClearShares Ultra-Short Maturity	OPER	0.20	125.1	0.02	-	-
BlackRock Ultra Short-Term Bond	ICSH	0.08	5,197.1	0.02	2.29	1.98
JPMorgan Ultra-Short Income	JPST	0.18	15,864.3	0.02	2.53	-
Invesco BulletShares 2021 Corporate Bond	BSCL	0.10	2,054.8	0.00	2.83	3.03
SPDR Portfolio Short Term Corporate Bond	SPSB	0.07	7,312.6	0.00	3.56	2.84
iShares iBonds Dec 2021 Term Corporate	IBDM	0.10	1,561.3	-0.04	2.89	2.89
Vanguard Short-Term Bond	BSV	0.05	30,809.0	-0.06	3.81	2.52
Invesco BulletShares 2022 Corporate Bond	BSCM	0.10	2,259.1	-0.08	3.87	3.94
iShares iBonds Dec 2022 Term Corporate	IBDN	0.10	1,472.9	-0.08	3.82	3.73
iShares 1-5 Yr Inv Grade Corporate Bond	IGSB	0.20	22,540.6	-0.09	4.60	3.27
Schwab 1-5 Year Corporate Bond	SCHJ	0.05	236.0	-0.10	-	-
iShares ESG Aware 1-5 Year USD Corporate	SUSB	0.12	597.0	-0.11	4.27	-
WisdomTree Yld Enh US Short-Term Agg Bond	SHAG	0.12	148.9	-0.12	3.90	-
iShares 0-5 Year Inv Gr Corporate Bond	SLQD	0.06	2,206.5	-0.15	4.07	3.09
Vanguard Short-Term Corporate Bond	VCSH	0.05	37,037.4	-0.17	4.39	3.47
U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - INTERMEDIATE						
iShares iBonds Dec 2024 Term Corporate	IBDP	0.10	1,223.1	-0.02	5.51	5.25
Invesco BulletShares 2024 Corporate Bond	BSCO	0.10	1,292.5	-0.04	5.76	5.35
iShares iBonds Dec 2027 Term Corporate	IBDS	0.10	420.8	-0.15	7.34	-
Invesco BulletShares 2023 Corporate Bond	BSCN	0.10	1,636.8	-0.16	4.74	4.70
iShares iBonds Dec 2023 Term Corporate	IBDO	0.10	1,437.7	-0.17	4.81	4.58
Invesco BulletShares 2027 Corporate Bond	BSCR	0.10	287.6	-0.26	7.40	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Inspire Corporate Bond Impact	IBD	0.50	156.4	-0.38	4.00	-
iShares iBonds Dec 2025 Term Corporate	IBDQ	0.10	1,008.7	-0.40	6.64	5.87
Invesco BulletShares 2025 Corporate Bond	BSCP	0.10	917.6	-0.41	6.41	5.60
FlexShares Credit-Scored US Corporate Bond	SKOR	0.22	273.2	-0.46	6.34	4.73
iShares iBonds Dec 2026 Term Corporate	IBDR	0.10	625.2	-0.47	7.12	-
American Century Diversified Corporate Bond	KORP	0.29	132.0	-0.48	4.84	-
Invesco BulletShares 2026 Corporate Bond	BSCQ	0.10	375.8	-0.50	7.12	-
SPDR Portfolio Intermediate Corporate Bond	SPIB	0.07	5,951.0	-0.51	5.78	4.76
iShares 5-10 Year Inv Grade Corporate Bond	IGIB	0.20	11,192.7	-0.81	7.64	5.65
Vanguard Intermediate Corporate Bond	VCIT	0.05	43,790.4	-0.88	7.17	6.06
Schwab 5-10 Year Corporate Bond	SCHI	0.05	378.4	-0.89	-	-
Invesco BulletShares 2028 Corporate Bond	BSCS	0.10	172.0	-0.93	-	-
U.S. FIXED INCOME: CORPORATE - INVESTMENT GRADE - FLOATING RATE						
Invesco Variable Rate Investment Grade	VRIG	0.30	461.3	0.48	2.34	-
VanEck Vectors Inv Grade Floating Rate	FLTR	0.14	450.0	0.47	2.51	2.72
iShares Floating Rate Bond	FLOT	0.20	5,606.1	0.24	2.04	1.98
SPDR Bloomberg Barclays Inv Gr Floating Rate	FLRN	0.15	2,365.0	0.23	2.00	1.98
U.S. FIXED INCOME: CORPORATE - HIGH YIELD - BROAD MATURITIES						
FlexShares High Yield Value-Scored Bond	HYGV	0.37	197.5	0.10	-	-
SPDR Portfolio High Yield Bond	SPHY	0.15	209.5	0.09	5.59	7.10
Invesco Senior Loan	BKLN	0.65	5,730.4	0.02	2.78	4.26
VanEck Vectors Fallen Angel High Yield Bond	ANGL	0.35	4,434.7	-0.09	7.82	12.07
iShares Fallen Angels USD Bond	FALN	0.25	1,319.5	-0.19	7.94	-
iShares Broad USD HiYld CorpBond	USHY	0.22	7,553.4	-0.22	5.52	-
JPMorgan High Yield Research Enhanced	JPHY	0.24	1,025.1	-0.23	5.32	-
Goldman Sachs Access HiYld CorpBond	GHYB	0.34	183.5	-0.36	5.53	-
iShares iBoxx USD HiYld CorpBond	HYG	0.49	21,596.1	-0.38	5.16	7.30
Xtrackers USD HiYld CorpBond	HYLB	0.15	7,436.8	-0.38	5.20	-
SPDR Bloomberg Barclays High Yield Bond	JNK	0.40	11,851.8	-0.50	5.10	7.62
WisdomTree US HiYld CorpBond	WFHY	0.38	130.6	-0.51	6.69	-
Pacer Trendpilot US Bond	PTBD	0.60	518.2	-0.53	-	-
U.S. FIXED INCOME: CORPORATE - HIGH YIELD - SHORT-TERM						
SPDR Bloomberg Barclays Short HiYld Bond	SJNK	0.40	3,940.1	0.11	4.75	7.28
iShares 0-5 Year HiYld CorpBond	SHYG	0.30	4,784.9	-0.15	4.13	6.26
PIMCO 0-5 Year HiYld CorpBond	HYS	0.56	1,960.5	-0.34	3.82	6.82
U.S. FIXED INCOME: CORPORATE - HIGH YIELD - INTERMEDIATE						
Invesco BulletShares 2021 HiYld Corp Bond	BSJL	0.42	909.5	0.18	2.03	5.27
Invesco BulletShares 2024 HiYld Corp Bond	BSJO	0.42	226.4	-0.14	4.17	-
Invesco BulletShares 2023 HiYld Corp Bond	BSJN	0.42	478.2	-0.18	3.75	6.03
Invesco BulletShares 2022 HiYld Corp Bond	BSJM	0.42	791.0	-0.23	2.51	5.78
Invesco BulletShares 2025 HiYld Corp Bond	BSJP	0.42	205.0	-0.32	4.84	-
iShares Intermediate Govt/Credit Bond	GVI	0.20	2,331.7	-0.37	4.71	3.15
Invesco Fundamental HiYld Corp Bond	PHB	0.50	764.8	-0.46	5.06	6.86
Vanguard Intermediate-Term Bond	BIV	0.05	15,337.8	-0.73	6.79	4.68
U.S. FIXED INCOME: CORPORATE - ASSET-BACKED						
iShares CMBS	CMBS	0.25	505.1	0.22	5.89	4.25
U.S. FIXED INCOME: CORPORATE - CONVERTIBLES						
iShares Convertible Bond	ICVT	0.20	1,426.3	3.40	24.93	23.49
SPDR Bloomberg Barclays Convertible Securities	CWB	0.40	7,100.1	2.17	21.42	20.50
U.S. FIXED INCOME: CORPORATE - PREFERRED STOCK						
Invesco Variable Rate Preferred	VRP	0.50	1,540.4	-0.14	5.51	6.72
VanEck Vectors Preferred Securities ex Fin	PFXF	0.41	829.4	-1.22	7.77	7.04
Global X US Preferred	PFFD	0.23	1,156.8	-1.28	7.22	-
iShares Preferred and Income Securities	PFF	0.47	19,137.4	-1.71	5.87	5.43
Invesco Financial Preferred	PGF	0.61	1,765.8	-1.84	6.17	5.65
Innovator S&P Investment Grade Preferred	EPRF	0.47	176.9	-2.12	6.79	-
Invesco Preferred	PGX	0.52	6,941.5	-2.22	6.56	5.76
SPDR Wells Fargo Preferred Stock	PSK	0.45	1,348.0	-2.27	6.35	5.10
GLOBAL FIXED INCOME						
First Trust SSI Strategic Convertible Securities	FCVT	0.95	308.7	2.71	21.45	18.78
SPDR DoubleLine Short Dur Total Ret Tactical	STOT	0.45	147.5	0.47	2.90	-
Aware Ultra-Short Duration Enh Income	AWTM	0.23	224.8	0.31	-	-
First Trust TCW Unconstrained Plus Bond	UCON	0.76	253.3	0.28	-	-
PIMCO Enhanced Low Duration Active	LDUR	0.56	813.8	0.24	3.55	3.10
IQ Ultra Short Duration	ULTR	0.25	300.4	0.22	-	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
BlackRock Short Maturity Bond	NEAR	0.25	4,564.3	0.12	2.17	1.91
FlexShares Ready Access Variable Income	RAVI	0.25	444.4	0.05	2.40	1.95
Invesco Ultra Short Duration	GSY	0.23	3,068.8	0.05	2.41	2.23
Janus Henderson Short Duration Income	VNLA	0.26	3,047.0	-0.02	2.87	-
Invesco Global Short Term High Yield Bond	PGHY	0.35	215.0	-0.03	2.88	5.36
SPDR DoubleLine Total Return Tactical	TOTL	0.55	3,275.0	-0.06	4.04	3.28
Fidelity Limited Term Bond	FLTB	0.36	247.7	-0.11	4.26	3.14
First Trust Preferred Securities & Income	FPE	0.85	5,948.6	-0.20	5.97	7.05
Hartford Total Return Bond	HTRB	0.29	905.8	-0.38	5.99	-
Invesco Total Return Bond	GTO	0.50	599.2	-0.44	7.18	-
First Trust TCW Opportunistic Fixed Income	FIXD	0.56	4,935.9	-0.45	6.14	-
Anfield Universal Fixed Income	AFIF	1.23	130.0	-0.45	-	-
PIMCO Active Bond	BOND	0.57	4,194.3	-0.46	5.64	4.55
JPMorgan Core Plus Bond	JCPB	0.40	137.9	-0.50	-	-
Franklin Liberty Intl Aggregate Bond	FLIA	0.25	227.8	-0.57	-	-
JPMorgan International Bond Opportunities	JPIB	0.50	241.4	-0.57	4.79	-
iShares Global Green Bond	BGRN	0.20	192.3	-0.60	-	-
iShares Core International Aggregate Bond	IAGG	0.08	3,431.1	-0.62	5.20	4.11
Vanguard Total International Bond	BNDX	0.08	38,447.1	-0.63	5.06	4.05
Fidelity Total Bond	FBND	0.36	1,705.8	-0.68	6.19	5.46
FormulaFolios Tactical Income	FFTI	1.04	221.9	-0.74	2.02	-
Vanguard Total World Bond	BNDW	0.06	531.7	-0.76	-	-
Columbia Diversified Fixed Income Alloc	DIAL	0.28	895.0	-0.77	6.69	-
Hartford Core Bond	HCRB	0.29	158.5	-0.80	-	-
SPDR Dorsey Wright Fixed Income Allocation	DWFI	0.60	123.7	-0.82	4.04	-
SPDR Bloomberg Barclays Short Intl Treasury	BWZ	0.35	211.5	-0.94	-0.16	2.42
Western Asset Total Return	WBND	0.47	142.2	-1.07	-	-
SPDR Bloomberg Barclays Intl Treasury Bond	BWX	0.35	1,038.7	-1.25	2.88	4.33
SPDR FTSE Intl Govt Infl-Protected Bond	WIP	0.50	416.0	-1.29	1.55	5.21
SPDR Bloomberg Barclays Intl Corporate	IBND	0.50	261.3	-1.42	1.48	4.44
INTERNATIONAL FIXED INCOME: DEVELOPED						
iShares US & Intl High Yield Corp Bond	GHYG	0.40	186.9	-0.42	4.47	7.88
Invesco International Corporate Bond	PICB	0.50	134.2	-1.30	2.82	4.64
iShares International Treasury Bond	IGOV	0.35	1,170.1	-1.58	2.45	4.14
INTERNATIONAL FIXED INCOME: EMERGING						
iShares J.P. Morgan EM Corporate Bond	CEMB	0.50	278.8	-0.41	5.52	7.33
VanEck Vectors EM High Yield Bond	HYEM	0.40	720.4	-0.88	4.75	7.82
iShares JPM EM Local Currency Bond	LEMB	0.50	526.8	-1.06	-1.30	4.02
SPDR Bloomberg Barclays EM Local Bond	EBND	0.30	1,021.7	-1.32	1.08	5.64
Invesco Emerging Markets Sovereign Debt	PCY	0.50	2,875.1	-1.37	3.93	5.89
iShares J.P. Morgan EM High Yield Bond	EMHY	0.50	346.4	-1.38	3.00	6.61
Vanguard Emerging Markets Govt Bond	VWOB	0.25	2,750.6	-1.70	5.05	6.63
iShares JP Morgan USD Emerging Markets	EMB	0.39	18,673.3	-1.78	4.39	6.37
VanEck Vectors JP Morgan EM Local Currency	EMLC	0.30	3,524.9	-1.86	-0.50	4.98
First Trust EM Local Currency Bond	FEMB	0.85	259.3	-2.03	-0.10	4.85
WisdomTree Emerging Markets Local Debt	ELD	0.55	125.5	-2.10	0.05	5.25
GLOBAL FIXED INCOME: CORPORATE - PREFERRED STOCK						
First Trust Institutl Pref Securities & Income	FPEI	0.85	308.5	0.29	5.62	-
Principal Spectrum Pref Securities Active	PREF	0.55	271.4	-0.15	5.89	-
Global X SuperIncome Preferred	SPFF	0.58	199.5	-0.59	5.18	4.62
GLOBAL FIXED INCOME: HIGH YIELD						
First Trust Senior Loan	FTSL	0.86	1,438.4	0.96	3.72	4.43
SPDR Blackstone / GSO Senior Loan	SRLN	0.70	3,107.4	0.55	3.92	4.74
First Trust Tactical High Yield	HYLS	1.23	2,196.4	0.47	5.53	6.42
Franklin Liberty HiYld CorpETF	FLHY	0.40	235.9	-0.56	-	-
Fidelity High Yield Factor	FDHY	0.45	190.2	-0.60	-	-
COMMODITIES: BROAD MARKET						
Teucrium Corn	CORN	3.71	144.0	8.34	-0.53	-4.92
iShares S&P GSCI Commodity	GSG	0.75	921.6	4.70	-8.57	-0.86
Invesco DB Commodity	DBC	0.89	1,386.2	3.33	-2.94	4.12
iShares Commodities Select Strategy	COMT	0.48	228.4	3.26	-5.87	4.64
Invesco Opt Yld Divrsfd Commod No K-1	PDBC	0.59	3,167.0	3.21	-3.58	3.82
First Trust Global Tactical Commodity	FTGC	0.95	335.7	2.90	-1.30	0.70
iPath Bloomberg Commodity ETN	DJP	0.70	518.1	2.88	-3.43	1.41
United States Commodity	USCI	1.03	146.8	2.24	-8.37	-3.26

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
Aberdeen Std All Commodity K-1 Free	BCI	0.25	365.9	**2.19**	-2.57	-
COMMODITIES: AGRICULTURE						
Invesco DB Agriculture	DBA	0.89	697.5	**1.55**	-3.68	-3.39
COMMODITIES: ENERGY						
Invesco DB Oil	DBO	0.78	467.6	**7.59**	-5.09	3.21
United States Brent Oil	BNO	0.88	348.3	**6.68**	-9.99	3.91
United States Oil	USO	0.79	3,227.9	**6.57**	-30.29	-14.55
United States 12 Month Oil	USL	0.88	202.6	**5.76**	-6.48	2.74
United States Natural Gas	UNG	1.28	393.2	**2.28**	-27.87	-22.64
COMMODITIES: INDUSTRIAL METALS						
Invesco DB Base Metals	DBB	0.80	186.7	**-2.49**	-3.80	8.25
COMMODITIES: PRECIOUS METALS						
iShares Silver Trust	SLV	0.50	15,169.1	**1.71**	15.19	12.96
Aberdeen Standard Physical Silver	SIVR	0.30	897.2	**1.64**	15.37	13.19
Aberdeen Standard Physical Platinum	PPLT	0.60	1,381.9	**-0.29**	1.75	3.65
Aberdeen Standard Physical Prec Metals	GLTR	0.60	859.4	**-2.52**	13.10	12.33
Invesco DB Precious Metals	DBP	0.78	127.4	**-2.65**	9.90	9.31
GraniteShares Gold	BAR	0.17	1,128.4	**-3.07**	10.79	-
VanEck Merk Gold	OUNZ	0.25	440.1	**-3.08**	10.59	10.09
SPDR Gold MiniShares	GLDM	0.18	4,122.0	**-3.17**	-	-
Aberdeen Standard Physical Gold	SGOL	0.17	2,642.0	**-3.17**	10.92	10.17
iShares Gold	IAU	0.25	31,393.4	**-3.20**	10.75	10.24
SPDR Gold	GLD	0.40	69,120.3	**-3.22**	10.58	10.05
Aberdeen Standard Physical Palladium	PALL	0.60	351.8	**-9.23**	28.58	34.10
Goldman Sachs Physical Gold	AAAU	0.18	375.2	**-**	-	-
CURRENCY: DEVELOPED						
Invesco DB US Dollar Bullish	UUP	0.79	348.7	**0.74**	2.69	-0.51
Invesco CurrencyShares British Pound	FXB	0.40	139.2	**0.14**	-1.39	-1.05
Invesco CurrencyShares Canadian Dollar	FXC	0.40	157.4	**-0.56**	-0.97	1.93
Invesco CurrencyShares Euro	FXE	0.40	358.4	**-0.76**	-1.62	1.45
Invesco CurrencyShares Swiss Franc	FXF	0.40	333.0	**-0.77**	0.31	1.65
Invesco CurrencyShares Australian Dollar	FXA	0.40	156.6	**-0.95**	-1.47	2.07
Invesco CurrencyShares Japanese Yen	FXY	0.40	239.8	**-1.51**	0.83	2.40
ASSET ALLOCATION						
Merlyn.AI SectorSurfer Momentum	DUDE	1.32	125.3	**6.29**	-	-
Multi-Asset Diversified Income	MDIV	0.73	450.4	**1.09**	-1.62	3.25
Amplify High Income	YYY	2.28	280.2	**1.06**	3.41	8.64
Aptus Defined Risk	DRSK	0.78	595.6	**0.14**	-	-
Principal Active Income	YLD	0.49	232.4	**-0.10**	3.78	7.61
Cambria Tail Risk	TAIL	0.59	379.0	**-0.19**	-0.86	-
Invesco CEF Income Composite	PCEF	2.34	795.4	**-0.28**	5.61	9.45
iShares Core Growth Allocation	AOR	0.33	1,625.5	**-0.29**	6.52	9.67
iShares Core Aggressive Allocation	AOA	0.33	1,219.3	**-0.31**	6.84	11.38
SPDR SSgA Global Allocation	GAL	0.35	262.8	**-0.31**	4.95	8.59
iShares Core Moderate Allocation	AOM	0.34	1,472.9	**-0.42**	6.15	7.85
iShares Core Conservative Allocation	AOK	0.34	851.9	**-0.44**	5.96	6.95
Strategy Shares NASDAQ 7 HANDL	HNDL	1.17	255.1	**-0.72**	7.64	-
DeltaShares S&P International Managed Risk	DMRI	0.50	176.0	**-0.81**	-2.55	-
Cabana Target Drawdown 10	TDSC	0.69	569.9	**-0.91**	-	-
Cabana Target Drawdown 13	TDSD	0.68	174.5	**-0.98**	-	-
WisdomTree 90/60 US Balanced	NTSX	0.20	416.6	**-1.42**	-	-
Amplify BlackSwan Growth & Treasury Core	SWAN	0.49	769.9	**-1.43**	-	-
Cabana Target Drawdown 7	TDSB	0.68	377.5	**-1.49**	-	-
DeltaShares S&P 500 Managed Risk	DMRL	0.35	373.2	**-1.61**	4.61	-
iShares Morningstar Multi-Asset Income	IYLD	0.60	263.8	**-1.83**	2.49	5.76
ALTERNATIVES: ABSOLUTE RETURN						
First Trust Long/Short Equity	FTLS	1.60	318.0	**2.90**	3.97	8.14
AGFiQ US Market Neutral Anti-Beta	BTAL	2.11	132.7	**1.42**	1.67	-2.84
IQ Hedge Multi-Strategy Tracker	QAI	0.78	822.4	**0.13**	2.93	3.83
IQ Merger Arbitrage	MNA	0.77	733.2	**-0.54**	2.46	3.93
RPAR Risk Parity	RPAR	0.50	1,120.3	**-1.22**	-	-
Core Alternative	CCOR	1.09	151.4	**-2.90**	4.09	-
ALTERNATIVES: TACTICAL TOOLS						
ProShares VIX Short-Term Futures	VIXY	0.87	428.6	**25.91**	-11.31	-44.20
iPath Ser B S&P 500 VIX Short Tm Futs ETN	VXX	0.89	1,338.7	**25.55**	-11.73	-

FUND NAME	TICKER	EXP RATIO %	AUM ($M)	YTD %	3YR %	5YR %
LEVERAGED						
ProShares Ultra VIX Short-Term Futures	UVXY	0.95	2,022.2	**37.46**	-36.71	-76.22
Direxion Daily S&P Biotech Bull 3X	LABU	1.04	369.8	**25.63**	8.12	34.81
Direxion Daily S&P Oil/Gas Exp/Prod Bull 2X	GUSH	1.17	537.5	**18.89**	-84.18	-65.71
Direxion Daily FTSE China Bull 3X	YINN	1.37	375.9	**17.94**	-20.97	16.14
Direxion Daily Homebldrs/Supplies Bull 3X	NAIL	0.99	346.4	**16.05**	-14.44	23.11
Direxion Daily Small Cap Bull 3x	TNA	1.12	1,476.9	**13.50**	0.24	26.24
ProShares UltraPro Russell2000	URTY	0.95	353.2	**13.49**	0.47	26.51
ProShares Ultra NASDAQ Biotechnology	BIB	0.95	245.6	**12.28**	15.05	17.29
ProShares Ultra Bloomberg Crude Oil	UCO	0.95	899.5	**11.91**	-60.91	-38.81
Direxion Daily Regional Banks Bull 3X	DPST	0.99	235.7	**10.66**	-45.45	-8.34
ProShares Ultra Russell2000	UWM	0.95	675.1	**9.43**	10.23	24.87
MicroSectors US Big Oil 3X Leveraged ETN	NRGU	0.95	256.5	**7.90**	-	-
Direxion Daily MSCI Emerging Markets Bull 3x	EDC	1.33	265.8	**7.72**	-13.13	22.10
Direxion Daily Semiconductor Bull 3X	SOXL	0.96	2,682.9	**7.40**	43.05	91.86
ProShares Ultra Oil & Gas	DIG	0.95	133.8	**7.05**	-41.33	-20.38
Direxion Daily Energy Bull 2x	ERX	1.06	475.5	**6.62**	-65.36	-39.57
Direxion Daily CSI 300 China A Share Bull 2X	CHAU	1.21	170.4	**6.45**	8.40	25.40
ProShares Ultra Semiconductors	USD	0.95	186.0	**4.08**	33.08	56.12
MicroSectors FANG+ 2X Leveraged ETN	FNGO	0.95	201.7	**3.61**	-	-
Direxion Daily Healthcare Bull 3x	CURE	1.08	147.6	**3.54**	13.13	25.80
MicroSectors FANG+ 3X Leveraged ETN	FNGU	0.95	1,431.8	**2.76**	71.70	-
ProShares Ultra MidCap400	MVV	0.95	159.1	**2.31**	4.72	20.13
ProShares Ultra Bloomberg Natural Gas	BOIL	0.95	124.1	**1.58**	-60.08	-52.40
ProShares Ultra Silver	AGQ	0.93	683.7	**1.03**	13.71	12.62
ProShares Ultra Technology	ROM	0.95	734.3	**0.77**	42.31	53.23
ProShares Ultra QQQ	QLD	0.95	3,997.6	**0.23**	38.84	47.11
Virtus InfraCap US Preferred Stock	PFFA	2.01	237.0	**-0.36**	-	-
ProShares UltraPro QQQ	TQQQ	0.95	10,295.2	**-0.47**	45.34	64.57
Credit Suisse FI Large Cap Growth Enh ETN	FLGE	1.52	305.6	**-0.67**	28.20	37.78
UBS AG FI Enhanced Large Cap Growth ETN	FBGX	1.29	138.9	**-0.97**	28.92	38.12
ProShares Ultra S&P 500	SSO	0.91	2,940.9	**-2.30**	14.23	26.53
ProShares UltraPro S&P500	UPRO	0.93	1,738.0	**-3.71**	10.73	33.57
Direxion Daily S&P 500 Bull 3X	SPXL	1.01	1,611.9	**-3.76**	11.07	33.40
Direxion Daily Technology Bull 3X	TECL	1.08	1,850.3	**-3.88**	42.53	65.69
ProShares Ultra Dow30	DDM	0.95	370.2	**-4.02**	4.05	24.28
Credit Suisse Mo Pay 2xLev Mort REIT ETN	REML	1.30	166.1	**-4.06**	-27.26	-
ProShares Ultra Financials	UYG	0.95	600.4	**-5.13**	-3.77	16.33
ProShares UltraPro Dow30	UDOW	0.95	635.1	**-6.21**	-4.14	29.59
Direxion Daily Financial Bull 3x	FAS	0.99	2,128.0	**-6.23**	-9.42	21.67
ProShares Ultra Gold	UGL	0.95	259.2	**-7.07**	13.57	13.94
Direxion Daily Gold Miners Bull 2X	NUGT	1.17	1,078.5	**-9.50**	-26.76	-9.13
Direxion Daily 20+ Year Treasury Bull 3X	TMF	1.05	259.7	**-10.84**	18.08	8.58
Direxion Daily MSCI Brazil Bull 2X	BRZU	1.29	217.0	**-16.00**	-63.70	-21.41
Direxion Daily Junior Gold Miners Bull 2X	JNUG	1.12	707.7	**-16.57**	-50.29	-29.56
Direxion Daily Aerospace & Defense Bull 3X	DFEN	0.99	252.9	**-18.33**	-36.65	-
INVERSE						
Direxion Daily 20+ Year Treasury Bear 3x	TMV	1.04	130.9	**10.83**	-31.85	-23.57
ProShares UltraShort 20+ Year Treasury	TBT	0.92	666.5	**7.06**	-20.46	-14.36
ProShares UltraPro Short Dow30	SDOW	0.95	493.1	**4.94**	-40.62	-46.93
ProShares UltraShort Dow30	DXD	0.95	136.5	**3.45**	-24.69	-31.65
ProShares Short 20+ Year Treasury	TBF	0.94	353.7	**3.17**	-9.57	-6.52
Direxion Daily Financial Bear 3X	FAZ	1.07	195.6	**1.94**	-47.02	-50.70
Direxion Daily S&P 500 Bear 3X Shares	SPXS	1.07	503.2	**1.82**	-45.71	-47.00
ProShares Short Dow30	DOG	0.95	327.3	**1.71**	-10.24	-15.56
ProShares UltraPro Short S&P500	SPXU	0.93	637.8	**1.59**	-45.57	-46.70
ProShares UltraShort S&P500	SDS	0.91	756.3	**1.37**	-29.40	-31.72
Direxion Daily S&P 500 Bear 1X	SPDN	0.50	138.4	**0.92**	-12.88	-
ProShares Short S&P500	SH	0.90	1,939.7	**0.72**	-13.35	-15.72
ProShares Short QQQ	PSQ	0.95	550.8	**-0.76**	-23.41	-23.39
ProShares UltraShort QQQ	QID	0.95	250.1	**-1.80**	-45.71	-44.22
ProShares UltraPro Short QQQ	SQQQ	0.95	1,520.0	**-3.10**	-64.20	-61.37
Direxion Daily CSI 300 China A Share Bear 1X	CHAD	0.85	258.1	**-4.04**	-14.61	-18.81
ProShares Short Russell2000	RWM	0.95	279.2	**-5.07**	-15.65	-18.18
ProShares Short VIX Short-Term Futures	SVXY	1.38	366.1	**-13.10**	-57.60	-14.38
Direxion Daily Small Cap Bear 3X	TZA	1.07	418.0	**-15.58**	-52.85	-53.85
Direxion Daily S&P Biotech Bear 3X	LABD	1.06	130.3	**-24.77**	-69.07	-73.29

THE LAST WORD

EVOLVING INDEX LANDSCAPE

Technology and ETFs have transformed indexes

BY HEATHER BELL
Editor

Fresh out of college, I landed in the index world in 1998 with an editorial assistant job at Dow Jones Indexes. On my first day, I was informed that it was quite difficult to make money providing indexes unless you were S&P or MSCI.

While there were a handful of ETFs available at the time, index investing was still looked at sideways by most of the investment world. It's doubtful Wall Street pundits fully realized the scope of the investing revolution that was coming at them.

I left the index and ETF space for a few years in the early 2000s to take an editorial role with Lehman Brothers. I returned to the index industry via ETF.com's precursor, IndexUniverse, about a year before the Great Financial Crisis. To say the least, I found myself in a very different world.

ETFs then numbered in the hundreds; index-based investing was rapidly amassing credibility; and John Bogle was no longer viewed as a fringe agitator, but a living, breathing prophet. The ETF buzz was akin to the sound of bitcoin today.

Not too long after officially joining IndexUniverse, I witnessed the launch of the first-ever active ETFs. It's been a wildly evolving ride ever since.

Inextricably Linked

Make no mistake: ETFs are why the indexing industry is now thriving. In 20 years, we've gone from benchmarks covering broad core asset classes, to indexes covering thematic niches of the equity markets and incorporating artificial intelligence into their methodologies.

Technology has been a key driver. Cheaper storage and faster computers have also played huge roles in the proliferation of indexes. With the lower costs and the better tech, it's simpler than it's ever been to create and maintain an index at the rapid speeds required.

But that doesn't mean the field is wide open to all comers. Indexes are also far more complex than they've ever been, and expertise is more important than ever.

Despite the exponential increase in choices in the ETF industry, and growing innovation in the active space, the lion's share of assets has predominantly flowed not into the shiny new products, but the tested, the plain vanilla and the most basic. All of the top 10 ETFs for inflows in 2020 were plain vanilla products and pulled in a combined $173 billion.

Changing Trend?

Maybe that overall trend is changing, as we see the rapid rise of actively managed ETFs like ARK Investment's asset magnets, but for the first nearly 30 years of ETFs' existence, it was the most boring index-based funds that saw the greatest investor dollars.

Even today, there are only four actively managed ETFs among the top 100 ETFs by assets. Two of them are issued by ARK, the $13 billion **ARK Genomic Revolution ETF (ARKG)** and the $28 billion **ARK Innovation ETF (ARKK)**.

And as for the passively managed ETFs in the top 100, almost all are cap-weighted, with the exception of the **Invesco S&P 500 Equal Weight ETF (RSP)** and the **Invesco QQQ Trust (QQQ)**, which uses modified cap weighting.

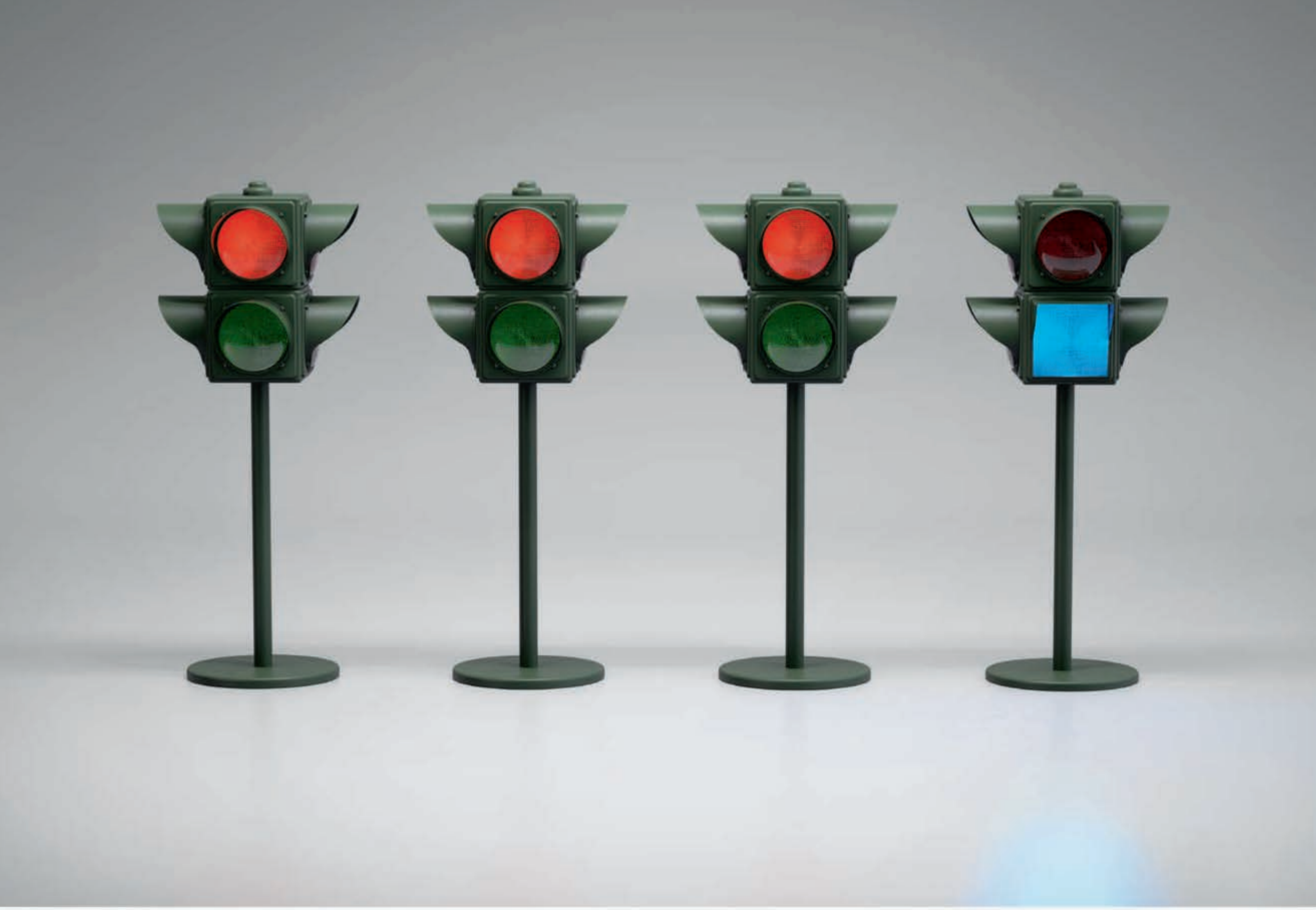
No matter how well the ARK funds or any of the new active players do in the near future, it's going to be tough to move the needle. Plain vanilla index strategies in the ETF space aren't going anywhere, even if they might lose a little ground to active management or more complex benchmarks.

Add to that the new investment spaces emerging in the ETF universe all the time—SPACs are the latest example—and the demand for new indexes is going to be steady.

Just look at what's happening with ARK's strategies. The ETF issuer's embrace of (and success around) disruptive technology has been followed by any number of index strategies aimed at trying to capture the same space and similar performance success. Active can beget more indexing, not eliminate it.

The index revolution doesn't look like it's ending anytime soon.

Heather Bell is editor of ETF Report. She can be reached at hbell@etf.com.



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