2018 EXCHANGE-TRADED FUNDS GUIDE

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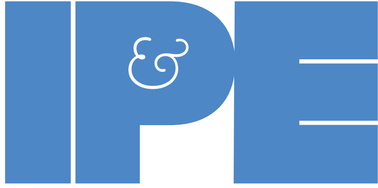

2018 EXCHANGE-TRADED FUNDS GUIDE

Competition and innovation

Consolidation has been a hallmark of the ETF sector in recent years as the market continues its growth trajectory, with global assets exceeding $5.7trn (€4.9trn) and 46 consecutive months of net inflows in Europe as of July this year. European assets are soon set to exceed the $1trn mark, according to ETFGI.

Can investors rely on established and emerging big players to keep costs down and to continue innovation? On the positive side of the equation, some 66 providers are active in Europe alone at present.

Yet the top three European providers – iShares, Xtrackers and Lyxor – account for over 60% of European ETF and ETP assets. While iShares alone has market share of almost 44%, there is a long tail of small providers outside the top three, all with a market share of 7% or less.

And 70% of the assets are concentrated in less than 10% of European listed ETFs and ETPs, with 8.7% (202 of 2,320 listed funds) holding more than $1bn in assets, according to ETFGI.

To stay competitive and relevant, ETF and ETP providers must show they can continue to offer value for money as well as innovate. This may not be so easy as market cost pressures increase and margins diminish in asset management overall.

As many institutional investors embrace equity strategies with pure index, systematic and factor exposure components, with active management strategies under ever more scrutiny, ETF providers have something to offer. And as QE comes to an end and interest rates shift, active fixed income strategies could prove to be an interesting area of competition and innovation.

Liam Kennedy, Editorial Director, Investment & Pensions Europe

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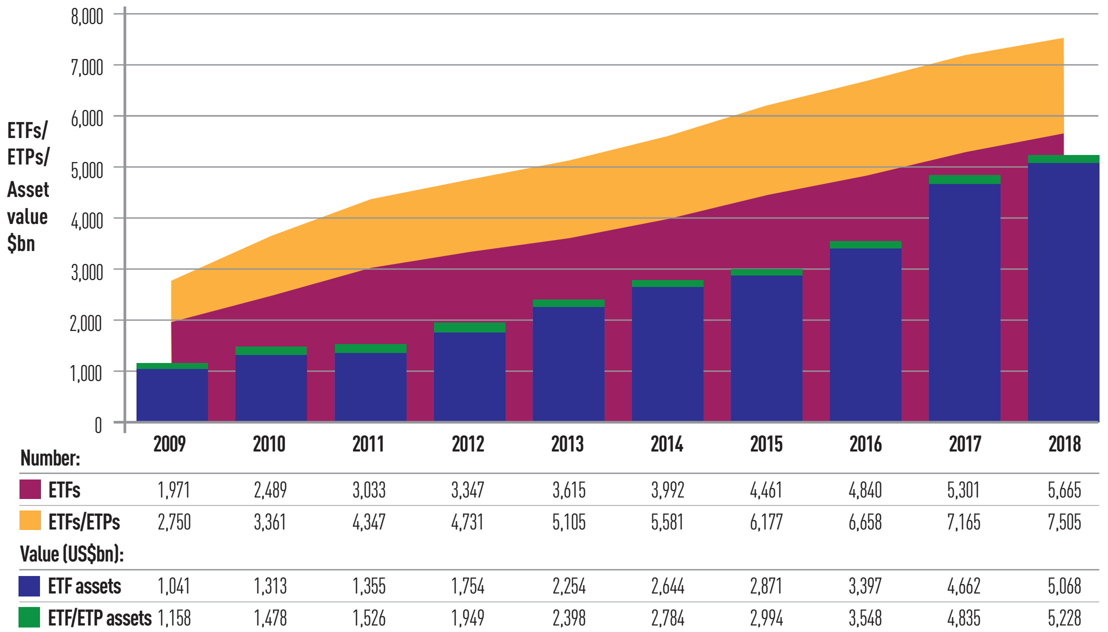
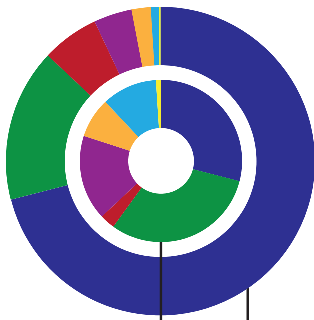
Global ETF and ETP asset growth as at end of August 2018



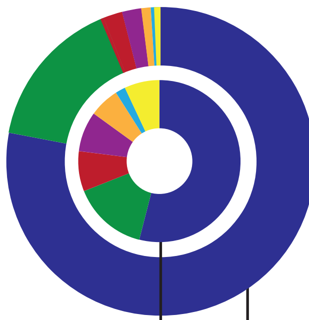
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number:										
ETFs	1,971	2,489	3,033	3,347	3,615	3,992	4,461	4,840	5,301	5,665
ETFs/ETPs	2,750	3,361	4,347	4,731	5,105	5,581	6,177	6,658	7,165	7,505
Value (US$bn):										
ETF assets	1,041	1,313	1,355	1,754	2,254	2,644	2,871	3,397	4,662	5,068
ETF/ETP assets	1,158	1,478	1,526	1,949	2,398	2,784	2,994	3,548	4,835	5,228

By region listed



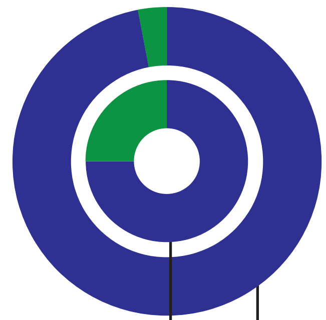
Region	ETFs/ETPs	Assets $bn	Total %
US	2,173	$3,709	70.9%
Europe	2,324	$835.2	16%
Japan	213	$320.7	6.1%
Asia Pacific (ex-Japan)	1,294	$185.8	3.6%
Canada	624	$131.3	2.5%
Middle East and Africa	830	$37.4	0.7%
Latin America	47	$9	0.2%
Total	**7,505**	**$5,228.4**	**100%**

By asset class



Asset class	ETFs/ETPs	Assets $bn	Total %
Equity	4,059	$4,061.5	77.7%
Fixed Income	1,121	$838	16%
Commodities	574	$124.9	2.4%
Active	579	$104.4	2%
Leveraged	462	$53	1%
Leveraged Inverse	205	$13.9	0.3%
Others	505	$32.7	0.6%
Total	**7,505**	**$5,228.4**	**100%**

By product structure



Structure	ETFs/ETPs	Assets $ bn	Total %
ETF	5,665	$5,068.2	96.9%
ETP	1,840	$160.2	3.1%
Total	**7,505**	**$5,228.4**	**100%**

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources and data generated in-house

ETFs/ETPs listed by region/country: Global

North America

	ETFs/ETPs	Assets $m
Canada	624	131,283
US	2,173	3,708,968
Total	**2,797**	**3,840,251**

Asia Pacific

	ETFs/ETPs	Assets $m
Australia	155	32,548
China	161	45,713
Hong Kong	117	37,137
India	70	7,517
Indonesia	11	362
Japan	213	320,682
Kazakhstan	-	-
Malaysia	9	464
New Zealand	23	1,844
Philippines	1	30
Singapore	16	3,389
South Korea	586	39,496
Taiwan	127	16,975
Thailand	16	180
Vietnam	2	192
Total	**1,507**	**506,53**

Europe

	ETFs/ETPs	Assets $m
Austria	2	114
Belgium	1	41
Bulgaria	11	19
Finland	1	319
France	347	122,355
Germany	676	220,839
Greece	1	15
Hungary	1	6
Iceland	1	-
Ireland	1	21
Italy	168	13,881
Netherlands	30	3,941
Norway	4	531
Poland	1	42
Portugal	2	64
Romania	1	1
Russia	11	165
Spain	6	1,532
Sweden	15	3,831
Switzerland	276	116,793
Turkey	9	65
UK	759	350,639
Total	**2,324**	**835,213**

Middle East & Africa

	ETFs/ETPs	Assets $m
Botswana	-	-
Egypt	1	4
Ghana	-	-
Iran	25	610
Israel	693	29,834
Kenya	-	-
Mauritius	3	-
Namibia	-	-
Nigeria	8	7
Qatar	2	186
Saudi Arabia	3	14
South Africa	94	6,759
UAE	1	2
Total	**830**	**37,416**

South America

	ETFs/ETPs	Assets $m
Brazil	15	2,265
Chile	1	231
Colombia	4	1,814
Mexico	27	4,668
Peru	-	-
Total	**47**	**8,978**

Source: ETFGI, Bloomberg, ETF/ETP providers, Bank of Israel, WIND, Tehran Stock Exchange. The data for Iran is as at the end of May 2017.

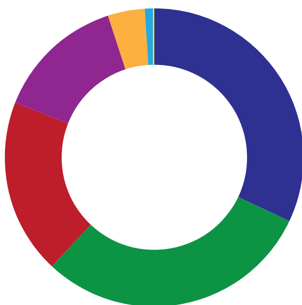
Total expense ratios of the top 20 ETF/ETP providers by assets

Provider	ETFs/ETPs	Listings	Assets - Aug 2018 $m	asset weighted TER (bps) Overall	Equity	Fixed income	Commodity
iShares	836	2,536	1,879,269	24	24	21	34
Vanguard	167	350	997,734	8	8	7	-
SPDR ETFs	256	682	692,725	18	15	26	40
Invesco	385	698	232,952	35	30	46	56
Nomura AM	84	88	144,595	28	26	45	53
Schwab ETFs	22	22	124,584	8	9	5	-
Xtrackers	269	962	104,462	29	28	21	39
Lyxor AM	234	853	77,599	28	30	18	35
First Trust	168	259	74,133	67	64	97	-
Nikko AM	28	29	65,332	16	16	27	-
Daiwa	39	39	62,816	15	14	-	-
WisdomTree	536	1,313	59,393	-	-	-	-
UBS ETFs	122	684	56,192	26	26	22	30
Amundi ETF	121	520	49,667	23	24	18	-
BMO AM	111	130	41,407	33	28	28	-
Van Eck	91	214	37,727	50	57	36	-
ProShares	136	164	31,457	82	39	34	-
Mitsubishi UFJ	16	16	27,189	14	14	-	-
Mirae Asset ETFs	263	275	20,833	40	30	18	69
HSBC/Hang Seng	35	138	18,512	29	29	21	326

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources

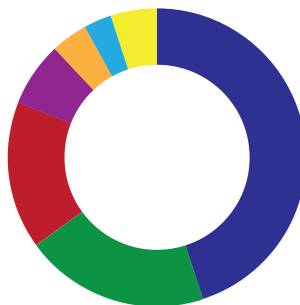
2018 ETF/ETP product launches

By region listed



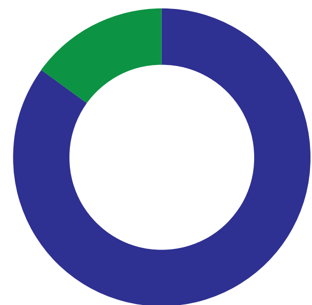
Region	ETFs/ETPs	Total %
US	180	32.3%
Asia Pacific (ex-Japan)	167	30.0%
Europe	104	18.7%
Canada	79	14.2%
Middle East & Africa	20	3.6%
Japan	6	1.1%
Latin America	1	0.2%
Total	**557**	**100%**

By asset class



Asset class	ETFs/ETPs	Total %
Equity	251	45.1%
Active	113	20.3%
Fixed income	93	16.7%
Mixed	36	6.5%
Commodities	21	3.8%
Leveraged	16	2.9%
Others	27	4.8%
Total	**557**	**100%**

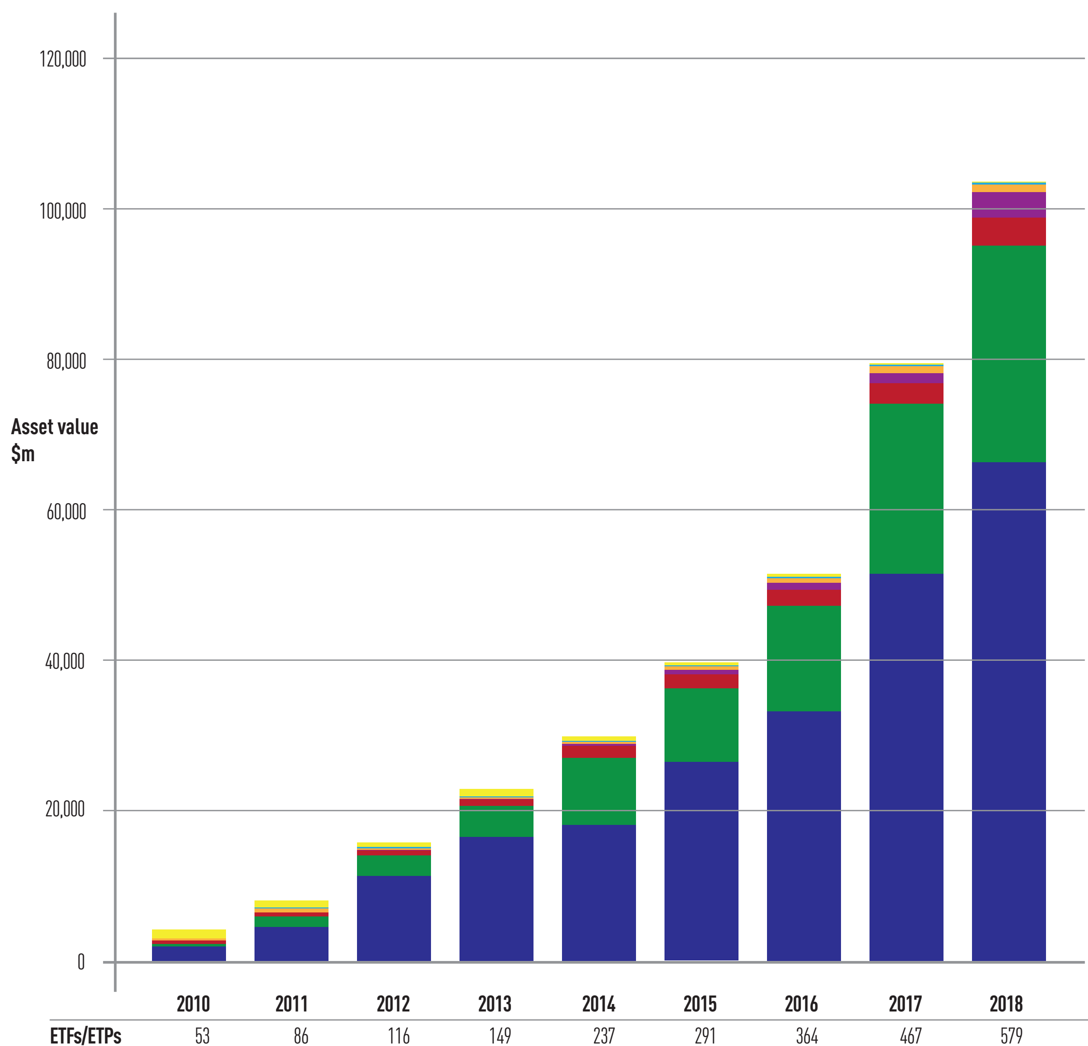
By product structure



Structure	ETFs/ETPs	Total %
ETF	474	85.1%
ETP	83	14.9%
Total	**557**	**100%**

Source: ETFGI, Bloomberg, ETF/ETP providers

Actively managed ETF and ETP asset growth: By asset class



	2010	2011	2012	2013	2014	2015	2016	2017	2018
ETFs/ETPs	53	86	116	149	237	291	364	467	579
ETF/ETP Asset value $m									
Fixed income	1,898	4,499	11,370	16,595	18,188	26,618	33,427	51,852	66,810
Equity	322	1,383	2,722	4,100	8,945	9,900	14,133	22,757	29,029
Commodities	445	561	673	935	1,656	1,819	2,142	2,760	3,701
Mixed	0	7	89	59	237	627	919	1,378	3,433
Alternative	331	515	163	190	278	463	646	914	1,061
Inverse	0	154	219	131	145	148	186	201	207
Currency	1,141	950	611	1,000	614	368	345	241	188
Total	**4,137**	**7,915**	**15,628**	**22,879**	**29,917**	**39,794**	**51,613**	**79,903**	**104,447**

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources

Tools in tune with the zeitgeist

HUGO GREENHALGH

2018 marks the year that exchange-traded funds (ETFs) dedicated to tracking environmental, social and governance (ESG) issues truly became mainstream.

As the overall global ETF industry grew to $5.7trn (€4.9trn) at the end of August, according to ETFGI, the independent research and consultancy firm, investor focus has increasingly been on those funds that tap into the investment world's current zeitgeist.

Nearly 80 ETF ESG funds have been launched so far this year, as Rachael Revesz reveals in her deep dive into the sector for this year's report. As she uncovers, ESG funds in this area now account for almost a fifth of all assets across the ETF industry.

Interest is growing, and fast. Several reasons are at work here, not least the fact that a younger generation of investors is keen to put its money to work for social good as well as high returns. Debates about ESG may continue, but the larger investment houses are moving in response to increased – and sustained – demand.

So far this year, inflows into ESG – and the ETF sector as a whole – are not as strong as they were in the corresponding months of 2017, perhaps indicating investor nervousness over more macroeconomic indicators such as Brexit, the worsening trade dispute between China and the US and increasing uncertainty over the short-term future of President Donald Trump.

VOLATILITY ALERT

"It seems likely that investors will experience more volatile global markets in the near future," says Danny Dolan, managing director at China Post Global, the Hong Kong-headquartered investment company.

Perhaps unsurprisingly as they serve as a leveraged play on the more developed indices, the emerging markets took the brunt of investor disaffection.

"Emerging market equity ETFs saw steady inflows since the beginning of the year until the end of April, with investors mainly using global emerging market indices followed by Asian emerging market indices, but from May through to July, emerging market equities recorded outflows, peaking in June," says Keshava Shastry, head of ETP capital markets at DWS.

"In terms of performance, emerging market equities started the year with a small positive return in Q1 followed by a sharp fall in Q2. This was mainly driven by a lot of headwind coming from US dollar strength and escalated global trade tensions."

Yet despite the return of investor nerves, the overwhelming amount of assets remain committed to equity investing, ETFGI figures reveal. At the end of August, of the overall $5.7trn, $4.1trn was in equities compared with $838bn in fixed income and a relatively modest $125bn in commodities. The ETF industry now represents approximately 15% of the assets invested across all mutual funds, according to Morningstar data.

China Post Global's Dolan suggests investors seeking to

hedge turbulent markets should plump for smart beta, which combines both active and passive management strategies.

"For passive investors, taking a selective approach to stock screening, such as smart beta, rather than embracing the market as a whole, can help mitigate the effects of this volatility," he says. "In this environment, the right smart beta approach can create value for investors."

LOOKING TO OBJECTIVES

Smart beta has become common currency in recent years, particularly for larger institutional investors. But even this is evolving, adds Caroline Baron, head of ETF sales EMEA at Franklin Templeton.

"The world of investing is no longer about active or passive, nor is it about smart beta versus market-cap," she says. "It is about portfolio construction and ultimate objectives.

"Within smart beta, we've seen some evolution with the emergence of multi-factor solutions designed to serve a specific objective (either risk reduction, return enhancement or diversification) and also addressing the challenge of 'factor selection'."

In essence this is leading to a greater understanding of how ETFs can work as part of an active portfolio, rather than using them in their more traditional sense as passive vehicles that track markets, indices or other more esoteric areas.

"An active ETF exhibits the features of a traditional ETF like transparency, low cost and flexibility," explains Baron. "Instead of following an index though, these ETFs are aiming to beat the benchmark. They are 'benchmark aware', which means that they use the underlying from a certain universe but the ultimate objective is to beat the performance of that universe."

This view is widely held across the industry, which is devising increasingly sophisticated products around what used to be seen as a practical, vanilla core holding.

"ETFs represent the next leg of the global indexing revolution," says Jim Norris, managing director of Vanguard's international operations. "They are truly disruptive vehicles, simply because they are so democratic. Investors can access them at any time, on a whole range of exchanges and, as a result, we're already hearing investors, across a number of different markets, asking for portfolios to be built using ETFs. If you haven't heard that conversation already, you will soon."

After BlackRock, Vanguard is the second-largest ETF player in terms of assets under management. Norris sees the low-cost flexibility of ETFs as offering a solution for the asset management industry in these times of increasing pressures on margins.

"Throughout the international markets that Vanguard operates in, we're seeing wealth managers and discretionary portfolio managers increasingly use ETFs as flexible, low-cost building blocks that help them to deliver high-quality products whilst maintaining their margins," he says.

"We expect margins to come under increasing pressure in the years to come, so ETFs are likely to continue to play an important role in this respect."

TECHNOLOGY SHAPES FUTURE

Looking forward to next year's guide and beyond, innovation seems to be the watchword. ETFs – whether ESG or those tracking whisky futures – are firmly ensconced in the mainstream. What will ultimately determine the future is technology, Vanguard's Norris believes.

"Technology will provide the transparency that investors deserve," he says. "It's easy for a fintech start-up to build a technology-driven asset allocation model and to implement that model using low-cost ETFs. They can then distribute it online with low overheads. These suppliers can help bridge the advice gap for lower-income investors, but they're not just for beginners: wealth investors are using them too."

ETF products and the current market

ELIZABETH PFEUTI

As the present elongated bull run is beginning to make some market participants nervous, investors may do well to assess which products on the ETF market could help them navigate changes in market conditions.

Exchange-traded funds have instantaneous valuation.

This transparency, although potentially hair-raising in times of erratic market movements, is no reason to disregard ETFs, according to those working in the sector.

For Bryon Lake, head of international ETF at JP Morgan Asset Management, investors should consider any critique of it using all the evidence.

"The wrapper has had two major stress tests since it was introduced in 1993," he says. "In the early and late 2000s, underlying securities fell and so did ETFs. But it was nothing to do with the wrapper. These funds gave an accurate representation of what they were meant to track."

For Antoine Lesne, head of investment strategy at State Street's SPDR, the wrapper has withstood further tests – the 2011 euro-zone crisis, the 2013 taper tantrum and its reprise two years later.

"When investors are looking at how to weatherproof their portfolio, it is not the ETF wrapper they need to look at," he says. "It is their asset allocation."

Concerns over illiquidity have also subsided since the last major downturn.

A report from DWS's Xtrackers found that ETFs tracking less liquid market segments, such as high-yield bond markets, actually helped enhance market liquidity, as they created a two-tier trading system by operating like a secondary market. Even international regulators have relaxed their tone in recent years.

Eric Wiegand, ETF strategist at Xtrackers, says that, compared with trading a basket of fixed income instruments separately, buying and selling an ETF is much quicker for investors wanting to get in or out of the asset class.

"Fixed income markets limit who can trade," says Weigand. "They are very fragmented and it can be hard to find a buyer who wants a security with the exact credit and duration profile at short notice. It is much easier to trade an ETF."

HORSE FOR THE COURSE

This ease of trading makes an ETF an ideal vehicle to manage a market downturn, according to those in the sector. With a huge range of products now on offer, investors will not be stuck for options.

Across all exchange-traded products, global assets under management have exploded from $813bn at the end of 2007 to $5.1trn, according to data from ETFGI. The number of products has also increased almost fivefold to 7,282 listed on exchanges around the world If you can invest in a security through a mutual fund, it is pretty certain there will be an ETF to match.

Wiegand says options for

investors rang from physical gold to quality stocks that pay a reasonable dividend. Xtrackers recently launched a fund that looks at a company's business model, rather than just its level of pay out to shareholders, to ensure they are not being compensated for taking a risk by backing them. "There would still be drawdowns," he says. "But these are defensive equities."

There are yet more alternatives. Many providers have launched smart beta ETFs in the past few years, to take advantage of growing investor sophistication and understanding of factors. By the end of July, some $659bn was invested in these products, according to ETFGI.

Anthony Kruger, a smart beta specialist for iShares in Europe, Middle East and Africa, says: "Taking a factor lens to a portfolio means investors can go down another level. They can build defensive and resilient portfolios."

Factor-based strategies allow investors to drill down to the risks that push or pull a security through the market.

"A whole portfolio analysis will allow you to see where you might have correlation across all strategies," adds Kruger.

Independent provider WisdomTree runs a range of multi-factor ETFs. For Chris Gannatti, head of research, using smart beta strategies through ETFs is an efficient way of investing in a downturn.

"An ETF vehicle is lower in cost than an active, mutual fund," he says. "It is also entirely transparent, so you can see what you are invested in each day."

Additionally, unlike human asset allocators – even those operating algorithm-based systems – factor-based ETFs are not swayed by emotion and rebalance automatically, according to their schedule.

SMOOTHING THE BUMPS

One of the factors that has performed well in previous downturns is low volatility, according to Lesne. As the term suggests, the strategy chooses securities relatively insulated from the erratic moves of the market to give a smoother return.

Lesne's analysis shows that in the 18 years to the end of April 2018, low volatility ETFs outperformed straight S&P 500-tracking vehicles on a cumulative basis. "The strategy will not protect you completely," says Lesne. "But it is likely to have lower drawdowns, allowing you to get back in to a healthy position more quickly." Since 2011, this factor has seen $45bn flow into its ETFs across the board.

Howie Li, head of ETFs at Legal & General Investment Management, notes investors have begun considering commodities as an option that is lowly correlated to other asset classes.

He says investors have been asking over the past year how commodities ETFs, usually constructed using futures based on underlying securities, were constructed and performing.

For those wanting to derisk almost completely, providers have developed a range of funds that hold safe haven government bonds and short-dated debt.

As part of its recently launched ETF proposition, JP Morgan Asset Management has the Ultra Short Suite of money market funds.

"A lot of clients are reaching their threshold for cash," says Lake. "These funds are an intelligent way to invest it."

Xtrackers also offers funds based on the Eonia overnight bank lending rate. These ETFs hold physical government bonds but have swap overlays – made with a range of large banks – to provide additional yield.

At the other end of the scale, investors who fear the worst can use ETFs to hedge their existing holdings or even short indexes they think are going to fall.

Brett Pybus, who leads the investment and product strategy team at BlackRock iShares in Emea, says the vehicles can play a role in taking this stance.

"Investors can use ETFs to short, they can use options or pair ETFs with derivatives – for example hedging out interest risk of a credit portfolio," says Pybus. "The market has evolved significantly, relative to five years ago, and investors are more comfortable using and constructing bespoke solutions."

Li at LGIM says investors wanting to use ETFs as a tactical tool should carry out a full investigation of how they work.

"They are very specialist tools," he says.

M&A activity in European ETFs

GAIL MOSS

The European ETF industry is still relatively youthful compared with its US counterpart, but already there have been significant mergers and acquisitions.

In the past 18 months, WisdomTree has taken over ETF Securities' European arm, Invesco has snapped up Source – as well as Guggenheim Partners' smart beta range – and Legal & General Investment Management (LGIM) has acquired Canvas.

The rush to combine with other providers suggests that the sector will become dominated by a small number of very large players.

So what is driving the move towards consolidation – and does it mean the end of new entrants?

The consensus seems to be that the market is very much open to new providers.

Howie Li, head of ETFs at LGIM, says: "There will be new entrants even if there are a reducing number of established independent ETF firms available for acquisitions. As our industry evolves, asset managers with traditional mutual fund structures are likely to need to build ETF expertise organically, rather than through mergers and acquisitions."

And he adds that while scale is important, there are opportunities for smaller providers in more focused investment areas.

Fannie Wurtz, managing director at Amundi ETF, indexing & smart beta, says: "The European ETF market is very dynamic and benefits from a steady pace of growth and increasing demand. Strong drivers, such as new regulations, new distribution channels, a challenging macroeconomic environment, and a 'retailisation' of the space also support the expansion of the ETF market in Europe. This ends up attracting new entrants, with consolidation moves from players aiming to achieve economies of scale."

Nick King, head of ETFs, Fidelity International, says that regulatory change – which is driving a focus on cost and transparency – is favouring disintermediated distribution channels.

"In this context, the ETF wrapper is an extremely convenient and efficient vehicle for delivering investment capabilities and I would expect more managers to take advantage of this," he says. "There are a number of developments which could support the creation of efficient active ETF structures, and I believe that this could be a driver for some new entrants."

OPENINGS FOR INNOVATORS

Other managers see potential for new providers if they offer innovation.

Frank Spiteri, head of European distribution, WisdomTree, says: "Consolidation may very well mean the end for new entrants launching vanilla beta products, but there is still room for new entrants launching differentiated strategies. That may be in

alternative asset classes, or it could be smart beta or active investment strategies using the ETF vehicle."

He believes the plain vanilla beta market is saturated.

"Will we see a new provider come to the market with a plain vanilla offering and compete with the current behemoth funds?" he asks. "No, we highly doubt that. Their competition is too big, too well-established and very low cost. There's no way a new entrant could compete here or make a viable business in this space."

But he says that launches targeted at a particular market or market segment, challenging the big funds with a viable alternative, could see a new competitor emerge.

"Even then those funds need to be sold; they won't be bought off-the-shelf like the larger plain vanilla funds that have the scale," he cautions. "It will therefore be difficult to get to double-digit billions in those products. Distribution is key for this type of approach."

He sees potential for success where new entrants deliver thematic funds: "We've seen particular themes like robotics and cyber security attract billions in investment."

"Investors are welcoming of new entrants to increase competition and broaden the variety of exposures available," agrees Christine Cantrell, UK sales director for ETFs at BMO Global Asset Management.

Cantrell says the company is still the only provider to offer global corporate bonds segmented into multiple maturity bands – to help clients manage duration – and the first provider in Europe to offer covered call strategies in a UCITS ETF.

"Scale is important however," she acknowledges, "And since ETFs are typically managed in a passive or systematic approach, the economies of scale can be harnessed and leveraged through a global ETF business. Processes can be shared across the Atlantic and the magnitude of assets managed in ETFs globally facilitate strong relationships."

Views vary as to whether MiFID II has had an impact on consolidation within the ETF sector.

Spiteri says: "MiFID certainly provides a regulatory framework that should favour an increasing use of exchange-traded products, but more than anything else it is because the narrative has moved on from active versus passive."

He continues: "Most investors are now considering how to implement various investment strategies – beta, smart beta and active strategies – and asset managers are reacting to that. They recognise that their investment propositions need to evolve to meet client demand, and ETFs are a big part of this changing landscape."

NOT A MAGIC FORMULA

But he adds that the ETF wrapper should only be considered when this gives a clear advantage to being exchange-traded, providing intra day liquidity: "The vehicle isn't a magic formula in itself."

Li says that MiFID is not a particular factor behind consolidation – rather it is the increasing realisation that ETFs are flexible structures that can be used to create products across different investment capabilities.

> "Scale is important ... And since ETFs are typically managed in a passive or systematic approach, the economies of scale can be harnessed and leveraged through a global ETF business"
>
> **Christine Cantrell**

"They represent an evolution of the traditional mutual fund model, especially as our industry prepares for increased digitalisation," he says. "They are mutual funds with extra features such as real time price transparency, and that fits well with the digital model."

Cantrell says: "I believe consolidation is mainly due to greater adoption and acceptance of ETFs as mainstream investment vehicles by wealth managers, and more recently, retail investors and pension funds. It is clear that the most popular multi-asset strategies in recent years are those that have promised to keep costs low, whether that's achieved using a blend of active and passive strategies, or exclusively ETFs."

But will consolidation bring about a slimming of the medium-sized ETF provider market?

Some observers see it already taking place, with a sizeable gap between the largest ETF players and smaller ones.

And Spiteri sees the trend continuing.

"What is clear is that across the asset management space there is demand for ETF

capability, whether that's product development or distribution," he says. "This demand won't be going away any time soon, therefore acquisitions are likely to continue where possible."

But, having worked closely on the sale of ETF Securities to multiple asset managers, he says: "It is clear that acquiring an ETF business and slotting it into your current business model isn't straightforward. And there are not many acquisition targets left."

Meanwhile, the 2008 financial crisis has prompted moves towards consolidation within the index market.

"We have seen a number of banks, many in Europe, exiting the business of administering their own proprietary indexes," says Richard Redding, CEO of the US-based Index Industry Association, the lobby group for index providers. "After the financial crisis and the subsequent European regulations, these banks questioned if being in the index provision business was a core function and use of capital."

He says the ETF distribution channel is very compelling for many asset managers who rely on their own proprietary investment approach. As they need to put those processes into rules-based approaches, some have self-indexed.

> "What is clear is that across the asset management space there is demand for ETF capability, whether that's product development or distribution. This demand won't be going away any time soon"
>
> **Frank Spiteri**

"However, as asset managers start to realise the full impact of the European Benchmarks Regulation, many self-indexers may find it complicated and expensive to comply," he says. "The self-indexers are likely to partner with index providers who have the operational and compliance infrastructure in place."

THE FEES DEBATE

Meanwhile, in the wider ETF sector, the effect on fees resulting from the drive towards more mega-sized players is a subject of keen debate.

Greater size should in theory bring about economies of scale; conversely, less competition between providers could mean less pressure on fees.

But the majority opinion is that consolidation does not have to be bad news for the investor.

"More competition can certainly create pressure on fees but it is also driving new entrants to find ways to differentiate, ensuring that the industry evolves and offering greater choice to investors," says King.

Spiteri agrees on the importance of differentiation.

"Cost is only an issue in the absence of value," he observes. "If your fund is different and delivers performance, it's easier to justify a higher fee."

By contrast, he says, when a product is the same as everyone else's, the only way the provider can really differentiate is through size and cost: "We've seen examples lately where providers have been unable to compete with the large established plain vanilla funds, and have drastically cut fees to low single digits in a bid to compete."

But he says competition has also entailed a compression in fees.

"Again, this is good for the investor," he says. "This fee compression isn't limited to passives. We are seeing fee compression across the active market as well, and active managers are being made to justify their fees in the context of fund performance. That is a good thing."

However, Cantrell is more cautious about the benefits of consolidation.

"Some mergers and acquisitions can be in the interests of investors, where small businesses can benefit from greater efficiencies and a wider audience familiar with the brand," she says. "But I'd argue that competition is ultimately in the best interests of the end investor."

She says that BMO Global Asset Management is very conscious of its ETF pricing strategy because it has been shown that net new assets in ETFs are skewed towards ETFs with comparatively low ongoing charges figures.

"While we provide unique strategies that have not been offered in ETF format until now, we ensure we are not only competitive within the ETF market, but also more broadly against mutual funds which have been the only way to access strategies such as those involving covered calls," she says.

And Caroline Baron, head of EMEA sales, Franklin Temple-

ton, cautions against an over-emphasis on costs.

She points out that the continuing low rate environment has highlighted the importance of fees, “but clients have to focus on what they are looking to achieve, as the cheapest solution is not always the one that meets their requirements and what works for one client may not work for the next”.

> “Clients have to focus on what they are looking to achieve, as the cheapest solution is not always the one that meets their requirements”
>
> **Caroline Baron**

For example, she says, one client may be looking for a long-term holding and wants to consider only a physical ETF with an Irish domicile; another may be looking for a short-term tactical trade and has the ability to invest in derivatives.

“Price will not be what these investors look for primarily – it will be in the mix at some stage, but will not lead the decision-making process,” says Baron. “That’s very important, as we’ve seen many sophisticated investors selecting only by price and ending up with the wrong product.”

And she considers new entrants to the market to be necessary to ensure that clients have choice: “Clients will also benefit from different thought processes and the ability to navigate between different providers, because having all your eggs in the same basket is never a good idea.”

Understanding the ETF landscape and flows in Europe

DEBORAH FUHR

ETFGI

A number of tailwinds have helped to fuel the growth in the ETF industry in Europe. It's hard to believe that April 2018 marked the 18th anniversary of the listing of the first ETF in Europe. Although ETFs are no longer a new product, their growth rate continues to be impressive. And we can see that tailwinds are likely to continue to fuel the growth in assets in ETFs/ETPs listed in Europe.

ETF ASSETS HIT NEW RECORDS WORLDWIDE

We are seeing continuing net inflows, the increased adoption of ETFs across the full spectrum of investors in Europe, and the advent of new issuers and new types of products. Other catalysts for growth in the ETF industry include regulatory changes, the relative performance and cost of alternative products, and a growing acceptance that ETFs are a solution that can be used by most institutions, financial advisers and retail investors.

In recent years the growth rate in ETFs has accelerated. In the three years to July 2018 the assets in ETFs/ETPs listed in Europe have increased by 64.2% to reach $828bn (€703bn)[1]; and during July alone the asset total increased by 2.1%. We are on target to meet ETFGI's 2018 forecast that European ETF/ETP assets will reach $1.32trn by 2025. The $4.6bn in net inflows to ETFs/ETPs in Europe in July marked 46 consecutive months of net inflows. Yet the $37bn in year-to-date net inflows was half the $74bn in net inflows recorded by end-July last year, and $12.2bn less than the $49.2bn average gathered year-to-date for the previous four years.

As at end-July 2018, the European ETF/ETP industry had 2,320 ETFs/ETPs, with 7,845 listings from 66 providers across 27 exchanges in 21 countries.

Institutional use of ETFs/ETPs has increased by 34% between 2010 and 2017. An analysis[2] by ETFGI found that 4,691 institutional investors in 53 countries and 7,075 mutual funds in 55 countries reported owning at least one ETF or ETP in 2017.

The five countries in 2017 with the largest number of institutions using ETFs and ETPs are the US, UK, Germany, Canada and Switzerland. In aggregate, institutions in these countries represent 81.2% of total global users.

EQUITIES REGAIN MOST FAVOURED STATUS

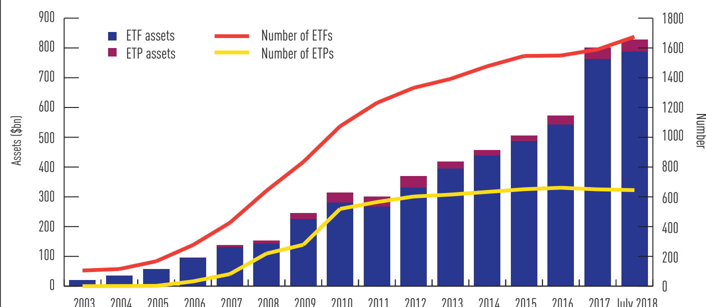
By asset class, year-to-date investment flows to European ETFs/ETPs as at the end of July 2018 have favoured equities, followed by fixed income and commodities.

Equity ETFs/ETPs gathered $2.3bn in net inflows in July, bringing year-to-date net inflows

1 These and all other statistics in this article come from ETFGI reports. For further details, please visit www.etfgi.com

2 Source: ETFGI Institutional users of ETFs and ETPs 2017 report, based on an analysis of the ThomsonReuters/Lipper database of regulatory filings from over 70 countries and mutual fund holdings.

1. Assets invested in European-domiciled ETFs/ETPs



Note: Exchange Traded Products (ETPs) are products that have similarities to ETFs in the way they trade and settle but they do not use a mutual fund structure. The use of other structures including grantor trusts, notes, and commodity pools by ETPs can create different tax and regulatory implications for investors when compared with ETFs which are funds.
Source: ETFGI, ETF/ETP Providers, Bloomberg.

to $24.7bn. Inflows to equity ETFs/ETPs in 2018 are almost half of the $43.6bn gathered by July during 2017.

Fixed income ETFs and ETPs gathered $2.7bn in net inflows in July, increasing year-to-date net inflows to $8.6bn. Fixed income ETF/ETP inflows have also slowed from the record levels seen in 2017, when net inflows at the same point of the year had reached $19.8bn.

Commodity ETFs/ETPs saw net outflows of $1.1bn in July. Year-to-date, net inflows are at $3.5bn, more than half the net inflows of $7.6bn gathered over the same period last year.

Overall, equity ETF/ETPs have a 68.1% market share in Europe, followed by a 21.9% market share for fixed income and 7.3% for commodities. Other ETF/ETP types, such as active and alternative ETFs, leveraged, inverse and leveraged inverse funds, have a collective market share of less than 3%.

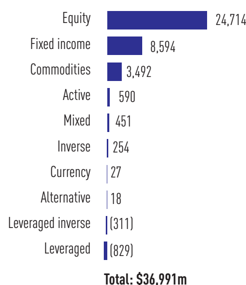
REGULATORY AND POLITICAL TRENDS

In Europe, the use of ETFs and ETPs by financial advisers and retail investors is still low compared with the US. Until recently, in many countries across Europe financial advisers were still paid to sell products. The introduction of the second Markets in Financial Instruments Directive (MiFID II) in January 2018 ended this distribution policy for independent advisers. This will be a benefit for ETFs as ETFs do not pay commissions to those distributing them.

In the UK, the Retail Distribution Review (RDR), which banned the payment of commission to independent financial advisers for selling products, was implemented in 2013. There has

2. European ETF/ETP 2018 net new assets by asset class

YTD ETF/ETP net new assets by asset class ($m)



Exposure	# ETFs/ ETPs	# listings	Assets ($m) Jul 18	% market share	ADV Jul 18	NNA ($m) Jul 18	NNA ($m) YTD 2018	NNA ($) YTD 2017	NNA ($m) 2017
Equity	1,095	4,540	563,638	68.1%	4,697	2,261	24,714	43,563	71,025
Fixed income	400	1,550	181,638	21.9%	1,307	2,741	8,584	19,803	25,004
Commodities	369	736	60,176	7.3%	279	(1,112)	3,492	7,600	8,414
Active	32	96	9,836	1.2%	120	558	590	1,338	1,993
Alternative	2	10	118	0.0%	1	15	18	(142)	(125)
Currency	70	135	315	0.0%	3	5	27	(43)	(3)
Mixed	16	32	1,219	0.1%	3	374	451	151	204
Leveraged	193	385	3,376	0.4%	154	(73)	(829)	109	(80)
Inverse	68	202	4,083	0.5%	105	(219)	254	678	845
Leveraged inverse	75	159	3,258	0.4%	108	46	(311)	933	1,000
Total	**2,320**	**7,845**	**827,658**	**100.0%**	**6,778**	**4,598**	**36,991**	**73,989**	**108,276**

Source: ETFGI data sourced from ETF/ETP sponsors, exchanges, regulatory filings, Thomson Reuters/Lipper, Bloomberg, publicly available sources and data generated in-house. Note: This report is based on the most recent data available at the time of publication. Asset and flow data may change slightly as additional data becomes available.

been an increase in the use of ETFs, but the increase has been slower than many expected as a result of many investment platforms not offering ETFs. Many platforms have justified this policy by arguing that there is insufficient demand for ETFs.

In fact, adding ETFs to most platforms requires a technology upgrade as platforms that have historically offered only mutual funds did not have nor need connectivity to trade. And platforms that have added ETFs typically do not include ETFs in comparisons when a search is done to compare products tracking an index. The UK's Financial Conduct Authority (FCA) is conducting a review of platforms, which should help to facilitate a more level playing field for ETFs in the future.

Robo-advisers in Europe account for a small amount of assets but, unlike platforms, most robo-advisers only use ETFs. The passing of significant wealth to millennials, which is expected to take place over the next 10–15 years, will be beneficial to robo-advisers. And assets invested through robo-advisers are expected to grow after MiFID II, as many retail investors do not understand the full costs of using financial advisers.

MiFID II provides more transparency around ETF trading, which will be helpful as many investors still have a relatively poor understanding of the trading and liquidity of ETFs. MIFID I did not make the reporting of ETF trades mandatory. About 70% of the trades in ETFs in Europe are done on an over-the-counter (OTC) basis. Many investors have embraced using request for quote (RFQ) platforms as an easy way to fulfil best execution requirements. The imminent arrival of Brexit has caused a number of global firms to put on hold plans they had to launch ETFs in Europe. There remains uncertainty on where it would be best to set up and the requirements that would allow products domiciled in Ireland or Luxembourg to be marketed, sold and listed in the UK, or for products domiciled in the UK to be marketed, sold and listed in Europe.

COMPETITIVE TRENDS

The competition within the ETF market continues to intensify as all providers try to find an edge to distribute and grow their assets. The providers of ETFs/ETPs have been competing by lowering fees, creating core product series with lower fees, pursuing distribution arrangements with robo-advisers, via partnerships and through acquisitions.

ETFs listed in Europe have an asset-weighted average expense ratio of 27 basis points (bps). The cheapest products track fixed income indices, at an average expense ratio of 25bps, while the most expensive are mixed ETFs at 51bps. There are 80 ETFs with an expense ratio below 10bps, while there are 34 ETFs with an expense ratio greater than 80bps.

The ETF market is heavily concentrated both in terms of fund size and fund providers.

As at end-July 2018, 202 of the 2,320 ETFs/ETPs listed in Europe had more than $1bn in assets and held a combined total of $577bn, or 70%, of total European ETF/ETP assets. In contrast, 1,221 ETFs/ETPs have less than $50m in assets. Products that have assets below $100m are generally deemed not to be breaking even.

iShares is the largest ETF/ETP provider in Europe, with $363bn in assets, representing a 43.8% market share. Xtrackers is second with $88bn in assets and a 10.7% market share, while Lyxor is third with $76bn in assets and a 9.2% market share. The top three ETF/ETP providers (out of 66) account for 63.7% of European ETF/ETP assets, while none of the remaining 63 providers have more than a 7% market share.

Gaining scale in individual ETFs and in their overall platform is one of the goals of issuers. In 2017 Invesco completed the acquisition of the Source ETF business, and combined it with the Invesco PowerShares offering in Europe. And a number of issuers of ETFs in the US have recently entered the European market: Fidelity, IndexIQ Advisors, Franklin Templeton and JP Morgan.

Overall, however, the rate of listing of new funds has slowed somewhat. There were 102 new ETFs/ETPs launched by 22 different providers through the end of July 2018. By contrast, there were 115, 112, 116, 120 and 93 launches over the same period in 2017, 2016, 2015, 2014 and 2013, respectively. The largest number of product launches over the course of a single year was 510 in 2010: then, there were 355 launches during the first seven months of the year.

Year-to-date through the end of July there have been 22 ETF/

ETP closures from six providers. In previous years there were 62, 83, 71, 40 and 52 closures over the same period in 2017, 2016, 2015, 2014 and 2013, respectively. The largest number of product closures over the course of a year was 151 in 2016, and the largest number of closures during the first seven months of the year was in 2016, with 832 closures.

There has been an increasing interest from investors for new ETFs/ETPs providing exposure to fixed income, smart beta, thematic and ESG strategies.

Smart beta is an area of significant focus for ETF providers and investors. In July 2018, smart beta equity ETFs/ETPs gathered net inflows of $6.3bn, marking 30 consecutive months of net inflows and $35.5bn in year-to-date net inflows, although markedly less than the $45.0bn in net inflows at this point in 2017.

Global smart beta equity ETF/ETP assets have increased by 8.7% from $606bn to $659bn so far in 2018, with a five-year compound annual growth rate of 33.0%, according to ETFGI's July 2018 global smart beta equity ETF and ETP industry insights report.

Of this total, smart beta ETFs/ETPs in the US had $581bn of assets, Europe had total smart beta ETF/ETP assets of $52bn, Canada $14bn and Asia Pacific (ex-Japan) $6.7bn. At the end of July 2018, there were 1,235 smart beta equity ETFs/ETPs, with 2,241 listings, from 148 providers on 40 exchanges in 32 countries.

Active ETF and ETPs, another area of interest for providers, account for 2% of the total assets invested in ETFs and ETPs. Assets invested in active ETFs and ETPs listed globally have increased 26.1% in the first seven months of the year to reach a new record of $96bn at the end of July 2018, according to ETFGI's July 2018 Active ETF and ETP industry insights report. Of this total, $62bn was represented by funds listed in the US, $20bn by ETFs/ETPs in Canada, $9.8bn in Europe and $4.2bn by funds listed in Asia Pacific (ex-Japan).

At the end of July 2018, the global active ETF and ETP industry had 524 ETFs/ETPs, with 640 listings, from 104 providers on 18 exchanges. So far, the active ETF/ETP market is heavily concentrated by asset class: 65.8% of the assets in active ETFs and ETPs are in fixed income products.

Finally, ETFs and ETPs providing exposure to indices with environmental, social, and governance (ESG) exclusions reached a record global high of $20.6bn at the end of July 2018. Assets invested in ESG ETFs/ETPs, increased by 22.6% year-to-date, from $16.8bn at the end of 2017.

ESG ETFs and ETPs represent a small fraction of exchange-traded products, with less than 0.5% of assets listed around the world. Yet that fraction is growing, as investors increasingly seek to account for the environmental, social and governance impacts of their investment decisions and to generate sustainable returns. From 2012 to 2017 the compound annual growth rate for ESG ETFs/ETPs was 39.5%, versus 19.9% for all ETFs/ETPs. The assets in ESG ETFs in Europe is larger than for ESG ETFs listed in the US.

Deborah Fuhr is managing partner at ETFGI

Transatlantic invasion

GAIL MOSS

The Americans are coming! But unlike the US cavalry providing an 11th-hour rescue in the last reel of an old-time Western, these Americans are moving in on what they hope will be a lucrative European ETF market.

Last year, Franklin Templeton launched a Europe-listed range of ETFs: Franklin LibertyShares UCITS ETFs now offer investors access to five actively managed smart beta equity ETFs and two active fixed income funds.

And this summer, Goldman Sachs and JPMorgan have joined the growing ranks of investment banks bolstering their European ETF teams with a series of senior hires.

But why is this transatlantic invasion happening just now?

"We believe that the ETF industry is far from being mature," says Caroline Baron, head of EMEA sales at Franklin Templeton. "This is still a young industry with many investors still not using these efficient, transparent and low-cost tools."

She adds: "Now is perfect timing for any business understanding the way clients manage assets – it is no longer about the merits of active versus passive, but more about solutions and being in the position to work with the client to offer a panel of strategies."

The US ETF industry may only be 25 years old, but its European counterpart, several years younger, has not yet closed the gap on its more mature neighbour.

According to ETFGI, the European ETF industry represents $828bn (€703bn)-worth of assets – around 17% – out of a global total of around $5.7trn.

"Europe is roughly five to 10 years behind the US," says Bryon Lake, head of international ETFs at JP Morgan Asset Management. "We've seen assets doubling over every rolling five-year period, and in each region, since the first ETF was launched in 1993. We feel strongly that European ETFs will double in the next five years to over $1.6trn and then possibly again to $3.2trn."

Bryon Lake, JP Morgan

Even so, the European ETF market has grown at almost 20% per annum for the past 10 years.

"This has generally been a period of exceptionally high beta returns which has been a key driver for the growth of passives which, in turn, has benefited ETFs," says Nick King, head of ETFs, Fidelity International.

And it is this growth which is attracting overseas managers.

King says: "These US managers have already had success launching ETFs in the US market

and are now looking to distribute these capabilities internationally. They are able to leverage relationships and infrastructure globally and UCITS ETFs present distribution opportunities into Europe and also into Asia."

King observes: "Both the European and Asian markets are less developed than the US market so many expect this is where the largest growth opportunities exist. However, this will not be without challenges, as both European and Asian markets are more complex than the US – with a number of exchanges, regulators, languages and cultures to navigate."

Adam Laird, head of ETF strategy at Lyxor ETF, adds: "We've seen a lot of rapid growth in the European ETF market, with records broken in the last few years. I think for many international asset managers that's very appealing."

And he considers that the regulatory environment in Europe is also becoming quite favourable for ETFs.

"Since the start of 2018, MiFID II has effectively banned kickbacks from expensive active funds to distributors, with low-cost ETFs primed to benefit," he says. "And that's causing a lot of businesses, and not just from the US, to re-examine the ETF market, scared that their dinner is being eaten from under their noses."

Structurally, however, there are clear differences between the European market and its counterpart across the Atlantic.

"The European ETF market is fragmented, with ETFs listed across multiple exchanges and with multiple settlement arenas," says Manooj Mistry, co-head of

Nick King, Fidelity International

index investing at DWS. "Furthermore, even though MiFID II is designed to establish a consolidated tape of centralised trade reporting, in practice this is still a work in progress."

STRUCTURAL ISSUES

In the US, by contrast, all trades settle in one place – the Depository Trust and Clearing Corporation – and there is an established consolidated tape.

Mistry says: "These structural issues are one reason why the European market remains largely dominated by institutional investors trading over-the-counter rather than on exchange, whereas in the US, liquidity has tended to concentrate on exchange. There are also differences in how ETFs are taxed in different countries across the EU."

Given that the European ETF market is always said to lag behind that of the US, what kind of product innovation can we expect to see in Europe?

Mistry says: "I would say that it is in terms of these structural issues, and how they impact investor uptake of ETFs, as opposed to product innovation, where the European market lags behind the US."

In terms of product innovation, however, Mistry expects to see more smart beta ETFs and more fixed income ETFs coming to market, in both the US and Europe.

He says: "One point worth noting is that new entrants are unlikely to come to market with products linked to mainstream indices, like the well-known equity indices, because this part of the market is already so developed and competitive. Instead, they will aim to exploit more niche areas like smart beta where they still see opportunities."

He adds: "Furthermore, some active managers are looking at the rise of passive investments and feel a need to respond, so they are launching active ETFs, or smart beta ETFs where the strategy is essentially a low-cost automated version of an active strategy. In this way, they hope to stop the bleeding of assets from their firms by offering low-cost passives."

Franklin Templeton's Baron says: "We've seen the development of smart beta in the last few years and we strongly believe that there is a lot of room for growth. There is still a lack of education around the role of factors in the portfolios and especially when it comes to multi-factor solutions, how they behave, what role they play, where to put them in the portfolio, and so on."

She says that with smart beta ETFs growing at a faster rate than the market-cap weighted ETFs (45% versus 24% for the tradi-

Manooj Mistry, DWS

tional ETF industry), and with more education and perhaps different market conditions, smart beta ETFs should gather even more assets.

She also suggests that an area which is still almost untouched is active ETFs.

Franklin Templeton launched its first two active fixed income ETFs in June this year and she says they have very well received so far.

"As investors better understand how market-cap weighted indices are built and also about some of the flaws they have, they look to alternative solutions while keeping all the attributes of the ETF wrapper: low cost, transparency, liquidity and simplicity," explains Baron. "Being active gives investors the ability to navigate the flaws of the traditional ETFs – especially on the fixed income side – and to build more robust portfolios."

And in an environment in which markets are becoming more volatile and uncertain, having someone at the helm of the ETF who is able to apply their experience and leverage the decades of research by the asset manager is an advantage that many investors would want to have, she says.

But in the US, the success and take-up of active ETFs is not new, says JPMorgan's Lake.

"This is mainly due to the maturity of the market and the broadening needs from clients who have adopted ETFs as investment tools on all types of strategies," he says. "We think the active ETF area of the European ETF market will grow significantly in the years to come. As with any investment innovation, it takes time to adopt."

He continues: "Generally speaking, we have observed that sophisticated investors across Europe are on the lookout for proven strategies that can provide diversification benefits in their portfolios. They also want to see innovation across a range of asset classes, although demand for greater innovation in fixed income is particularly noteworthy at present, whether that is for passive, smart beta and/or active capabilities."

However, Laird believes that Europe has developed its own culture of innovation to rival that of the US.

"Of course Europe is a smaller market than the US, and ETFs haven't had the same time to bed in," he acknowledges. "But I don't agree with the characterisation that we're European Luddites. We've been just as innovative. Fees levels are commensurate – we know that at Lyxor, since we launched the lowest cost range earlier this year, starting at 4 basis point fees."

Fidelity's King says he thinks product innovation will be similar both within and outside the US, and expects further development of factor-based products, as well as the development of active ETFs.

Adam Laird, Lyxor

GOING FOR RETAIL

But he warns that increased retail usage will be one key factor that will be required to continue the rapid growth rate of the European ETF industry.

Franklin Templeton's Baron agrees, pointing out that in Europe more than 80% of the clients using ETFs are institutional in nature, versus a 50% split in the US between retail and professional investors; this gives the European industry scope to grow, she maintains.

Meanwhile, according to Mistry, assets invested passively in Europe account for around 10% of overall mutual fund assets.

"But in the US it's more like 20%," he says. "And while growth in Europe has been exponential, there is still a long way to go. The fixed income market is taking off, but still has a lot of

development potential in terms of new products and in attracting assets. Factor investing is likely to become more mainstream, more retail investors are likely to start using ETFs, and more institutional investors as well."

And he suggests that the US invaders may not have things all their own way.

"Given that the European market is so different to the US, a provider that's already established there can't assume success in Europe simply by opening up shop here," Mistry says. "It takes a real understanding of the market and a lot of work at the grassroots level on the sales and distribution side."

Laird agrees that new entrants need to be aware that Europe has a different product culture from the US.

"With the exception of BlackRock, the big US providers haven't really taken off in Europe," he says. "Certainly the other big names across the Pond are not as dominant as Lyxor and Deutsche Bank. And that's because you need a local mindset to really get European investors."

He continues: "There's an obvious arrogance about the approach of some of the American players. Some of the new entrants have come along with expensive or overly-complex active strategies. Simply repackaging an old fashioned strategy won't make a hit. Europe is a different market."

Five myths about ETFs debunked

RACHAEL REVESZ

Over the years, exchange-traded funds (ETFs) have attracted their fair share of criticism from market participants, regulators and investors.

In 2000, when iShares launched its first two ETFs in Europe, commentators speculated that the infamous YK2 bug would bring down funds, and the rest of the world as we knew it.

The Millennium bug came to nothing, but fears remained about the stability of the ETF market. The 2010 flash crash in the US, which saw markets lose trillions of dollars in minutes thanks to rogue algorithmic trades, fuelled further concerns that ETFs could exacerbate a downturn. The following year multiple European regulators said synthetically backed ETFs were opaque and a "source of contagion and systemic risk", prompting many European issuers to re-align their product ranges.

In 2016, research and brokerage firm Sanford C Bernstein & Co declared that passive funds were "worse than Marxism" as they undermined the social value of active management and threatened to eradicate modern-day capitalism.

But ETFs continued to grow throughout the tech bubble of 2000, the financial crisis of 2008 and through Brexit uncertainty, accounting for $4.8trn (€4.1trn) in assets as of June 2018, according to ETFGI.

And almost two decades on from their launch in Germany, the iShares Stoxx Europe 50 UCITS ETF and the iShares Euro Stoxx 50 UCITS ETF have combined assets of more than €5bn.

"The European ETF marketplace has seen tremendous growth in recent years, with expansion in the number of strategies on offer," says Hortense Bioy, director of passive funds research at Morningstar.

She adds: "This calls for renewed education efforts for professional and retail investors."

Education is critical – not least to bust some of the myths surrounding ETFs. Here is IPE's guide to cutting through the hype of how exchange traded funds work.

ETFs ARE OVERTRADED AND CAN CAUSE MARKETS TO FALL

In May 2010, the flash crash had come and gone within little more than half an hour, yet indices such as the Dow Jones had dropped by around 9%. They recovered quickly, but in the aftermath jittery investors searched for culprits.

The US Securities and Exchange Commission said ETFs played a significant part in the fall, with 68% of more than 21,000 cancelled trades coming from ETF investors.

"Post the 2010 hiccups, the exchanges enacted rules which have so far mitigated the problems we saw back then," says Dave Nadig, CEO of ETF.com, referring to trading limits designed to prevent sudden changes in securities' prices. "I'd expect them to continue to work."

Investors in active funds are

also prone to knee-jerk reactions. Data from the UK's Investment Association found that retail investors pulled £6.7bn (€7.5bn) from UK actively managed funds between the Brexit referendum in June 2016 and March 2018, despite healthy UK market returns of around 17% in that period.

It is difficult to compare exactly with ETFs, although TrackInsight data shows that global inflows into ETFs tracking UK equities grew by around €1.3bn over that period, with the vast majority (€1.2bn) going to the iShares FTSE 100 UCITS ETF.

It is worth noting that the European ETF market is dominated by institutional investors, while retail investors drive the US market, according to Cerulli Associates.

"We don't see any overtrading by our institutional customers," says Simon McGhee, director of ETF business development at market-maker Bluefin Europe.

Pension funds are exceptionally cost sensitive and tend to trade monthly to cover their liabilities, he explains, while the most aggressive institutional traders would be smaller hedge funds who trade more often and need to outperform their given benchmarks. More conservative users such as private banks and wealth managers tend to use ETFs for long-term investing within discretionary portfolios, he adds.

In addition, the ETF market tends to be overstated relative to the size of the overall stock market. According to Morningstar, ETFs tracking US equities represent less than 10% of the US equity market and, in terms of trading, ETFs account for less than 5% of equity daily volumes.

"With that in mind, it's difficult to believe that ETFs could cause a downturn in the market," says Bioy.

ETF ASSETS WILL GROW TO OVERTAKE EVERYTHING ELSE AND MAKE MARKETS INEFFICIENT

Some argue that passive funds rely on the research of active managers to determine stock prices, and if everybody indexed, then stocks would be mispriced and the market would fail. However, many ETF experts say this would never happen.

"As much as 60% of securities in the Russell 3000 in just 25 years has out- or underperformed [the broader index] by 10% in the last 25 years," says Thomas Bartolacci, head of European capital markets at Vanguard. "The ability to under- or outperform is still there as long as the active manager has a rigorous process and their fees are not exorbitant."

And what would happen if everyone invested in the Russell 3000? Ben Kumar, investment manager at Seven Investment Management, points out that there are more indices than there are stocks.

"If ETFs all tracked the same index, then sure, there'd be a big wall of money forcing markets into a non-discriminating state of inefficiency," he says. "As it is though, I can build hundreds of portfolios using ETFs, with very little similarity between them all."

Vanguard's Bartolacci adds that in terms of total dollar value, indexed assets only makes up 15% of the global equity market, and bonds just 5%.

"We are a long way off from the market reaching a tipping point. In addition, the price setting mechanisms are still that of active traders, hedge funds or even retail investors," he says.

Assets in fixed income ETFs have even further to go. As of March 2018, the total global amount of fixed income issuance stands at approximately $96trn, and less than 1% of that, around $790bn, is in fixed income ETFs, according to Bluefin.

"The ETF market would have to grow 100 times or more with no further bond issuance [for fixed income ETFs to overtake the broader market] and that's simply not going to happen," says McGhee. The biggest institutions and pension funds generally only hold a small proportion of their assets in ETFs, he adds.

"Bigger pension funds will only really use ETFs that give access to more difficult areas of fixed income: for example, they might well use a high-yield ETF in a small proportion," says McGhee. "Smaller pension funds use ETFs across the board."

ETFs ARE NOT AS LIQUID AS THEIR UNDERLYING SECURITIES

There are several important examples where ETFs have continued to provide liquidity and price discovery during times of uncertainty.

In the summer of 2015, the Athens stock exchange suspended trading for several weeks during domestic volatility. While the Lyxor UCITS ETF FTSE Athex 20 (GRE) temporarily shut its doors, its US-listed counter-

part continued to trade. The same year, more than 14,000 Chinese companies suspended trading to stem panic selling by retail investors, but China-focused ETFs continued to trade. And following the Brexit referendum, several actively managed property funds halted redemptions while property ETFs, which replicate equity-based real estate investment trusts, remained open.

"We now live in very efficient markets with a lot of ways to move asset class bets around," explains Nadig. "If everyone wants out of, say, junk bonds on a Tuesday at 2pm, they will sell the heck out of everything related to junk bonds. ETFs will go down. Options on ETFs will go down. Actual underlying bonds will sell off. There's no magic to this."

The price of the ETF is designed never to stray too far from net asset value of its underlying securities, due to competition between market makers. This contrasts to investment trusts, many of which trade on wide discounts or premiums.

"Ultimately, ETFs can never be more liquid than the underlying market they track because creation/redemption activity is strictly delimited by the depth and size of the underlying market," says Bioy. "However, by virtue of their exchange-traded nature, ETFs do bring an extra layer of liquidity to the marketplace. We've seen that in the high-yield bond space."

SYNTHETIC ETFS HOLD NOTHING

Since the International Monetary Fund, the Bank for International Settlements and the Financial Stability Board all claimed after 2010 that synthetic ETFs were riddled with "complexity and opacity", the number of synthetic ETFs has dwindled. Assets in synthetic ETFs have dropped from 46% of overall ETF assets in 2009 to 20% in 2018, according to Morningstar.

"The war between physical and synthetic in Europe is over. Physical has won, but there are some countries where investors have a sophisticated knowledge of derivatives and they are comfortable with synthetic products," says McGhee. "As a liquidity provider we prefer physical products, as we execute the bond hedges ourselves and can make investors tighter prices on the ETF."

While there are fewer synthetic products today, there are still myths about the remaining ETFs today, such as the ETF "holds nothing".

"This is not true. The bulk of swap-based ETFs in Europe hold a basket of highly liquid equities or bonds," says Bioy. "Should the swap counterparty go under the fund has immediate access to the basket of securities, which can be sold if needed."

McGhee adds: "There are strict rules about how synthetic ETFs are structured as the type of collateral used is governed by UCITS regulation. Sometimes swap-backed ETFs are the only way to give investors access to a foreign market. Saudi Arabian equity exposure is a good example."

ETFS CARRY OUT TOO MUCH SECURITIES LENDING

Securities lending, whereby the fund manager loans out a proportion of its portfolio in exchange for collateral to enhance returns, is not exclusive to ETFs. It's a common practice across the investment management industry carried out by mutual funds, pension funds and other vehicles, according to Bioy.

"Passive funds have lower turnover than actively managed funds and hence are less subject to the risk that the fund manager will recall the loaned securities," she says.

ETFs are more transparent about their securities lending activity than other types of funds, Bioy adds

"They disclose information on their websites, including average and maximum on-loan levels, collateral composition, collateralisation level, and net return on a fund by fund basis," she says. "The same couldn't be said about actively managed funds."

Most ETF providers limit the amount of assets that their funds can lend out at any point in time to 50% or less, while iShares ETFs can lend up to 100%. Some providers, such as UBS, have decided to exclude fixed income ETFs and ETFs that focus on environmental, social and governance aspects from their lending programme. Other providers don't lend securities at all, while Vanguard only started allowing securities lending on its equity ETFs from November 2016.

"Securities lending is a very important aspect of the marketplace as it increases the liquidity of the underlying securities and improves market efficiency and lowers costs," says Bartolacci. "At Vanguard we take a very risk-

controlled approach and 100% of the revenues, minus the cost of running the programme, go back into the fund and benefit the end investor."

Morningstar's latest survey on the subject was in 2013, which found that around two-thirds of physical ETFs lent fewer than 20% of their assets on average and that 50% lent fewer than 10%.

"I suspect the amounts on loan have since declined partly because of withholding tax harmonisation in Europe," says Bioy.

Figures from IHS Markit's latest quarterly review found that 88% of securities lending revenue within ETFs comes from US-listed funds. It showed that US ETFs had an average value on loan between April and June of $39bn (€33bn) while Europe only lent out an average of $4.6bn (€3.9bn).

"Securities lending may be the closest thing to a free lunch in investing," says Nadig. "I recently did a ton of legwork trying to find a single example of a securities lending default that impacted regulated shareholders. I went back to 1980. I couldn't find one, in funds or ETFs. If someone finds one, please tell me."

The future is active

BRYON LAKE
JP MORGAN ASSET MANAGEMENT

ACTIVE MANAGEMENT AND ETFs: A POWERFUL COMBINATION

ETFs are structured to provide liquid, cost-effective and transparent access to global markets. These attributes have lent themselves perfectly to index tracking funds, allowing investors to add low cost beta exposure to portfolios, easily and efficiently, whenever they choose.

Passive ETFs have been hugely popular, driving the strong growth in the US ETF market that we've seen over the past two decades. More recently, ETFs have experienced similarly impressive growth in Europe, with assets under management rising at a compound annual growth rate of 19% in the five years to the end of 2016, according to Morningstar.

PWC, in its Annual Global ETF Survey 2015, predicted that the European ETF market could reach $1.5trn (€860bn) by 2021.

The dawn of the active ETF

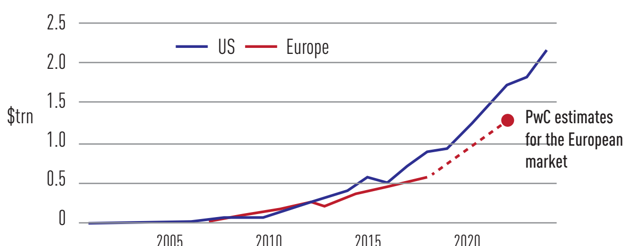
While passive ETFs continue to dominate flows, fund providers are increasingly realising that the ETF wrapper is also an ideal home for actively managed strategies. Active ETFs are one of the factors that will drive further ETF growth, providing investors with the opportunity to earn alpha on their investments while still gaining all the benefits that they expect from the ETF vehicle.

One of the key advantages of active ETFs is that they allow investors to target specific outcomes. For example, an active equity ETF can provide access to excess returns above a chosen index, driven by fundamental stock selection.

Because the weighting methodology in active strategies is at the discretion of the portfolio manager (within certain tracking error constraints), some active ETFs can partly mitigate some of the limitations that are inherent in market-cap indices. Active fixed income ETFs, for example, have the ability to assess the creditworthiness of individual issuers and deviate from the weighting methodology of traditional fixed income benchmarks, which give larger weightings to issuers with higher outstanding debts.

Active strategies can also be

1. AUM rebased since the inception of first ETF in the US and Europe



Source: Morningstar, PwC, as of December 2016.

used to gain exposure to certain investment criteria, such as securities with strong environmental, social and governance characteristics.

Another advantage of active ETFs is their ability to rebalance portfolios outside of the systematic rebalancing dates used in passive indices. This flexibility may be beneficial in reacting to unexpected market events.

Moving up a gear

The trend towards active strategies is helping to take ETF growth to the next level. ETFGI reports that active ETFs and ETPs (exchange-traded products) reached $95.9bn in global assets in July 2018, up from $15.3bn in December 2012. This represents a 39% annual growth rate over this period (see ETFGI Active ETF and ETP Insights, July 2018).

As demand for active strategies grows and more active ETFs are launched, it's important for investors to have a full understanding of how they can be employed in portfolios, and the due diligence and trading questions that they should be asking their ETF providers.

ACTIVE ETF DUE DILIGENCE: PAY ATTENTION AT THE ENGINE LEVEL

Before investing in an active ETF, investors need to conduct due diligence at the ETF wrapper level, in much the same way as they would with a passive ETF.

However, because the benchmark is only a reference for active ETFs, the range of possible outcomes and performance deviations from traditional benchmarks will be much greater than with passive ETFs. Active ETFs will therefore require more upfront and ongoing due diligence at the "investment engine" level than market cap-weighted index strategies.

Understand the ETF investment engine

In an active ETF, stock selection, investment allocations and risk management will be based on a portfolio manager's investment philosophy, conviction and skill. It's therefore vital that investors ensure the active strategy is based on a proven, repeatable process that aligns with their risk tolerance and overall investment objectives.

Questions to ask include:

- What is the starting universe of eligible securities?
- How are securities selected and weightings assigned in the portfolio?
- What are the portfolio's diversification and liquidity constraints?
- What biases or exposures can be expected as a result of portfolio construction?
- How experienced is the portfolio management team?
- Does the strategy have a verifiable track record?

Know your ETF provider

As with passive investments, when evaluating potential active ETF investments, investors should consider the character and capabilities of the ETF provider. Investors should choose to invest with a provider they value, and that has a proven history of delivering investment expertise and insights.

Investors particularly need to ensure the ETF provider is able to give them the level of client support they need. Does the provider have a multi-language client service desk? Does the provider have a capital markets desk that can support with trading questions, and dedicated websites that provide critical fund information? How well aware and aligned is the provider to the regulatory changes impacting the industry?

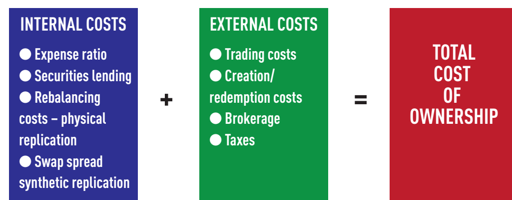
Investors should also ask how much access the ETF provider is willing to give to its investment teams to discuss strategies in detail.

Evaluate the total cost of ownership

As with passive ETFs, the full cost of investing needs to be carefully evaluated. Low fees are attractive, but the total expense ratio (TER) is just one component of the overall investment cost of an ETF.

As well as the TER, investors need to evaluate other costs

2. Total investment cost



Source: JP Morgan Asset Management

incurred for holding an ETF, which include such factors as transaction costs related to portfolio rebalancing, and any costs associated with securities lending. Investors will also need to account for the cost of purchasing and exiting the fund. These charges include brokerage fees, and creation and redemption costs.

Together, the cost of holding and the cost of trading will provide investors with a view of the total cost of ownership of an ETF.

Assess the implications of ETF structure

While the costs and risks associated with physical and synthetic (swap-based) index replication are less relevant for active ETF investors, structural implications are still important to consider. For example, active ETFs may participate in security lending schemes to offset costs, similar to many physical replication passive ETFs.

Although UCITS collateral requirements mitigate counterparty risks somewhat, active ETF investors should assess and monitor the performance of ETF providers and make sure they understand all the credit exposures that an ETF strategy may have.

ACTIVE ETF TRADING: WHAT MAKES A GOOD ACTIVE ETF?

As with passive ETFs, a good active ETF will be backed by a dedicated capital markets team with a strong technology platform and strong relationships with a diversified set of authorised participants (APs).

The ETF provider must be able to demonstrate that it can provide APs with all the information they need to deliver efficient pricing of the ETF at all times, while utilising both primary and secondary markets to boost liquidity.

Focus on the ETF's underlying securities

Some strategies will not be appropriate for the ETF wrapper, so it's important to ensure that the ETF strategy provides ample trading liquidity.

First and foremost, a good active ETF strategy needs to maintain exposure to liquid and tradeable underlying securities, which will allow the cost of creating and redeeming shares to be low, and the ability to provide intra-day pricing to be high.

- *Assess the starting universe*

Just like passive strategies, active ETF portfolios are constructed based on a starting universe of underlying securities – taken either from the starting point of a reference benchmark, or from the universe covered by the relevant portfolio management or analyst team.

Active ETFs will therefore share similar characteristics to the starting universe. An active ETF with a starting universe of US equities, for example, will be more liquid and cheaper to trade than an active ETF with a starting universe of emerging market bonds.

- *Analyse portfolio construction*

While the liquidity of the starting universe is the main driver of an active ETF's underlying liquidity, investors will also need to look at the fund's portfolio construction to get a true view of its liquidity profile.

This means analysing the investment criteria used to select securities, the risk management tools that the strategy uses, any tracking error considerations that are in place, and any individual security restrictions or other portfolio constraints that will influence the makeup of the portfolio.

- *Focus on trading expertise*

While many equity indices rebalance on a quarterly basis, active strategies often adjust portfolios on a monthly basis.

However, active ETF strategies also have the flexibility to trade outside of their normal rebalancing period, which means portfolio managers can buy or sell securities to reflect a change in market view at any time.

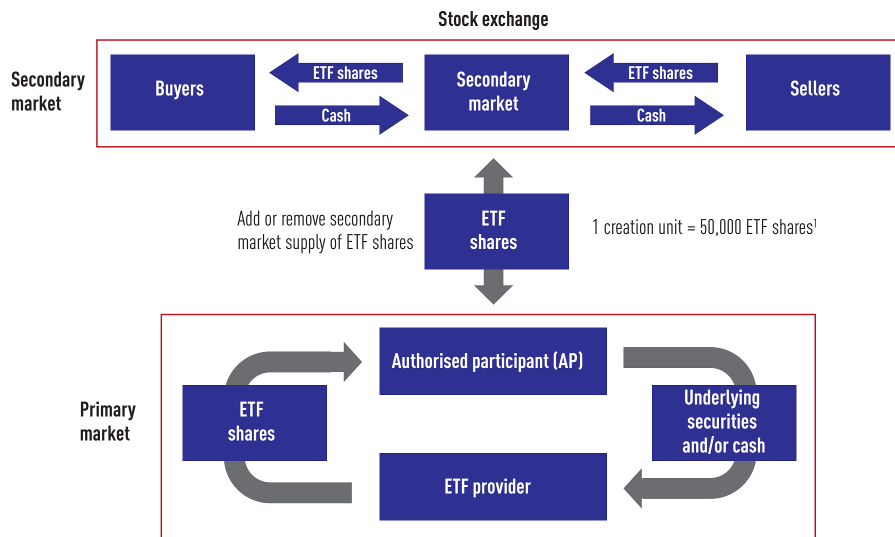
To facilitate intra-day portfolio rebalancing, ETF providers can reissue the daily portfolio composition files (PCFs) that APs use to create or redeem shares throughout the day. This allows the ETF provider to maintain full pricing transparency in real time as the underlying portfolio changes are made.

Investors in active ETFs should therefore ensure that the ETF provider has the requisite trading expertise and capital markets resources, as well as the technology support, to deliver these extra trading requirements while also providing best execution and price transparency to investors.

Focus on secondary market liquidity

As with passive ETFs, secondary market liquidity is just as important for the efficient pricing of active ETFs.

3. The ETF ecosystem



Source: JP Morgan Asset Management. [1] Creation unit size will vary by provider, typically of at least 50,000 shares

If an ETF suffers a redemption, or receives inflows, it may not need to trade its underlying securities if an AP or market maker is able instead to find a willing buyer or seller for the ETF's shares in the secondary market. APs may not therefore need to create or redeem shares – and trigger trading in the underlying securities – every time they receive a buy or sell order for an ETF.

It's therefore important to assess the ETF's ability to access secondary market liquidity. However, the level of visible "on exchange" liquidity may not provide the whole picture. Consolidated trading reports, which show the level of hidden over-the-counter (OTC) trading as well as exchange-based trading, can help give a better view of an ETF's secondary markets access.

USING ACTIVE ETFs IN AN INVESTMENT PORTFOLIO: STRATEGIC BUILDING BLOCKS

ETFs provide a powerful portfolio construction tool for institutional investors. Today, advanced strategies such as smart beta fixed income, multi-factor strategic beta, ultra-short income and liquid alternatives are allowing investors to build ETF portfolios with a level of sophistication and diversification that they couldn't have envisaged even just five or 10 years ago.

More efficient asset allocation

The buy-and-hold nature of active ETF strategies (where turnover of underlying assets is relatively low) makes them particularly well suited to helping investors build out the strategic core of their portfolios.

At the same time, an active strategy can be used to add alpha to a portfolio with core passive holdings.

For example, if an asset allocator wants to add exposure to a less liquid category, such as emerging market debt, using an ETF within an emerging market sleeve can help them to increase or decrease their exposure without buying or selling individual bonds or managers. Other examples include using active ETFs to add alpha to a plain vanilla portfolio, or using an actively managed growth-style ETF to reduce a portfolio's value bias at low relatively cost.

Ultimately, active ETFs offer investors access to long-term alpha potential, while benefiting from the attributes of the ETF wrapper.

Bryon Lake, head of international ETFs, JP Morgan Asset Management

A liquid diet for trustees

ARMIT BHAMBRA
iSHARES

Liquidity in a pension fund context can mean a number of things. As long-term investors, pension funds can harvest the illiquidity premia by investing in private markets, which they have been doing increasingly over the past 10 years.[1] On the other hand, pension funds are required to meet their liabilities and so need enough liquidity to ensure payment of benefits to members. For pension funds, these are the two most distinct expressions of the term 'liquidity'. The balancing act of locking assets up whilst retaining enough liquidity to meet member benefits, if done correctly, can improve the returns generated from a scheme's asset allocation.

In the UK, the majority of pension funds have become cash flow negative. This change in cash flow profile has been brought on as pension funds have increasingly closed their schemes to new entrants and future accruals. Due to the increasing maturity of their cash flow profile, they are now paying out more to their members in the form of member benefits than they receive from the combination of company contributions and investment return on assets.

Mercer, in its European Asset Allocation survey reported that 55% of UK DB PFs are now cash flow negative.[2] This is not a trend that will reverse, Mercer adds that it expects this number to rise to 85% over the next decade. The UK pension industry needs to pay out liabilities of over £1.7trn (€1.9trn) over the next 20 years or so.[3]

The profile of these cash flows is not linear either. As baby-boomers retire, the bulge bracket of pension fund liabilities will mean the amount in sterling that needs to be paid out on a monthly basis for the average fund may dramatically increase from its current position.

Those schemes that effectively plan how to navigate this liquidity challenge will be better placed to achieve their long-term funding objectives than those that do not.

Currently, cash flow negative schemes may be adopting a series of measures. Some schemes are moving to cash flow-driven investing (CDI), which seeks to construct a portfolio of income assets, bonds and other contractual cash flow generating assets, which are projected to meet all the liability cash flows as they become due.

CDI can be a highly effective framework for pension schemes to use as a way of mapping their assets versus their liabilities in a way that focuses on cash flow, particularly for more mature schemes. In the US, some of the most mature schemes are adopting liquid beta sleeves, alongside a CDI-type framework.

Liquid beta sleeves are a combination of index products that seek to provide market exposure in a way that is liquid and customisable to fit a scheme's specific needs. Pension funds with maturing liability profiles are looking to liquidity sleeves to form part of the

1, 2 Source: Mercer, as of 19 June 2018.
3 Source: The Purple Book, Pension Protection Fund, as of 5 December 2017.

solution to help navigate the cash flow negative journey.

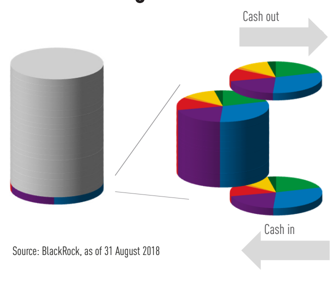
In this context, liquid beta sleeves form a small percentage of a pensions fund's total asset allocation, perhaps 5–10%, and could be used to deal with the cash flow requirements of the scheme alongside traditional money market funds. Typically, these liquidity sleeves reflect, as far as possible, the strategic asset allocation of the pension fund itself. To this end, the liquidity sleeve also helps the fund avoid a large build-up of cash that can arise as member benefits become more burdensome. We estimate that in aggregate current cash levels across UK pension funds are now in excess of $50bn (€42.8bn) and part of that capital will be earmarked to meet member benefits.[4]

CASE STUDY

A US pension fund with a mature liability profile was building up excess cash as a buffer to help meet its increasing cash flow burden as it became more cash flow negative. The client was also finding it challenging to liquidate assets monthly.

A combination of exchange-traded funds (ETFs) was used to replicate the strategic asset allocation of the pension fund. Their asset allocation was a typical mix of public and private markets, across a variety of asset classes. Following analysis, we constructed a liquidity sleeve with a correlation of 0.99 over a one, three and five-year period. The

1. Liquidity sleeve inflow and outflow management



Source: BlackRock, as of 31 August 2018

sleeve itself was a composition of five underlying iShares ETFs with a weighted average total expense ratio (TER) of 12bps.[5]

Ultimately, the client outsourced the implementation of the liquidity sleeve to BlackRock to also offload the governance burden of managing the associated cash flows. The liquidity sleeve periodically rebalances back to the pension fund's strategic asset allocation to ensure that its correlation remains high over time.

INCREASING OPPORTUNITY SET ACROSS INDEX INVESTING

The topic of liquidity sleeves is becoming relevant because of the maturity of UK pension fund liabilities. The evolution in choices across indexing products is helping to improve the replicability of liquidity sleeves themselves. We believe that indexing has evolved from two perspectives.

- *Exposures*. Whilst market capitalisation weighted indices still dominate index investing across UK pension funds, the breadth of options has widened. Investors are now able to access single countries, common factors and specific sectors through ETFs. The number of exchange-traded products in Europe has grown from roughly 500 in 2007 to a figure close to 2,400 today.[6]

- *Wrappers*. Pension funds have a variety of implementation options available to them when it comes to indexing. Index mutual funds remain the mainstay for most pension funds. However, price dynamics around derivatives and ETFs have changed. The implicit cost of holding certain index derivatives has increased as a function of changes in regulation, post the global financial crisis. Meanwhile, the holding costs associated with ETFs are downward trending, making them much more comparable to traditional index mutual funds. As the ETF market has grown, transaction costs have shrunk as a function of increased trading on the secondary market. Lower transaction costs make ETFs a good fit to play a role in liquid beta sleeves given that cash flows will require funds to be bought and sold regularly.

CONCLUSION

As DB schemes continue to navigate towards the end game, managing the draw down of their assets to meet their maturing liability profiles will be a difficult task. The sophistication of the indexing landscape has just so happened to coincide with this stage of the DB journey. The coming together of these two different aspects of our industry serves to provide maturing pension funds with a new way of solving for cash flow negativity.

Armit Bhambra, head of iShares retirement at BlackRock

4 Source: Willis Towers Watson, as of 28 February 2018.
5 Source: BlackRock, as of 31 August 2018.
6 Source: BlackRock, as of 30 June 2018.

A cost comparison of futures and ETFs

RICHARD CO and TOM RAFFERTY
CME GROUP

Ten years into the current bull market, the US stock market has been inching up with little volatility for an extended period. Meanwhile, the investment management industry has also seen a relentless drive to wring out costs. A good grasp of implementation cost of using different vehicles for the same strategy matters. Here, a cost comparison framework will be described for contrasting index futures and comparable exchange-traded funds (ETFs). CME Group's E-mini S&P 500 index futures (ES) is compared with the top three US-listed ETFs of the same underlying index. The same framework can be applied to other indices as well.

COST ESTIMATES AND ASSUMPTIONS

Implementation cost estimates for using ETFs are relatively simple. There are trading costs associated with acquiring and disposing of the positions (commissions and price impact costs), holding cost (management fee), as well as other financing related cost applicable to some situation, for example, deployment of leverage or short positions.

Implementation cost for deploying futures is only slightly different. They also include the trading costs (commissions and price impacts), holding cost (associated with financing a position), as well as other financing costs.

For the purposes of this article, the conclusions are derived for a hypothetical investment of $25m (€21.4m).

TRANSACTION COSTS

Transaction costs are expenses incurred in the opening and closing trades.

- *Commission:* Commissions are charged by the broker for trade execution, which varies. This analysis assumes execution costs of $3.54 per contract (0.35bps) for E-mini S&P 500 futures and $0.08 per share (4.1bps) for each ETF.[1]
- *Market impact:* It measures the adverse price movement caused by the act of executing the order. Market impact is dependent on trade size. Given that an order of $25m represents less than 0.01% of average daily notional value traded in the ES future ($230bn) and 0.08% of average daily notional value in SPDR S&P 500 ETF (SPY – $32.2bn), it is reasonable to assume minimal market impact beyond the cost of crossing the bid-ask spread. This analysis, therefore, estimates one tick increment for ES (1.25 bps) and SPY (2.0bps), and four ticks for iShares S&P 500 Index (IVV – 2.5bps) and Vanguard 500 Index Fund (VOO– 2.5bps).

HOLDING COSTS

Holding costs are expenses that accrue over time. Most grow linearly with time (for example, ETF management fees) although there are some periodic ones (eg, execution fees on quarterly futures rolls). The following

1 Transaction cost estimates are based on the average execution fees among the largest retail brokers.

assumptions are made.

- *ETFs:* For fully funded investors, the full notional value is deployed. Management fee charged by the fund: 9.5 bps per annum for SPY, 4bps for IVV, and 4bps for VOO. Holders receive dividends.[2]
- *Futures:* Initial margin is required to secure the position. Investors can pledge securities, money market funds (or cash) to meet the requirement and receive income from the collateral during the holding period.

Unlike ETFs, futures do not carry management fees. But an implied financing cost is embedded in the price. This financing cost is the difference between the financing rate priced into the futures, and the income received from the collateral. This financing spread varies over time but is locked in place at the time of initiating or rolling the position.

For a long investor who has access to collaterals generating income at LIBOR rate, the futures implied financing less LIBOR would be the financing cost of the position.

For this analysis, the futures trading at three-month USD LIBOR (3mL) +20bps is used when futures are rich and 3mL –5.7bps is used when futures are cheap.

SCENARIO ANALYSIS

In each case, the total cost is computed for a holding period of 12 months. All scenarios assume the same transaction costs and market impact at both trade initiation and exit.

Scenario 1: Fully-funded long investor

For a fully-funded investor, the total cost is the sum of transaction costs plus the pro-rated annual holding costs. Each analysis starts at the round-trip execution costs: 2.10bps for ES, 6.50bps for SPY, 7.50bps for IVV and 7.50bps for VOO. as time passes, the annual holding costs will gradually accrue, with small jumps in the costs of futures due to the quarterly roll costs.

When futures are trading rich (3mL +20bps), ES is most cost efficient up until the fourth month. At the breakeven point (approximately 91 trading days), the ETFs becomes the cheaper alternative as the implied richness of futures becomes greater than the drag on performance generated by the management fee of the ETF.

When futures implied financing is valued at a discount to LIBOR (3mL –5.7bps), the negative financing spread provides long investor a distinct advantage. Futures can be the most cost-effective alternative in to perpetuity.

Scenario 2: Leveraged investor

Futures are inherently friendly to deploying leverage. As of this writing, initial margin requirement for E-mini S&P 500 futures is only approximately 4.01%. A leverage ratio over 20 is possible.

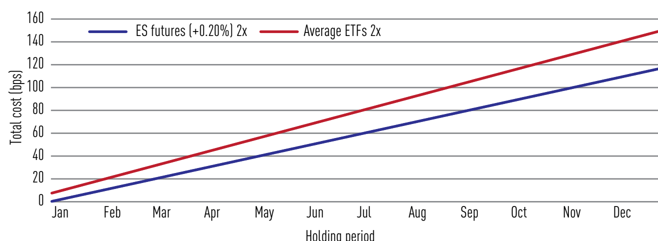
For ETF users, leverage could be limited by applicable strictures such as the Regulation T of the Federal Reserves. Under Reg T, a maximum of 2x leverage is feasible. As such, comparison is limited to the 2x ratio. The calculation in scenario 1 is redone with the following adjustment to account for the use of 2x leverage.

For futures position holders, the income generated by the collateral is reduced in half to account for the fact that only half the notional investment value is "funded".

For ETFs, explicit interest cost is added to the holding cost calculation. Margin loan rate varies widely. It is, however, likely to be linked to short-term interest rate benchmarks. In this calculation, however, a very low margin loan rate of 1.80% p.a. is assumed.

Figure 1 shows that as a function of leverage, the total cost associated with futures will never exceed that of the ETFs, making futures more economically attractive for the leveraged investor even if the implied financing is rich.

1. Total cost for 2x leverage, 12 months



Richard Co is executive director and Tom Rafferty is manager in the equity products division at CME Group

2 Dividend withholding tax may apply for non-US investors.

The growing world of fixed income ETFs

ANDREAS ZINGG
VANGUARD

The fixed income exchange-traded funds (ETFs) market has experienced rapid growth in recent years as more investors are now finding a role for them in their portfolios.

We explore the drivers behind this expansion, the rationale for low-cost indexing in fixed income and the challenges investors face in selecting bond ETF providers.

GROWING DEMAND

The combination of collective investing and the trading flexibility of a single security are well known benefits of ETFs. Blending the diversification and professional management of mutual funds with the continuous pricing and liquidity of individual shares, ETF assets have burgeoned in recent years.

While ETFs are more commonly associated with equities and commodities, bonds are taking an increasing share of the action. The market share of European fixed income ETFs has steadily grown each year since 2010 and now stands at 22%, up from 14% in 2010 (all data sourced from ETFGI). In 2014, net new flows into fixed income ETFs nearly doubled year-on-year and 2017 was the best year ever for new flows into fixed income ETFs in Europe.

The obvious explanation for the rise in bond ETFs is demand from investors. With interest rates still at or near the historic lows reached following the global financial crisis, investors continue to grapple with bonds' risk-dampening attributes and the search for higher-yielding assets.

ONE TRADE, MANY BONDS

These needs, coupled with the quantitative easing policies of major central banks since 2008, have meant the availability of some bonds has deteriorated considerably. This is particularly prevalent in areas such as corporate credit, high yield and emerging markets debt. As it has become more difficult to hold bonds directly, ETFs have stepped in to fill the gap.

Investors seeking exposure in these areas can effectively add thousands of bonds to their portfolio in a single trade. Few investors – even professional asset managers – can achieve such well-diversified, broad exposure in such a cost-effective way as an ETF.

Another advantage many investors are recognising is the ease of capital and income reinvestment. Compared with individual bonds, fixed income ETFs provide timelier reinvestment of principal and cash flows.

INCREASING SUPPLY

As demand has grown, the industry has responded. Almost 80 more fixed income ETFs are now available in Europe compared with the end of 2016. They cover a range of markets and indices. Interestingly, we've seen a significant rise in the number of corporate bond, EM debt and inflation-linked bond ETFs – all areas where it has been difficult for investors to access individual securities over the last few years.

This accessibility is one of the keys to the success of fixed income ETFs, and ETFs in general. Another factor is their lower fees and expenses. Collective investing lowers costs and ETFs are generally lower cost than mutual funds. This makes them an attractive, cost-effective option in an industry in which margins are under pressure.

Furthermore, research from Vanguard shows that by focusing on low-cost funds (both active and passive), the probability of outperforming higher-cost portfolios increases[1]. After all, every basis point an investor pays in fees is a basis point less in returns. And while we do not know what future returns will be, we do know what the costs are. For most investors, the best chance of maximising net returns over the long term lies in minimising these costs.

But it's not just about maximising returns and minimising costs. Investors need to consider risk beyond the volatility of returns. They must be confident that their chosen investment funds provide adequate safeguards for client assets.

REGULATORY SAFEGUARDS

Increasing awareness that ETFs share the same regulatory environment as mutual funds is allaying these concerns. The vast majority of European-domiciled ETFs are organised and regulated under the UCITS directive. While all investing involves risk, this framework provides various degrees of investor protection by ensuring underlying investments are liquid, portfolios are diversified and assets are ring-fenced and held by a custodian.

VERSATILE PORTFOLIO TOOLS

As the growing numbers of investors embracing fixed income ETFs are finding, they can be highly versatile portfolio tools. The ways that bond ETFs can be used by investors are many and varied, ranging from liquidity and transition management to rebalancing and overlay strategies.

But for many investors, bond ETFs will form the core building blocks of their fixed income allocation. These investors can use ETFs to help them gain fast, precise and cost-effective access to a broad variety of sub-asset classes within fixed income to build a strategic core bond portfolio.

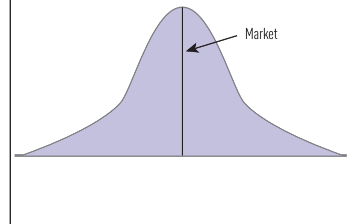
Indexing is a central function of fixed income ETFs, and the evolution of the market for bond ETFs has paralleled the growth of indexing more broadly within fixed income. Here, the case for passive investment is compelling.

THE ZERO-SUM GAME

Increasing numbers of investors are now discovering the potential of index funds that track fixed income indices. These bond index funds offer investors a number of advantages, including the consistent maintenance of portfolio risk characteristics, diversification and low cost.

The central concept underlying the case for index-fund investing is that of the zero-sum game. This theory states that each position that outperforms the market return is offset by a position that underperforms the market by the same amount. Presented graphically, all market participants' asset-weighted returns form a bell curve around the market's return, as can be seen in figure 1.

1. Market participants' asset-weighted returns form a bell curve around the market's returns



However, after costs are allowed for, investing becomes a negative-sum game. In other words, after accounting for costs, the aggregate performance of investors is less than zero sum, and as costs increase, the performance deficit becomes larger. This is demonstrated in figure 2.

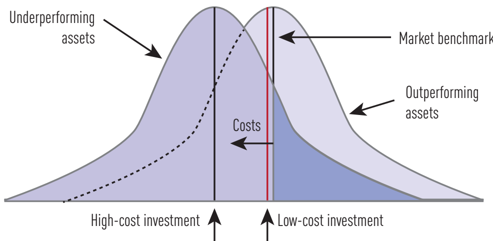
Once merged and liquidated funds are considered, a clear majority of actively managed bond funds fail to outperform their benchmarks after fees. As figure 3 shows, negative excess returns tend to be more common than positive excess returns.

The impact of costs on bond fund returns is even more pronounced than for equity funds. Given that bonds have historically exhibited lower returns than shares, costs tend to be a more significant drag on performance, and therefore to exert an important influence on returns.

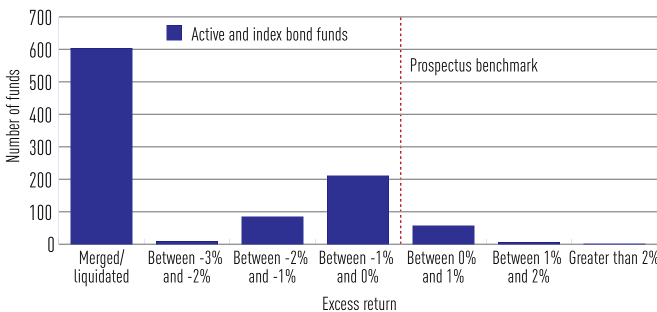
What's more, as we expect

1 The case for low-cost index-funding investing, April 2017.

2. Market participant returns after adjusting for costs



3. Distribution of fixed income funds' excess return



Sources: Vanguard calculations, using data from Morningstar. Displays the distribution of excess returns, relative to their prospectus benchmark, for the 15-year period ending 31 December 2017.

lower returns in fixed income markets (as well as in equity markets) going forward compared with historical standards, the impact of fees on returns is likely to become even more significant.

CONSISTENT RISK CHARACTERISTICS

Beyond the cost benefits, bond index funds can provide investors with the ability to keep the risk makeup of their fixed income portfolio at a steady level.

Liquidations, both full and partial, are much easier from bond index funds than from more concentrated bond holdings as the consistent cash flows into and out of index funds enable the fund managers to make incremental purchases and liquidations.

Bond index funds maintain more consistent risk characteristics, such as duration, over time because of these more regular, ongoing cash flows.

DIVERSIFICATION BENEFITS

Low-cost bond index funds also bring considerable diversification benefits, among issuers, credit qualities and term structures. Fixed income index funds can provide better protection against losses than more concentrated holdings owing to the broad universe of exposure they offer.

This diversification is particularly beneficial when it comes to default risk – that is, investors' perception of an issuer's willingness and ability to honour the terms of the obligation. This is a particular concern in the corporate bond market, where the dynamic nature of credit risk makes it essential to diversify issuer-specific risk.

This diversification also typically delivers higher risk-adjusted returns. Undiversified bond investors often try to hedge default risk by increasing their exposure to bonds of the highest credit quality. However, this approach sacrifices the potentially higher returns available from lower credit quality bonds.

The diversification offered by a bond index fund can incorporate higher-return opportunities further out on the credit quality spectrum, without the investor having to hold disproportionate exposures to higher-yielding issues.

Within government and supranational bonds in particular, index funds also provide diversification among a range of maturities. This is because they often have exposure to a number of different bonds across the term structure from the same issuer.

EXPANDING CHOICE

In Europe alone, as of the end of June, there were around 350 fixed income ETFs with more than $180bn in assets (data sourced from Morningstar). This is up from around 270 fixed income ETFs with around $130bn in assets at the end of 2016.

Given the amount of choice between different products and providers, it is important that investors are in a position to make informed decisions about which ETF, and which ETF manager, is right for them.

CHOOSE YOUR BENCHMARK WISELY

A single fixed income ETF can

give investors access to a portfolio of hundreds if not thousands of bonds, diversified by issuer, by credit quality and by term structure. But it is important to select a bond ETF that tracks a benchmark reflecting the investor's true opportunity set. This can help investors ensure they are getting appropriate exposure that matches their risk appetite.

Good indices should reflect the actual investment universe available to active management, and therefore the way that asset managers actually invest.

This can be more of a challenge in fixed income, where the investment universe is much broader than is the case with equities. And yet despite this, the availability of some bond issues may be limited, as we already mentioned. This is why it is especially important for investors to choose a fixed income ETF with an index methodology that is clear, easy to access and simple to understand.

For example, among US dollar-denominated corporate bond indices, the Bloomberg Barclays Global Aggregate Corporate USD Total Return index, which the Vanguard USD Corporate Bond UCITS ETF tracks, has more than 7,100 constituents. By contrast, the Markit iBoxx USD Liquid Investment Grade 150 Mid Price TCA total return index, which covers the same asset class, has only 150.

The index inclusion criteria drives the number of constituents. This criteria usually includes a minimum issuance size and a minimum maturity requirement. The constituents, in turn, drive the risk, return and yield characteristics of the indices, and more diversified indices tend to have lower duration risk but similar yields.

Investors should take care to select a strategy that is aligned with helping them achieve their investment objectives.

It is also a good idea to track an index with a proven track record, one that has demonstrated consistency not just in its construction but also in its exposure over time.

SCALE AND EXPERTISE

Building such a well-diversified bond portfolio requires an ETF provider to have sufficient scale and experience to enable it to assemble and manage large portfolios.

The scale of the provider is a key consideration for investors in fixed income ETFs when it comes to costs, too. As larger ETF managers typically place larger trades than smaller providers, they can secure lower execution costs than those available to smaller managers. This gives them access to narrower spreads on trades.

ETF providers with economies of scale typically have considerable bargaining power in the bond markets as they have access to a wide variety of dealers and counterparties. This improved access can lead to more favourable pricing.

Providers also need multiple authorised participants and market makers for their ETFs and an experienced capital markets team who have the expertise to place large trades, add new issues and reinvest income efficiently and effectively.

The best ETF providers will have the experience and skill to develop and deliver the best products for investors. These providers will consistently be investing in the talent and technology to improve their products and will have a strong network of relationships within the ETF ecosystem.

COSTS MATTER

The rise of fixed income ETFs shows no signs of abating, and low-cost bond index funds are set to be a key part of this growth.

In a world of low yields, investing costs matter a lot. This is especially true for bond markets, where in recent years yields have been below their historical averages and costs erode a larger share of returns than they have in the past.

Choosing a low-cost fixed income ETF in this environment makes sense. All else being equal, lower costs should translate into higher net returns and better performance.

Andreas Zingg is head of Vanguard's ETF sales specialists in Europe

Fixed income ETFs: consistent growth in a changing landscape

ANTOINE LESNE
STATE STREET GLOBAL ADVISORS

Fixed income, an asset class that historically traded over the counter (OTC), is increasingly being traded on exchange through exchange-traded funds (ETFs). The adoption of fixed income ETFs rapidly increased following the global financial crisis. While ETFs began as simple tactical asset allocation tools, investors now use them in many different ways.

With the expansion of the fixed income market, ETFs have helped investors to navigate a change in market structure and, at times, to address the liquidity conundrum. Over the past 10 years, innovation and product development have continued unabated. As quantitative easing buying activity from central banks recedes with balance sheet tapering, could the change have an impact on the strong growth pattern? We think not. In fact, we believe fixed income ETFs can serve as a tool to help investors to effectively manage their portfolios during this phase of the new normal(isation).

HOW ARE INVESTORS USING FIXED INCOME ETFs?

Today, both institutional and smaller investors use fixed income ETFs for an array of different reasons.

For core and tactical exposures, investors can choose from close to 950 fixed income ETFs to lay the strategic foundation of their portfolios. The options range from global aggregate to domestic government exposures, investment-grade corporate to high yield, and from emerging market debt (both hard and local) to convertible bonds. Major building blocks are available at TERs ranging from less than 5 basis points (bps) to 55bps. These low-cost exposures make ETFs ideal tools for portfolio construction.

The breadth of offerings across maturity and sector segments also allows investors to make tactical adjustments to portfolios. In the current environment of rate normalisation, shorter maturity ETFs have seen more flows as investors try to mitigate the negative impact of rising rates. Floating rate notes and loan funds in particular have benefited from these tailwinds.

Fixed income ETFs can also be used to hedge a position, such as a long-term high-yield bond position that is hedged by shorting a high-yield ETF. The same can hold true for other exposures. For example, more and more insurers now use ETFs as instruments to hedge their credit portfolios instead of using a less diversified basket of credit default swaps.

ETFs are often labelled as liquid instruments. In this capacity, asset managers can use ETFs to manage subscription and redemption flows, thus allowing for an easy and cost-efficient solution to get a clean beta that would otherwise be more complex to build with derivatives. Fixed income ETFs can also play a role in transition management. ETFs allow investors to keep the beta exposure while implementing the transition, or buying the ETF and getting bonds delivered into the target portfolio by redeeming in kind.

Looking through the derivatives lens, while 'ETFs versus futures' has become a hot topic in the equity space, it is gradually expanding to include fixed income. Indeed, ETFs are delta one instruments and offer a granular alternative for targeting duration and credit exposure compared with government bond futures and credit default swaps. ETFs can help reduce the tracking error and reduce the roll risk. Meanwhile, they are easier to trade than total-return swaps and may be more cost-effective.

ETFs are growing as a financial instrument, and the growth of fixed income ETFs offers new possibilities in a more efficient way, both in cost and ease, than was previously possible. High yield is a good example of a market that has rapidly grown in recent years and evolved to include fixed income ETFs – to the overall benefit of market participants.

CASE STUDY: HIGH-YIELD ETFs AND THE LIQUIDITY CONUNDRUM

High-yield ETFs, like all fixed income ETFs, are uniquely structured to offer two levels of liquidity: primary and secondary market liquidity. But confusion about this liquidity and resulting trading volumes can spark accusations that high-yield ETFs influence the price of underlying high-yield bonds. Primary market activity refers to the creation and redemption of ETF shares. Trading on the secondary market means buying and selling of existing ETF shares.

Secondary market transactions do not always result in the creation or redemption of ETF shares. In fact, the ratio of secondary to primary activity for the entire high-yield ETF industry, as defined by Bloomberg Finance, is 5:1. This means that for every $5 (€4.30) traded on the secondary market, only $1 is created or redeemed.

This ratio clearly illustrates that only a fraction of all high-yield ETF trades touch the asset class. Meanwhile, as a result of the liquidity provided by the secondary market, investors can transfer risk, modulate exposure, and tailor portfolios with precision and efficiency using one vehicle – an ETF.

GROWING WITH THE MARKET – A CHANGING LANDSCAPE

The fixed income ETF market has grown in size over the past 10 years as the underlying fixed income market structure has evolved. The challenge in tracking bond indices has increased as the number of issuers and issues has nearly tripled while the average bond issue size has not. In addition, the ability to match buyers and sellers in the underlying OTC market has not proved easier, even as electronic trading has become more common.

Bond market evolution

The global aggregate bond index grew 3.6 times in market value to reach $49trn between December 2001 and July 2018. Meanwhile, the number of securities in the index has multiplied by 3.1, from 7,000 to 21,800 bonds. With the exception of JGBs, which do not have many ETFs tracking them, it is interesting to note how fixed income ETFs tracking the EUR and USD Treasury and corporate bond markets have grown in line with the underlying exposures.

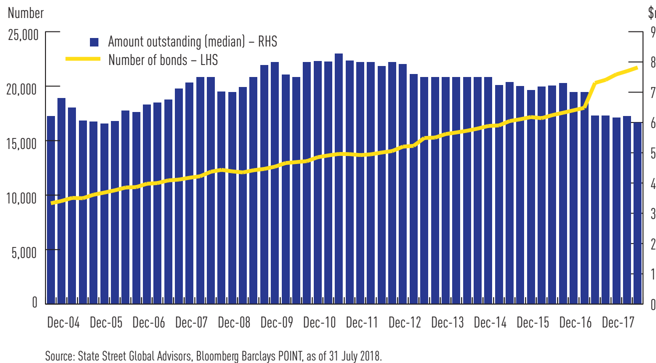
Why might this be the case? An advantage of an ETF is that it allows an investor to trade a broad basket of bonds in a single security. While the market has grown in size, the number of bonds issued has also increased. The median size of the bonds in the global aggregate index has not changed significantly over time. In fact, during the past few years, it has fallen to $600m per issue from a high of $800m per issue in 2011. Peak issue sizes were reached during a period where sovereigns issued larger amounts of debt than corporates (see figure 1).

This trend has occurred in a more regulated environment for dealers, forcing their balance sheets to shrink. Based on inventories recorded by the NY Federal Reserve, bond holdings went from a peak of $250bn in 2007 to between $25bn and $45bn, on average, at the end of July 2018. The trading model evolved to more of an agency approach where dealers looked to match buyers and sellers rather than make a market in an ever-growing number of securities. Matching buyers and sellers of a basket of securities via one financial instrument – the ETF – can help the trading of exposures. Consequently, fixed income ETFs can be viewed as a solution for asset allocators to trade more efficiently in an otherwise broad universe.

Fixed income ETP growth

In June 2002, the market started in the US with a handful of corporate and government ETFs. By 2008, the market had started to blossom, representing

1. Historical evolution of the number of bonds and median average bond size in the Bloomberg Barclays Global Aggregate index market value



Source: State Street Global Advisors, Bloomberg Barclays POINT, as of 31 July 2018.

around $51bn, or 6.9%, of the total ETP market. While growth has continued in the two largest regions (US and Europe), the share of fixed income ETPs relative to the total market has remained stable at 16% during the past couple of years.

While the relative size of fixed income ETFs within the broader ETP universe has recently plateaued, the universe has been growing almost three times faster than the equity universe during the past 10 years: 1,448% versus 517%. Admittedly, the figures in the past three years show a more equal figure with 86% for fixed income versus 72% to equities.

Within the fixed income universe, what trends can be observed? A comparative view between US and European-domiciled ETPs signals the following:

- Corporate bond ETFs have had strong success since 2008 but broad aggregate types of exposure have gathered more assets in the US.
- Emerging market exposures have grown significantly in the past five years, on both sides of the Atlantic, as the low-yield environment, and the disappointing performance of some active managers, pushed investors towards these higher-yielding and more transparent vehicles.
- High yield has also grown at a strong pace, boosted both by a similar thirst for yield and the liquidity advantage that ETFs provide. High-yield ETF assets have become more prominent, representing 3.6% of the total high-yield assets (around $1.2trn as of end-July 2018).

MARKET OUTLOOK – CAN WE LINK ETF GROWTH WITH CENTRAL BANK ACTIVITY?

The increase in the AUM of fixed income ETFs has been visible since the global financial crisis. The three-month rolling average flows into fixed income ETFs have increased tenfold over the past decade, from less than $2bn to $25bn as of end-July 2018. This outpaces the rise of the underlying fixed income market growth.

Interestingly, some commentators have pointed to a link between the rise in fixed income ETF assets and the actions of central banks. Focusing on this trend, some correlation can be derived between central bank buying and the increased flows, particularly in the European ETP market.

There is actually no significant statistical correlation between both streams. However, a few elements need to be noted:

- The higher three-month rolling flows coincide more with the announcement of actions as opposed to actual buying activity (eg, the March 2016 announcement of CSPP).
- The lower level of activity or even decrease in a central bank's balance sheet (such as the Fed's) does not necessarily impact ETF flows negatively. From April 2015, when the Fed had stopped buying more assets, the average three-month rolling flow was below $15bn, versus $25bn today.
- Divergence between markets: There is at times an inverse relationship between the Fed purchases and the flows towards ETFs, but when it comes to the ECB there is a stronger relationship between both streams.

We believe that this trend potentially highlights the fact that an increasing number of investors use fixed income ETFs to swiftly modify portfolio allocations. There is another dimension to this shift, which is that some active managers have found it challenging to beat their benchmarks. We have seen this in various segments, such as developed government bonds and emerging market debt. According to analysis by State Street Global Advisors, only 10% of the 30 largest active funds in Europe have managed to outperform the JPM EM GBI Global Diversified index over the past five years.

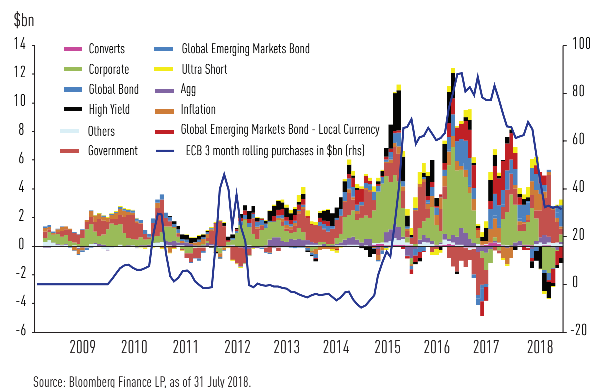
WHAT HAPPENS NEXT? THE MARGINAL BUYER SUPPORT DISAPPEARS

Undeniably, central bank liquidity has helped to improve how markets have functioned. Bid-offer spreads have gradually come down to levels slightly above pre-crisis levels. Using the Barclays Liquidity Score (measuring the cost of an actual $1m round trip trade in a bond) for the Bloomberg Barclays Global Aggregate index, the cost of liquidity was halved over the past five years from more than 50bps in 2012 to less than 25bps today. However, other measures are the evolution of fixed income ETF bid-offer spreads and how ETFs have helped investors access parts of the market that may remain more expensive, in particular high yield or credit.

If the marginal buyer provides less support, the impact to market trends may be felt in several ways. This “new” normalisation simply translates into financial conditions that gradually tighten. The cycle moves into a rising rate period, which we are in now, credit spreads widen, and allocations shift primarily in three directions:

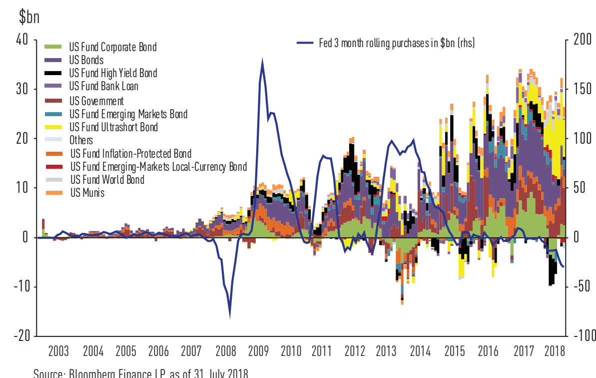
- Shorter maturity exposures in order to partly mitigate interest rate sensitivity.
- Away from lower-quality exposures towards high grade (or from high yield to senior loans).
- Into broad treasury allocations, gradually adding to duration as we move through the economic cycle. The recent shift in allocations, as shown in figures 2 and 3, indicates that these trends are already taking place.

2. Cumulative three-month evolution breakdown vs ECB purchases



Source: Bloomberg Finance LP, as of 31 July 2018.

3. Cumulative three-month evolution breakdown vs Fed purchases



Source: Bloomberg Finance LP, as of 31 July 2018.

CONCLUSION

Fixed income ETFs are now an established financial instrument. As liquidity in the underlying OTC market recedes, we believe that flows towards fixed income ETFs may continue to increase thanks to the following factors:

- The broad offering of funds allowing granular portfolio allocations compared with futures and credit derivatives.
- The secondary market liquidity allowing investors to build or switch exposures in a cost-efficient way.
- The full transparency offered by the instrument.

As the tide turns, we expect investors to shift towards aggregate exposures as core allocations, and to make tactical allocations towards high grade credit exposure with less interest rate sensitivity, or convertible bonds to ride the last wave of the economic cycle.

Antoine Lesne, head of SPDR EMEA strategy & research, State Street Global Advisors

Building impact and values into portfolios

RACHAEL REVESZ

Exchange-traded funds that prioritise environmental, social and governance (ESG) matters have grown exponentially in popularity over the past few years.

Awareness has been boosted through global initiatives such as the Paris Agreement on climate change and the UN 2030 Agenda for Sustainable Development. Seventy-seven ETF ESG funds have been launched in the first six months of 2018 alone, although the total looks unlikely to eclipse the 214 launched over the course of 2017, according to Morningstar. Globally, there are now 2,953 funds holding ESG mandates, representing nearly $975bn in assets. The vast majority – 2,048 funds – are in Europe, with $652bn in assets.

AN UMBRELLA TERM

Despite significant growth, the exact definition of an ESG fund can vary greatly. Environmental issues could cover factors such as carbon emissions, whilst social matters could range from gender equality to workers' rights. By contrast, governance issues might address directors' pay or company transparency, for example. Some funds exclude certain companies from an index, such as tobacco and alcohol stocks, while others adopt a 'best-in-class' approach, selecting securities across different sectors and geographies that have a higher ESG rating than their peers.

A 2016 report from the European Commission on long-term and sustainable investment found that there was "insufficient knowledge about ESG in the investment universe" and "lack of clarity around main ESG concepts and definitions giving rise to diverging interpretations". In France for example, the energy transition law, known as Article 173, requires institutional investors to report how they incorporate ESG factors and tackle climate change. Perhaps it is no coincidence that Lyxor and Amundi, two French ETF providers, were some of the first to enter the ESG market more than a decade ago with low carbon and water ETFs.

In May this year, the European Commission announced plans to regulate and unify the ESG market. This includes creating an EU-wide classification system, as well as improving disclosure requirements for institutional investors as to how they integrate ESG factors in their risk processes and producing a new category of benchmarks to help people identify their investments' carbon footprint. This is, according to European Commission vice-president Valdis Dombrovskis, to prevent "greenwashing" – or the mis-selling of a product as green.

"Today we already have green labels for organic food, energy efficient appliances such as fridges, or building materials," he said. "In the same way, we could have an EU Ecolabel for green bonds or investment funds, to give trust that an investment is actually green."

The classification system could be implemented by 2020, Dombrovskis said, and then be expanded to social and governance objectives, which in turn affect ESG ETFs.

"From a product manufacturer point of view, as it's difficult to anticipate what the provisions will be, and we will have to adapt and find indexes suitable to the evolving requirements," says Isabelle Bourcier, global head of quantitative and index at BNP Paribas.

"Our ETFs are distributed in mainly continental European countries and the MSCI SRI methodology is probably the most common ground at this stage when we discuss ESG with retail and institutional clients."

As of June 2018, there were $11.8bn of assets tied to ETFs tracking MSCI ESG indexes globally, $7bn of which is listed in Europe.

Laurent Trottier, global head of ETF, indexing and smart beta management at Amundi, says he is "not convinced" that there would be a single definition agreed in the near future, adding that one label would be a positive thing for the ETF industry.

"Clearly, speaking the same language between providers, investors, regulators and market participants, and having the same expectations, would help improve the capacity to promote and manage ESG products," he says.

THE AUDIENCE FOR ESG

The dominance of institutional investors in the ESG space might help to explain the lack of standardisation, notes Steffen Scheuble, CEO of index provider Solactive.

"Different investors have different views. As a result, you have more indexes which are tailored for a specific approach and less 'one fits all'. Due to separately managed accounts and mandates, ESG indexes are often tailored for one institutional investor."

Deborah Yang, head of index, EMEA, at MSCI, points out that ETF assets in ESG are not broken down into retail versus institutional. "There is over $180bn in non-ETF assets tracking MSCI ESG indices and the vast majority of these assets is currently institutional," she adds.

"ESG investing is a relatively recent phenomenon, which has been accelerating in the last three to four years, and like other investment trends, such as factor investing, institutional investors tend to drive adoption and retail investors follow."

A 2017 report from US-based research firm Cerulli Associates, found that although asset managers believe demand for ESG will come from millennial investors, assets will only be accumulated slowly.

"Firms recognise that in order to draw attention from younger millennial investors, they need to begin to highlight their ESG capabilities," the report said. "Managers believe next-generation clients are fully prepared to fire their advisers unless they put impact or values or missions into their asset allocation; therefore, they are beginning to make it a priority now."

Trottier agrees there has been a recent shift in investor expectations and mindset. He says that-two thirds of queries from clients from the passive equity portfolio team include ESG criteria, and that this trend is starting to emerge among fixed income clients.

"I can't say whether that shift is due to an increase in offers from index providers or whether index providers are following the trend – it's a chicken-and-egg situation; however, we believe that it is here to last," he said.

BREAKING INTO FIXED INCOME

While the majority of ESG assets are in equity ETFs, the past couple of years have seen more fixed income products. For example, the Amundi Index US Corp UCITS ETF (UCRP) tracks an index of corporate-grade bonds, excluding issuers involved in alcohol, tobacco, gambling, military weapons, nuclear power, adult entertainment, civilian firearms and genetically modified organisms. Launched in late May, it already has approximately €221m under management.

Green, or social, bonds, whereby money is ring-fenced to have a positive, social impact, are another growing area of interest. Lxyor launched the Lyxor Green Bond UCITS ETF (CLIM) in February last year, and it now has approximately €53m under management. CLIM tracks a range of global green bonds deemed eligible by the Climate Bonds Initiative, an independent not-for-profit organisation that advocates low-carbon investments.

"The topic of social bonds

could be one of the next areas – that is something we are investigating," says Solactive's Scheuble, which has $80bn of ETF assets tied to its indices, including in low carbon, water and gender equality.

Within the broader market of fixed income, the lack of underlying securities that qualify for inclusion in an ESG index is also an issue. Andrew Walsh, executive director, head of passive and ETF specialist sales, UK and Ireland at UBS, which has $3.5bn in ESG ETFs, explains that the methodology for fixed income ESG ETFs is a "little bit looser".

"MSCI ESG's scoring system has seven bands for companies, from AAA to CCC. To be included for consideration, an equity must have at least a single A," he said. "Within liquid corporates fixed income indices, this minimum hurdle is a score of BBB. This slightly looser inclusion criteria ensures there are enough securities to choose from."

LACK OF DATA

As the 2016 report from the EC found, industry participants reported that harnessing Big Data is an issue, citing how it is often needed to analyse other asset classes, or dig deeper into individual sectors and themes – including gender equality.

The €53m Lyxor Global Gender Equality UCITS ETF (GEND) launched in October 2017. It tracks an index of 150 companies around the world that score highly on 19 criteria defined by research firm Equileap, including the pay gap, maternity/paternity leave and senior female representation.

"We looked at the UN's sustainable investment goals and women's rights is one of the cornerstones of that," says Adam Laird, head of ETF strategy, Northern Europe, at Lyxor. "The data from Equileap allowed us to work to construct an index in line with that goal and get the first ETF off the ground."

The firm now has $550m tied to products that license its data. Equileap CEO Diana van Maasdijk says she aims to add extra parameters in future, such as sex-based violence at work.

"If we expand the research the existing ETF doesn't change but it could apply to future indexes and products," she says.

Investors are also becoming more aware that gender equality contributes to a healthy bottom line. A 2016 report from Credit Suisse found that companies with at least one female director had generated an excess return of 3.5% for investors over the previous decade.

FEES BITE

Another potential hurdle for ESG investors is relatively high fees. Data from Lipper found that the average annual fee for ESG ETFs in Europe is 41 basis points (bps), compared with 37bps for normal equity ETFs, as of June 2018. These prices have only come down by 2bps in each category since 2016.

"There's higher turnover in the underlying constituents in ESG ETFs than in an ETF which tracks a standard index; it's more expensive to run these funds," says Walsh.

"Costs will undoubtedly fall," adds Laird at Lyxor. "We will probably see a proliferation of strategies as it's still relatively niche."

DOES ESG MEAN LESS RETURN?

Investors have also long debated whether ESG detracts from returns as it limits the number of stocks available to portfolio managers.

"I would say that none of the research I've seen was extremely conclusive," says Trottier. "I believe that ESG is no longer just about green, ethical values, but more about managing risk and return, which is in fact a very traditional framework for any portfolio manager. The more we invest in ESG, the more we facilitate the outperformance of the best-behaving companies and the underperformance of the worst-behaving companies."

Over the past five years, Walsh says UBS's ETF tracking the euro-zone SRI index has outperformed the parent index by 2.11% per annum, whereas the exclusion of big tech stocks has hampered SRI ETF performance in the US, as has the under-weighting of China in emerging market SRI ETFs.

"It's not like all SRI indices have the same performance against their respective parent indices," says Walsh. "While the Eurozone (EMU) SRI has outperformed the parent, non-SRI index, massively in recent years, it doesn't mean all SRI indices outperform the parents. In fact, with emerging markets SRI, it has underperformed. The simple point being that there is not one absolute situation where SRI outperforms all the time."

Lyxor's Laird adds that ESG funds generally performed well between 2005 and 2007. But after the financial crisis, they tended to underperform as they screened out natural resources and mining companies.

"Is that a failing of these funds? I don't think so," he says. "It's just a recognition you're getting performance from different areas at different times."

According to the EC's 2016 report, sustainable finance may not become the norm for years, or even decades. But Solactive's Scheuble notes that though there is still "more talk than assets" when it comes to ESG, investor trends are moving in the right direction.

"From my perspective we are right at the beginning," he says. "But I'm convinced that every ETF provider will offer ESG products in the future."

Managing indices to match convictions

ISABELLE BOURCIER
BNP PARIBAS ASSET MANAGEMENT

More and more investors know it is perfectly possible to link index management with responsible investment by choosing an index fund or an exchange-traded fund (ETF). Index management can offer numerous ESG solutions in line with their convictions.

The 2016 review published by the Global Sustainable Investment Alliance estimates worldwide sustainable investment volumes at approximately $23trn (€19.6trn). European investors contribute around $12trn to this.

The concepts frequently encountered in this specific segment should be clarified: SRI stands for socially responsible investment. The European professional organisation, Eurosif, has broadened this concept to include sustainable and responsible investment. ESG stands for environmental, social and governance. Companies that are eligible for sustainable equity investments demonstrate a particularly high level of responsibility with respect to ESG criteria.

In the past decade, an increasing number of institutional investors have been implementing their vision of sustainable investment by incorporating key criteria that take account of economic challenges, such as data on climate protection, in their equity analysis and portfolio management. This approach can constitute an 'engagement' basis for active shareholders, enabling these large-scale investors to contribute to making the economy more responsible. Many have turned to dedicated index mandates or funds that integrate their own ESG requirements (including a number of sector exclusions, for example). Those investments constitute the core of their allocations. Other key elements, besides the customising of the ESG approach and exclusions, include the voting rights policy and the set-up of the asset manager in this respect.

We now see more and more private banks and retail networks asking for ESG index solutions. Some groups have already defined their minimum requirements in terms of exclusions and choice of allocation in relation to ESG criteria. Others have not and are looking for more clarity and for standardisation of ESG benchmarks. The minimum requirement is often based on the exclusion of companies or sectors if they breach certain ethical standards. Exclusions are often combined with ESG selection criteria based on ratings issued by the extra-financial research team on individual companies.

The concept of best-in-class, for example, which is the most commonly discussed, describes a selection process whereby, within a given sector, the companies selected are those that offer the best environmental and/or social performance, and that have a high-quality management team.

SRI INDICES

As an initial step, SRI indices generally exclude the investment universe of companies active in the alcohol, gambling, tobacco, weapons, firearms, pornography,

genetically modified organisms, thermal coal and nuclear sectors. Next, they add all companies with an appropriate ESG rating, size and sector of activity. The best-in-class approach favours companies that are rated the highest within their sector from an extra-financial viewpoint.

Lastly, minimum standards are applied to the rating that is attributed following research on controversial themes through analysis and monitoring of controversial issues, such as breaches of the international standards set out by the United Nations or non-governmental organisations.

The objective of controversy criteria is to reduce reputational risk. The themes concerned are the environment, human rights, workers' rights, monitoring the supply chain and corporate governance. The investment universe for the MSCI KLD 400 Social index is the MSCI USA IMI, which is currently made up of 2,442 stocks. The MSCI KLD 400 Social index selects around 400 stocks according to the defined rules and adapts its composition every quarter.

In addition to giving investors a clear conscience, what contribution can sustainable investment indices make? A critical function of the rules for building the index is to avoid economic risks for investors by rapidly identifying companies that do not pass the selection process. The scandals surrounding "dieselgate" and the Deepwater Horizon oil platform were decisive tests of ESG ratings. Volkswagen and BP[1] were not represented in the corresponding indices before these controversies; they were not considered to be truly sustainable companies. In any event, the costs linked to the lawsuits and liability for environmental damage amounted to around $90bn for BP. For VW, the total costs of financial damages linked to the diesel emissions scandal has not been fully calculated. Up until now, they have amounted to $27bn in the US alone.[2]

WHEN FINANCE ACTS FOR THE PLANET

Sustainable thematic index funds or ETFs can focus on one specific selection criterion, such as CO_2 emissions, for example. The Low Carbon 100 Europe index, launched 10 years ago, represents an entirely sustainable thematic concept, which selects companies with a low carbon footprint. The index is composed of 100 European companies selected using the following process.

Among the 1,000 largest European companies, 12 'green companies' from the alternative energy, power, electronics, construction and industrials sectors that generate at least 50% of their sales in technologies with low carbon emissions are selected every year. Companies with controversial trade practices, manufacturers of controversial weapons and tobacco are excluded, as are companies in the defence sector. The 88 other companies in the index are selected from among the 300 largest companies on the basis of their environmental policy. The rankings established by CDP (formerly the Carbon Disclosure Project) or Carbone 4 (consulting firms specialising in climate data) have an influence both on the selection and the weighting of the shares in the index.

The objective of the methodology is to limit the global warming scenario to 2°C. The index used data such as the Carbon Impact Analytics (CIA) rating of Carbone 4. This rating is comprehensive because it includes indirect carbon emissions and avoided emissions (recycling, biofuels, etc). In addition, it goes beyond merely measuring the carbon footprint because it also assesses the company's contribution to energy transition, particularly through R&D efforts.

This allows companies to take the long view of their strategies in terms of energy transition. The methodology also separates the investment universe into two sub-categories. On the one hand, companies highly exposed to the energy transition issue (so-called 'high stakes' companies) are selected based on their CIA rating; on the other, those whose business activities have a limited impact on global warming ('low stakes') are selected based on their CDP data.

This index has a two-fold objective: to lower the weight of the stocks of companies that emit greenhouse gases and to support those that contribute the most to fighting global warming. For these companies, at least 50% of their business must come from 'low carbon' technologies (for example, renewable energies).

Isabelle Bourcier is head of quantitative and index management at BNP Paribas Asset Management

1 The above-mentioned securities are for illustrative purpose only, are not intended as solicitation of the purchase of such securities, and does not constitute any investment advice or recommendation.

2 Sources: www.n-tv.de, 9 September 2018; www.faz.net, 10 September 2018.

Responsible investing that reduces your carbon footprint

MICHAEL LEWIS and MURRAY BIRT

DWS

Climate change is one of the most important ESG risks and investment opportunities. Increasing investor attention on fossil fuel exposures has been brought into stark focus by the Paris climate agreement and increasing central bank and regulator attention to the financial stability risks of climate change.

At the first conference on climate risk for financial regulators and central banks in April 2018, Bank of England governor Mark Carney said "once climate change becomes a clear and present danger to financial stability it may already be too late to ... as climate related risks become re-evaluated, [this] could destabilise markets and spark a pro-cyclical crystallisation of losses and lead to a persistent tightening of financial conditions: a climate Minsky moment". He advises that such a future could be avoided by "early transitions in thinking and action".

The financial stability concern, among other factors, is the potential of an abrupt revaluation of asset prices in response to the risks of unburnable carbon or stranded assets, as well as physical climate risks. According to research published by Carbon Tracker in April 2013, to reduce the chance of global temperature rising to no more than 2°C above pre-industrialised levels, the world has an estimated global carbon budget for 2000–50 of 886Gt CO_2. Accounting for emissions from the first decade of this century leaves a carbon budget of 565Gt CO_2 for the 40 years to 2050.

However, the total carbon potential of known fossil fuel reserves is an estimated 2,860Gt CO_2; 65% of this is from coal, 22% from oil and 13% from natural gas. This means governments and global markets are treating reserves equivalent to nearly five times the carbon budget for the next 40 years as assets. Not surprisingly, investors want increased reporting of fossil fuel reserves and potential CO_2 emissions by listed companies and those applying for listing to assess these risks more closely.

Investors are also beginning to assess broader systemic risks posed by unburnable carbon and seeking reassurance that financial stability measures are in place to prevent a potential carbon bubble bursting. This has led an increasing number of investors to commit to divest from fossil fuel investments. This started with US universities and colleges, but over the past few years has seen significant growth in the total assets of institutions committed to divest. Recent growth in divestment commitments has come from private sector investors that have committed to phase out coal and/or fossil fuels or to divest after an (unsuccessful) engagement programme.

Some investors question the effectiveness of fossil fuel divestment in publicly listed companies. For instance, research by Oxford University concluded that the direct impacts of divestment campaigns are likely to be limited: share prices are unlikely to suffer precipitous declines and holdings will likely be taken up by neutral investors. If divestment is

to have any impact on company valuations, changes are needed in market norms and by constraining debt markets.

These factors may therefore have contributed to divestment programmes that are less aggressive in scope. Rather than the complete elimination of all fossil fuel companies, divestment can be confined to companies developing high-cost, high-carbon reserves, such as in the coal and oil sands sectors, or to companies not managing climate risk sufficiently strongly.

DEVELOPMENT OF ESG INDICES

Investor demand has led to the launch of a growing number of sustainable equity indices in recent years. In all cases, sustainable or ESG indices can be classified according to three investment styles:

- Negative/exclusion;
- Positive/best-in-class;
- Thematic investing.

There is $15trn (€12.7trn) invested globally in indices that use exclusion criteria, representing more than 65% of overall SRI assets. These indices generally exclude stocks from existing investment universes based on what they produce, how they operate and where they generate their revenues.

The most common exclusions are based on involvement in nuclear weapons, cluster munitions and landmines. Indices also exist based on criteria ranging from alcohol to stem-cell research. Positive screening, also known as best-in-class or ESG integration, focuses on investing in stocks with superior ESG performance relative to regional and industry peers.

Strategies excluding the bottom performers, overweighting the best performers, or overweighting stocks that are significantly improving with regard to ESG metrics, fall into this category: examples include the MSCI ESG Leaders indices.

Finally, thematic indices are new to the ESG index space, representing a fraction of overall assets. These target specific issues, including companies that meet scores in certain areas, or that derive a certain amount of revenue from particular activities. Examples include gender diversity indices or climate change-based benchmarks.

The majority of ESG indices, especially those deploying positive or negative screening, are based on a parent index, with stocks removed and/or reweighted to create the ESG version. These types of indices are used extensively by ETFs.

For the MSCI ESG Leaders indices, MSCI first applies negative screens to the 1,644 stocks, excluding companies involved in controversial industries, including nuclear power and weapons. Revenue-based screens are also applied to areas such as alcohol, gambling, tobacco and conventional weapons, varying from 5% to 50%, or $100m to $3bn of revenue, depending on the area.

A ‘controversies screen’ is then applied to exclude companies deemed to be involved in serious ESG controversies. A best-in-class filter, which screens out companies with the lowest ESG ratings relative to their industry and country peers, is also applied, producing a total of 847 exclusions from the parent index.

Some ETFs track indices that apply the methodologies set out by MSCI, but with additional filters for carbon exclusions based on assessments of current and potential emissions, leading to further filtering out of carbon intensive companies.

CONCLUSION

Over recent years institutional investors have become focused on the risks associated with investments in controversial sectors such as tobacco as well as across high carbon intensive industries. In addition, there is increasing evidence that highly-rated ESG companies display the most stable earnings per share over the medium term, as well as the hazards from carbon-intensive company investments. This reflects the dangers of government regulation to meet climate agreements made in Paris in 2015 as well as rapid advances in clean and renewable technologies, which are increasingly stealing market share from higher-carbon activities, notably in the power generating sector.

Not surprisingly, these trends are encouraging the growth of thematic ESG indices that aim to address pressing environmental and/or social challenges. The development of these indices reflects growing interest in divesting out of fossil fuel investments to address the threat posed by global warming as well as excluding investments in conflict with the UN Sustainable Development Goals.

Michael Lewis is head of ESG thematic research and Murray Birt is senior ESG strategist at DWS

What's in a name?

MELISSA R BROWN and SEBASTIAN CERIA
AXIOMA

Many smart beta ETFs are bought with the expectation of long-term market outperformance. The factors that many are based on have been proven both academically and empirically to produce excess returns.

However, especially in the short term, many of these funds may be vulnerable to different market, factor and economic events. Because factors are correlated, even funds that tilt on one factor (for example, momentum) may be impacted by a big move in a different factor (for example, value). Stress testing is a tool that can help managers and fund investors better understand the potential impact when history repeats, or of plausible moves in economic variables or factors.

In this article, we show results of stress tests on sample smart beta ETFs. This analysis allows us to examine how current portfolios would have fared under various historical scenarios and to evaluate the impact of big moves in selected economic and model variables. We also compare results from two dates to show how vulnerabilities can differ through time.

What accounts for these differences? There are many reasons, generally related to portfolio construction. How is the factor defined? How many stocks are in the portfolio and how are they weighted? How often does the fund rebalance? Are exposures to other factors controlled? And so on.

We chose two different US-based ETFs in each of four categories. The ETFs chosen have substantial NAV and are widely owned (figure 1).

Managers typically use stress tests to highlight potential negative impacts on their portfolios. For this study, however, we are looking at negative events, even if they might have a positive impact on the portfolio. Most of our tests are linear, which means that one could reverse the sign on the stressor and get an impact of equal magnitude in the opposite direction. The focus of our results is the expected active return versus the S&P 500 as the result of the test.

The results of this study point to three major conclusions: 1) portfolios with names that sound virtually identical can have very different reactions to stressors, suggesting they are not quite as similar as they sound; 2) factor-based portfolios (ETFs or otherwise) may have exposures to many other sources of risk, and may therefore be impacted by a

1. ETFs used in the study

Momentum	Quality	High dividend yield	Low volatility
iShares Edge MSCI USA Momentum (**MTUM**)	iShares Edges MSCI USA Quality Factor ETF (**QUAL**)	iShares Core High Dividend ETF (**HDV**)	iShares MSCI USA Minimum Volatility (**USMV**)
Fidelity Covington Momentum Factor ETF (**FDMO**)	PowerShares S&P 500 High Quality Portfolio (**SPHQ**)	Vanguard High Dividend Yield ETF (**VYM**)	PowerShares S&P 500 Low Volatility (**SPLV**)

Source: Shares, Fidelity, PowerShares, Vanguard, Standard & Poor's, Axioma

big move in a factor, even if it seems to be unrelated; and 3) stress tests should not be a 'one-and-done' exercise. The impact of a given shock can vary substantially over time as a result of changes in holdings, factor volatilities and factor correlations.

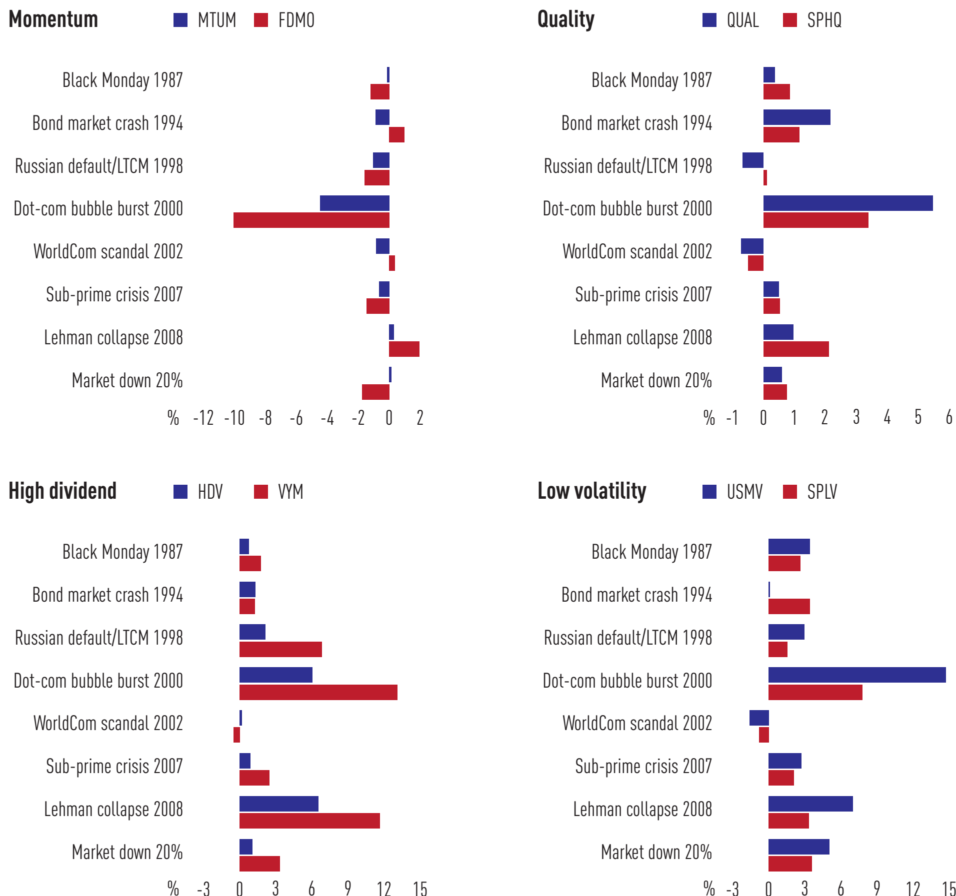
FIRST TEST: BIG MARKET DOWNTURN

Our first study was simple: what would happen to our portfolios if the markets were to fall by 20%? As many of our portfolios are chosen by investors for their defensive nature, we would expect this test to show positive results, and they do. What interests us is the difference in magnitude of the effect on portfolios that tilt on the same factor.

While MTUM (see figure 1) would be expected to underperform the down market significantly, its momentum counterpart FDMO does not seem to be correlated with the market at all. At the same time, while high-dividend HDV would be expected to outperform by more than three percentage points, its counterpart would be only one percentage point ahead. Low volatility strategies appear to be the most defensive, but their expected level of outperformance differs, too.

In terms of MTUM, the fund's exposure to momentum is not the driver of the expected shortfall. That factor is actually

2. Historical stress-test expected active returns as of 30 April 2018



Source: iShares, Fidelity, PowerShares, Vanguard, Standard & Poor's, Axioma

expected to have a positive return should the market fall. Instead, MTUM's return is expected to be dragged down the most because of its positive exposures to market sensitivity and volatility, both of which are positively correlated with the market and therefore expected to fall. FDMO has an exposure to market sensitivity that is much closer to zero and is therefore spared the impact of that factor. This difference illustrates the importance of understanding the underlying factor exposures in your portfolio of choice.

What would happen to our portfolios if history were to repeat itself? For this set of tests, we chose some well-known historical events (see figure 2). The expected performance is based on the portfolios' current factor exposures, and how those factors performed in the historic event. Note that specific risk is ignored (as it is in all of our tests).

These well-known events mostly had a big impact on the market overall, although some, such as the bursting of the dotcom bubble in 2000, generally impacted just a segment of the market – but that same set of industries or exposures may be prevalent in some funds today.

Whereas the direction of the expected active return for a given shock may not be surprising (for example, we would expect many of these funds to be defensive and therefore outperform when a big negative event occurs, or momentum portfolios may currently be heavily weighted in technology companies), what stands out is the magnitude of the expected return for funds that presumably target similar concepts.

For example, while MTUM would be expected to lag the market by 10% should we have another big downturn in technology names, FDMO would be hurt much less, with an expected active return of a little more than half of MTUM's. Similarly, the Quality ETF SPHQ would likely lag the market in an event similar to the Long-Term Capital Management crisis, but QUAL's return would match that of the market. Or in the event of another market rout like the Lehman collapse, HDV (one of our high dividend yield ETFs) appears to be much more defensive than VYM.

SHOCKING A FACTOR

We then turned our attention to shocks in a number of the style factors that underlie our risk models. An investor in, say, momentum may be focused on the benefits of targeting that factor, but because most ETFs do not provide a pure exposure to a factor the investor may end up with other unintended, and perhaps unwanted, exposures, such as a large tilt against value. Because factor returns may be correlated, a big move in one factor can have a big impact on another. And some correlations can be large in magnitude.

For these tests, we wanted to assume a factor shock big enough to have an impact, but not so big that it seemed implausible. Therefore, the factor shocks were chosen to be three standard deviations away from the long-term average, above for a factor whose average return was negative, and below for a factor with a positive average return (to reflect what would be assumed to be "bad" news). We used the model-predicted volatility for the factor at the end of April 2018 and assumed the return would unfold over the ensuing month.

Positive returns for market sensitivity, size and volatility were associated with an up market, while other factors had little correlation with the market direction.

The magnitude of the expected active return was relatively low for the momentum and quality ETFs, with the exception of the return to momentum portfolios when the momentum factor was shocked. Even there, however, the portfolios outperformed the underlying factor, owing to offsetting results from some of the other factor exposures they held. And some of the expected moves were in opposite directions for same-family ETFs (see exchange rate sensitivity shocks), or in the same direction but of quite different magnitude (the impact of shocking size or growth for the quality ETFs).

The impact size was larger for the high dividend yield and low volatility portfolios in some cases. While expected returns were in the same direction, the impact here could also be quite different within the same type of fund (for example, market sensitivity and volatility for both types, and momentum for high yield).

These results highlight two of the major conclusions we stated up front: a big factor move can have a large impact on a portfolio that says nothing about that factor in its name, and similar types of portfolios can expect a different effect from the same factor.

SUMMARY AND CONCLUSIONS

Through a variety of tests that replayed history and stressed macroeconomic and factor variables, we have shown that a set of US factor-based smart beta ETFs may be vulnerable to big (and even not so big) market and economic events.

In some cases, even funds that may be chosen for their defensive characteristics (such as low volatility or high dividend yield) may not offer as much protection against negative events as expected (although in many cases they probably would). In addition, funds that target the same factor may be so different from each other, even though their names suggest they would be quite similar, that their reactions to a given stress could differ substantially.

We also showed that funds that tilt on one particular factor may still see a big reaction if there is a big move in a different factor, because they have not neutralised their other exposures and many factors' returns are correlated.

Finally, the size and direction of the expected active return related to a particular shock can change over time, with the differences in reaction a function of the current holdings, a factor's volatility and/or changes in correlations among factors.

Presumably these sensitivities are not confined to our small test set, suggesting that investors in smart beta (or other quantitatively driven) products may want to make sure they understand the underlying characteristics and vulnerabilities of those funds.

A good stress-testing tool, employed periodically, can help investors understand these vulnerabilities and take appropriate action if desired. Fund managers should also be aware of these issues. Even if they do not change their methodology to address them, they will still be able to better understand the funds' performance, as will the investors in their funds.

Melissa R Brown is managing director, applied research, and Sebastian Ceria is CEO at Axioma

Advances in factor-based fixed income indices

ZARVAN KHAMBATTA and AMINE EL KHANJAR
BLOOMBERG

Global fixed income investors have benefited from a long bull market that began in the early 1990s. During that time broad market value-weighted benchmark indices that guided most investment policy portfolios enjoyed remarkable returns.

While these indices remain at the centre of asset allocation policy portfolios, some investors have been seeking new alternatives as this phase of the interest rate cycle seems to be drawing to an end. Recent research has led to a few different methods of constructing alternative-weighted indices.

THE SEARCH FOR INCOME

In the post-financial crisis period of depressed yields many investors have been seeking additional income. The global family of Bloomberg Barclays Enhanced Yield Bond indices focuses on dynamically managing interest rates and credit risk factor exposures to enhance the yield relative of a benchmark index.

Risk factors are useful for understanding portfolio exposures, but one cannot invest directly in factors. Investors need to determine which securities to over- or underweight to alter their portfolios' factor exposures. Rather than re-weighting individual bonds, we group bonds into 'buckets' based on their primary risk characteristics – asset class, maturity and credit quality – and then vary the weights of the buckets relative to the benchmark. The bonds within each bucket remain market value-weighted. Launched in July 2018, the Euro Aggregate Enhanced Yield index (the index), for example, re-weights sub-components of the Euro Aggregate Bond index (the benchmark) such that yield is maximised while primary risk characteristics are preserved.

The buckets are chosen to allow for meaningful yield and risk factor differentials while ensuring size and liquidity for trading. Up- or downsizing the weights of buckets, instead of individual bonds, could have two additional benefits. Forecasted risk is more reliable and turnover and index replication is easier to manage.

Since the relative attractiveness of interest rates and credit risk varies over time, the buckets are re-weighted monthly to maximise yield while controlling tracking error volatility to the benchmark. In back-tested performance from November 2002 to August 2018, the index achieved a higher yield (0.57% on average) and higher total return (4.73% annualised) than the benchmark (4.26%) with commensurately higher risk (4.11% versus 3.33% annualised volatility respectively). This index would underperform the benchmark in sub-periods of rising interest rates or widening credit spreads. However, it offers investors a means to vary exposures to duration and spread in a systematic and controlled manner to capture yield in the most risk-efficient manner.

RISK PARITY IN FIXED INCOME

Traditional 'beta' fixed income indices embed several distinct

systematic risk factors, such as interest rates, credit and prepayment risk. These factors have associated risk premia and passive long-term investors aim to harvest all three via investments in these indices.

Over the past three decades, the risk-adjusted returns that are attributable to interest rates risk exposure in these indices were much higher than those from credit- or mortgage-spread risk exposures. This served passive benchmark investors very well since these benchmarks are dominated by exposure to interest rates risk. However, past performance is not necessarily indicative of future returns. Thus, absent strong views on factors' future performance, establishing better risk diversification across risk premia factors is a sensible allocation strategy. The Bloomberg Barclays US Fixed Income Balanced Risk (FIBR) index seeks to balance interest rates and spread risk exposures. It also aims to benefit from the addition of the low volatility and high yield factors.

The FIBR index assigns equal excess return volatility-weights to buckets comprised of investment grade and high yield corporate bonds and agency mortgage backed securities. It then estimates the overall exposure of interest rates and spread risk in the portfolio and adjusts the former to equal the latter. Rebalanced monthly, and launched in February 2015, this alternative to a benchmark such as the US Universal Bond index (US Universal) is designed to offer balanced interest rates and spread risk using a systematic, rules-based approach.

While FIBR had lower total returns over a back-test from January 1992–August 2018 (5.28% annualised versus 5.66% for the US Universal), balancing interest rates and spread risk exposures in FIBR led to better risk diversification and lower realised volatility (2.57% annualised volatility versus 3.49%). Furthermore, FIBR outperformed during periods of rising interest rates (17bps/month total return versus 3bps/month). Over the entire back-tested period, FIBR had a higher Sharpe ratio than the US Universal (0.92 versus 0.78).

While deviating significantly from market value-weights may not be possible for all investors, certain investors may find balanced-risk indices appealing. It would be of interest to investors seeking to tactically reduce interest rates exposure as well as to investors who believe that in the long run indices with balanced exposures to multiple risk premia will deliver better risk-adjusted returns than indices with concentrated interest rates risk exposures.

CORPORATE BOND FACTORS

While our approach to credit style investing is guided by common equity styles, we make necessary adjustments to account for important differences between the two markets, particularly with regards to portfolio implementation and the liquidity constraints of corporate bonds. Our results provide strong evidence that alternative risk premia (value, low risk, momentum and size) factor-tilted portfolios have higher risk-adjusted returns than market value-weighted benchmarks do. These strategies, when implemented effectively, could deliver significant excess returns which are robust to transaction costs and specific portfolio construction settings over the past two decades.

The value factor assumes the fair value of a bond's spread can be deduced from its peer group – defined as the set of bonds with similar duration, industry, rating, subordination type and country of issuance. Low risk bonds have historically generated higher risk-adjusted returns than high-risk bonds. We define the low risk factor as a combination of a bond's systematic and idiosyncratic excess return volatilities. Momentum is predicated on empirical evidence of past winners continuing to outperform past losers. The size factor exploits the outperformance of small companies. While we recognise that size captures an illiquidity effect, we argue that the premium it offers holds even after accounting for the higher transactions costs that these bonds incur.

Our analysis and results are conducted and presented on excess returns over duration-matched Treasuries. This removes the interest rates premium and isolates the returns due to credit risk. The historical excess return Sharpe ratios for value (0.70), low risk (0.65), momentum (0.53) and size (0.43) were higher than the European Investment Grade benchmark index's (0.24) over the past 16 years. After conservatively accounting for transaction costs, all the factors' Sharpe ratios, with the exception of momentum, remain higher than that of the benchmark index.

Zarvan Khambatta, CFA, CAIA, is responsible for systematic strategies, and Amine El Khanjar for portfolio modelling at Bloomberg

The smart beta (r)evolution

FANNIE WURTZ
AMUNDI

Over the past 10 years there has been a revolution in the asset management industry. The ability of stocks with certain investment characteristics, such as value and momentum, to outperform the market has been well understood and documented for decades. But options of how to implement this strategy were limited.

For many years investors had no choice but to choose an active manager who selected those stocks with a particular characteristic. The development of the exchange-traded fund wrapper and the ability of asset managers and index providers to handle higher quantities of data changed all that.

Now it's possible for institutional investors to choose an ETF that will systematically select stocks with characteristics like low volatility and growth at lower cost.

INVESTMENT FUNDAMENTALS REMAIN UNCHANGED

Adding new tools to the kit available to institutional investors does not, however, change the fundamentals of investing. When a pension scheme or an insurance company sets their strategy, they carefully assess the risk-return profile they require to meet their liabilities.

Once these high-level goals have been set, trustees and asset allocators can turn their attention to which asset strategies will enable them to meet their goals. The development of smart beta gave many institutional investors access to a particularly useful tool – 'low volatility' equity funds.

In the aftermath of the global financial crisis, institutional investors were concerned about the inherent volatility of equity markets. The introduction of ultra-low monetary policy exacerbated those concerns – their liabilities ballooned as bond rates tumbled.

These institutional investors faced a tough conundrum: their funding gaps had risen, which required a more aggressive investment strategy to generate the returns to narrow. But at the same time these investors were wary of over-allocating to risky assets like equities. Their high volatility makes steep market corrections highly likely, which they could ill afford.

LOW VOLATILITY PROVED POPULAR WITH INSTITUTIONAL INVESTORS

Low volatility equities provided the perfect solution to many European pension schemes. They could still access equity markets but with less risk than conventional strategies. And this could be done through low-cost vehicles, such as ETFs.

Investors were pleased. These allocations performed well in the aftermath of the financial crisis because the market conditions favoured this investment characteristic.

This strategy works well during periods of economic contraction, which can often translate into market corrections and increases in volatility. But it will usually underperform in a bull market which could be accompanied by increases in interest rates.

Using a low volatility strategy allowed institutional investors to become familiar with smart beta strategies. They became more comfortable with this investment concept and, as economic growth recovered and equity markets started to perform well, they realised there was a broader universe available.

GROWING AWARENESS OF THE DIFFERENCE IN PERFORMANCE

The inverse correlation between the economic recovery and low volatility stocks also made investors aware of the performance behaviour of a particular investment factor.

Stock characteristics can be divided into two broad groups: those which have defensive characteristics and those which have cyclical attributes. Like low volatility, the 'dividend' and 'quality' factors tend to perform well when the economy is contracting. They are defensive attributes.

The 'dividend' factor selects those stocks which can deliver a sustainable high income. This characteristic has been popular as investors sought alternative sources of yield in a low interest rate environment.

The 'quality' factor emphasises those companies with lower debt and higher profit margins than the market average. Most importantly, these firms are capable of comfortably generating regular cash flows. These corporates provide a measure of protection during a period of rising interest rates because of they have few liabilities on their balance sheet.

When economies start to recover and financial markets rise, these defensive factors will tend to underperform the broader market and it is those with cyclical characteristics that will perform better.

For example, the 'value' factor will perform well when investors are more inclined to take risks. This usually happens during periods of economic expansion when inflation and interest rates increase. The share price of these stocks tends to rise in these conditions.

The 'size' attribute – which selects smaller and mid-cap stocks – is another that performs well during times of economic expansion. These companies need a positive environment to perform well and struggle when growth is stagnant.

'Momentum' also does well during periods of economic expansion, particularly in the later stages of a financial bull market. This strategy selects those stocks which have performed strongly recently as they are likely to continue to outperform the broader market.

WHEN ONE IS NOT ENOUGH

Investors faced a choice as they became more familiar with the universe of investment factors and their relationship to each other, the economic cycle and financial market trends. In order to maximise the performance of their allocation to these strategies, they realised focusing on only one or two would not achieve this goal.

As their knowledge increased, their implementation of these strategies became more sophisticated. They started to allocate to multiple strategies to get the best results over their long-term investment horizons.

Aware of the relationship between a particular factor and the economic outlook, investors could chose to time their asset allocation decision. For example, they could switch to value, size and momentum in times of expansion and to low volatility, dividend and quality during periods of contraction.

But institutional investors know how difficult it is to make accurate market timing decisions. This introduces a significant new risk into their investment implementation which, after all, is targeting a specific risk-return profile so they can meet their liabilities.

And those market timing decisions are made all the more complex by the current economic environment. Even though many regions are heading towards a period of more normalised monetary policy, the impacts of a long period of very low interest rates lingers.

The evolving relationship between factors and economic as

Correlations of excess return – global 2002–17

	Mid cap	Minimum volatility	Momentum	Quality	Value
Mid cap	100%				
Minimum volatility	–19.0%	100%			
Momentum	16.3%	31.1%	100%		
Quality	–30.9%	39.7%	31.8%	100%	
Value	28.9%	–35.2%	–22.1%	–53.9%	100%

Source: MSCI, Amundi as of December 2017, net total returns in US dollars

well as market conditions makes timing market decisions look even more unappealing. The more rational conclusion is to combine different factors into one portfolio.

By mixing different investment strategies, institutions can add diversification to their portfolio due to the complementary behaviour of the factors during different economic and market phases.

HOW TO ALLOCATE TO DIFFERENT STRATEGIES

Once investors have decided to use several investment factors, then they need to decide how to allocate the portfolio among them. As providers have become more sophisticated, the options available to investors have increased.

Investors could simply decide to allocate equal proportions of their portfolio to each strategy. But as many institutions are focused on the risk-return profile of their assets, allocating according to the relative risk of each factor might be a more appealing idea.

For example, the Multi-Beta Multi-Strategy ERC index created by ERI Scientific Beta in partnership with Amundi, does exactly that. It combines four factors – value, momentum, low volatility and size – according to the relative risk weightings of these indices.

GROWING CONCERN OVER EQUITY MARKET VOLATILITY

Institutions are becoming increasingly wary of equities. Even though an allocation to multiple factors will help to diversify the risk, it cannot negate the exposure to the direction and volatility of those markets.

The performance of equities has been exceptional. The Stoxx European 600 index has risen by 173% since March 2009 and is now close to an all-time high. The higher a financial market climbs, the greater the likelihood of a correction.

Not only does a fall in markets become more likely as prices beat historic peaks, but the pain also increases. Investors can ill-afford to relive the loss of capital values they experienced during the financial crisis. This desire to reduce risk increases the appeal of market neutral strategies.

One way to continue to exploit equity trends while being insulated from any potential market corrections is to use a long-short strategy. Traditionally these funds produce returns through stock selection while a hedge minimises the exposure to any market corrections.

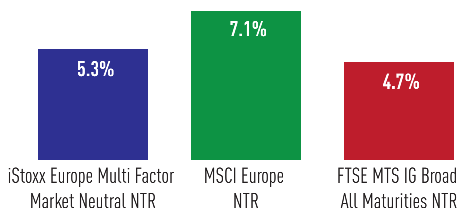
It is possible to develop a similar strategy for investment factors. For example, by taking a long position in equity factors to harvest risk premia and hedging this exposure by selling equity futures on a liquid, broad European stock index.

This is the strategy used by the iStoxx Europe Multi-Factor Market Neutral index. It embeds six factors: value, size, quality, carry, momentum and low risk.

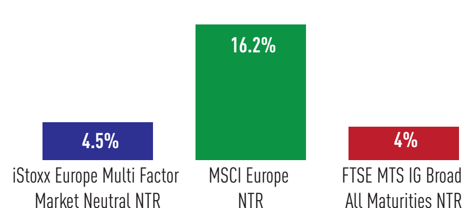
Each constituent stock of the Stoxx Europe 600 index has a multi-factor score calculated by average of each individual risk factor. Then 50 to 120 stocks are selected for the index through an optimisation process. This long position is counterbalanced with a short position in Stoxx Europe 600 futures roll index.

The combination of this long exposure along with short futures hedge removes the equity market beta, allowing the ETF to provide exposure only to the targeted

An index performance between equities and fixed income



An index volatility close to fixed income standards



Source: Bloomberg, Stoxx. Annualised daily volatility and return per annum from 31 December 2010 to 30 June 2018. Investors are reminded that past performance is not a reliable indicator of future results. MSCI Europe and FTSE MTS IG Broad All Maturities are used for illustrative purposes only.

investment factors.

Historical data shows this strategy will produce a potential performance outcome where the net result is somewhere between the returns on equities and fixed income but with bond-like levels of volatility.

The advantage of a market neutral ETF is that it is a cost-effective off-the-shelf solution for institutional investors. But many pension schemes and insurance companies prefer a bespoke investment strategy which meets their particular risk-return requirements.

SMART BETA STRATEGIES BECOME EVER MORE SOPHISTICATED

Using investment factors in market neutral strategy is only one way the use of smart beta is becoming more sophisticated. For example, there is growing recognition that factors can be implemented in multi asset and fixed income for instance.

Of all those asset classes, bonds are perhaps one of the most interesting because it is such a fundamental part of any institutional investor's portfolio.

But using fixed income investment factors has specific liquidity features and is more fragmented than other asset classes. Academics and companies such as Amundi are currently researching how bond investment factors can be exploited.

Fannie Wurtz is managing director, Amundi ETF, Indexing & Smart Beta

Regional spotlight – US equities

CHANCHAL SAMADDER
LYXOR ETF

US equities have proven overwhelmingly popular with investors desperate for signs of economic growth. They have been the best performers in euro terms since the beginning of the year and their dominance in terms of flows year-to-date is little short of astonishing.

By the end of August, they had gathered record YTD inflows of nearly €15bn – nearly 65% of all equity flows and almost more than developed market equity ETFs in total, given the sustained outflows from Europe we saw between February and July.

Nor have these flows been limited to traditional large cap exposures – as the economic cycle has aged, investors have become more selective in their allocations with sector ETFs and, latterly, small- and mid-cap ETFs gaining traction. Sector inflows, in fact, hit a record €1.6bn YTD by the end of August, with around €900m of that going into technology. But can the run continue?

LIFE IN THE OLD BULL YET

Despite their strength – and that popularity – we still feel there's more to come, even at this late stage of the cycle. There is little doubt US president Donald Trump's belated, but unprecedented, fiscal stimulus should foster more inflation at a time the economy is running at or above full capacity. Strong top-line revenues and margin expansion (as well as share buybacks) have bolstered the earnings-per-share outlook for corporates, while recovering capex and the associated upturn in productivity could help mitigate the negative effects of rising wages on profit margins. All of which suggests some further upside ahead. Little wonder investors are still being drawn to the US, despite the unpredictability of the administration on the Hill and the looming mid-terms.

So, for now at least, we're not put off by seemingly stretched valuations, although they may limit long-term upside potential. We, like many others, have said that before, however, and the bulls have kept on running...

Recent US ISM surveys have reached new cycle highs and the job market has remained strong, suggesting solid growth in the coming months. Outside the US, business survey results such as PMI manufacturing in emerging countries and Europe have dipped on the trade tensions, but they're still pointing to economic expansion. That could change should the trade war escalate or become more global in nature but we still think a negotiated settlement is ultimately more likely. In truth, a move from sporadic, temporary sell-offs into a lasting bear market requires a more meaningful, cyclical turn down – something we do not foresee just yet.

CHOOSING YOUR VEHICLE

So how should you invest? Choosing the right investment vehicle in most markets is often challenging – except, that is, in the US, where active managers

really do struggle to beat their benchmarks.

At the end of H1 2018, fewer than one in five large-cap managers (19%) were giving investors what they paid for. At least that's better than the 11% that have delivered over the past decade. Small-cap managers fared a little better, with just one in four having outperformed by the end of H1 but the pattern is clear.[1] Which passive vehicle should you choose?

Sophisticated investors tend to believe futures are more liquid options than ETFs and cost less overall but the results do not stack up, in our view, as often as you might believe.

Taking three of the major US equity markets as our examples, we can see that ETFs were more effective for a broad S&P 500 exposure as well small-caps via the Russell 2000. In contrast, for the NASDAQ 100, futures contracts still win out. When choosing your passively managed investment, you still need to be selective wherever possible.[2]

YOU ARE HERE

Although every business cycle is different, they do tend to follow a similar pattern. As an economy progresses through the cycle, some sectors naturally perform better than others and vice versa.

Convention has it that when an economic recovery matures, the energy and materials sectors – which are closely tied to raw material prices – tend to do well because inflationary pressures are building and demand is still solid. On the other hand, IT and consumer discretionary stocks tend to suffer because profit margins are being eroded and investors are more wary of luxury spending.

We're seeing some of this today in the US with the recovery now entering its dotage, but there are specific issues at play helping some sectors defy convention.

OF SECTORS, SIZES AND STYLES

When assessing US equity allocations today, you have to factor in the fallout from the fiscal push. It helped US corporates avoid typical late-cycle issues like slowing earnings growth and a squeeze on profit margins and also ensured a favourable environment for financials and technology, through deregulation and tax reform respectively.

Quite naturally, we also favour some more conventional late-cycle calls, including energy and healthcare. Energy in particular appeals to us because of its improved corporate fundamentals and the recovery in oil prices.

There are some areas we would rather avoid too. We are wary of the consumer discretionary sector given company-specific risks and problematic valuations, particularly in e-retailing. We are also keeping a watchful eye on the most defensive sectors – especially those more sensitive to interest-rate rises including utilities and consumer staples. We had held a negative view on telecoms too, but the sector's recent expansion and conversion to 'communication services' – which led to the inclusion of companies like Facebook and Netflix and the sector having more of a leaning towards growth – does change our view. That said, regulatory issues affecting data privacy still merit some caution.

Meanwhile, president Trump's tax cuts should still stimulate additional profit growth for smaller companies, many of which benefit from a domestic bias to their business – making them slightly less vulnerable to the ongoing trade disputes.

CHOOSE YOUR INDEX WISELY

Precision and selectivity, then, are the watchwords at this late stage of the cycle. Look to lower cost exposures to make the most of whatever upside remains, tilt towards tech or bet on the specific issues boosting banks with indices like the Morningstar US Large-Mid Cap, the NASDAQ 100 or the S&P 500 Banks. Alternatively, you could seek to add some resilience to your portfolio with quality income or minimum variance strategies.

In contrast, the S&P 500 and MSCI USA look most exposed to those areas we favour least, while the FTSE USA Core Infrastructure comes with a 50%+ allocation to utilities.

Chanchal Samadder is head of equity strategy, Lyxor ETF

1 Source Morningstar, Bloomberg. Data from 31 December 2007 to 29 June 2018.

2 Source: Lyxor International Asset Management, as at August 2018.

Using ETFs to position for a US–China trade war

MATTHEW TAGLIANI

INVESCO

Many media and market commentators believe that the potential US-China trade war could be one of the largest risks facing the global economy. And while the degree to which relations deteriorate is unknown, many investors are understandably exploring how best to position their portfolios amidst the potential economic impacts.

In this article, we explore the sectors and asset classes likely to benefit and suffer across a range of trade tension scenarios, why exchange-traded funds (ETFs) are a useful tool for implementing the sort of nuanced investment exposures that are required for such scenarios, and how an investor might implement these targeted views.

ADVANTAGES OF ETFs FOR TARGETED VIEWS

ETFs are unique in many ways. One unique feature is the granularity of exposure many ETFs offer. As most ETF assets are held in broad index trackers, many investors are unaware of the rich offering that exists in more narrowly focused funds. These ETFs can be used as 'satellite' investments around investors' core exposures to help fine tune portfolios to specific market or economic investment views.

Take sector-specific ETFs for example. Due to these ETFs' different sensitivities to macroeconomic factors, geopolitical shifts and other news flow, many investors use sector over- and underweights to position their portfolios according to their views.

Why might an investor use an ETF over an actively managed sector-specific fund? Sector-specific ETFs have several advantages over actively-managed funds. First, ETFs provide easy access to a full range of sector exposures, and many passively track indices at lower costs. When compared to achieving the same exposure via an active manager, an ETF may help reduce the need for lengthy due diligence across many different managers. Many sector specific active fund managers are boutique firms that lack a full range of sector funds, and so investors in these active funds may expend more time and resources performing due diligence.

By using passive replication, ETFs act as tools for pure directional positioning. This may mean less or no unintended conflict between the sector ETF exposure and the positioning or view of the end investor – many actively-managed sector funds are run as a long/short strategy to increase the opportunity for outperformance, but therefore provide less pure directional exposure.

Another advantage of sector ETFs is breadth of choice. For example, the most actively traded sector range in the US offers 11 different funds, and, in Europe, there are 18 funds in the most popular sector family. There is also a wide range of ETFs that track less traditional sectors (for example, fintech, master limited partnership or MLPs) and more thematic indices (for example, exporters).

Lastly, ETFs offer benefits because of how they trade. Sector views tend to be more tactical and short term than broader regional or asset allocation decisions. ETF investors can respond to news quickly, even intraday, and have no mandatory holding periods or pre-defined redemption windows. ETFs are designed to accommodate this type of high turnover trading.

Whether it's easy access through less due diligence, pure directional positioning, choice or trading, for investors seeking nuanced investment exposure, granular ETFs, such as sector ETFs, may be the preferred investment vehicle.

POSSIBLE SCENARIOS AND POSITIONING FOR A US-CHINA TRADE WAR

The recent US-China trade tensions provide a convenient framework for examining how investors can adjust their portfolio to express their views. Our Multi-Asset Economic Research Team has identified a scale of scenarios:

- Full-scale trade war that also negatively impacts other countries outside the US and China
- No all-out trade war, but a selective application of tariffs to a limited number of products
- China and the US both stand down without any repercussions.

The most likely scenario is not an all-out trade war, but a selective application of tariffs to a limited number of products. This would be likely to drag on global economic growth and push inflation up in the US as higher imported costs are passed on to consumers. Under this scenario, we expect domestic companies would fare better than exporters. Defensive sectors such as consumer staples, utilities, or healthcare, would likely outperform cyclicals such as banks or technology.

Tariffs will impact more than sectors. For investors asking broader allocation questions, from a geographical perspective, the question remains: is the trade impact contained to just the US and China? If so, one could argue the case for select European equity sectors.

For investors looking to invest directly into China, we believe the impact of selective tariffs on the overall Chinese economy is likely to be moderate. Investors may view the broad sell-off in Chinese equities over the past six to eight months as representing a fair assessment of this impact, or alternatively as an overreaction and therefore an attractive opportunity to invest.

The other two scenarios to consider are the extrema. The worst-case scenario is a full-scale trade war that would negatively impact other countries. This could lead to a global recession that would be particularly damaging for commodities, equities, and emerging markets. At an asset class level, the relative winners are likely to be 'safe haven' asset classes such as gold, Treasury bonds, and cash. In terms of equity exposure, the worst-case scenario would favour domestically-focused defensive stocks. Sectors such as healthcare, utilities, telecoms, and consumer staples would be likely to hold up much better than cyclicals. China A-shares in this case would be expected to underperform, in particular the more export-focused industrial and technology sectors would suffer.

At the other end of the spectrum, there is the extreme outcome of a happy ending in which both China and the US stand down without any repercussions. If this were the case, it would be a relief for global equity markets in general, and particularly for the US and China. Chinese equities would benefit, and the broad sell-off in Chinese equities over the past six to eight months could be an attractive entry point. The most attractive sectors would be those that benefit the most from continued strong global growth. These include highly cyclical sectors such as basic resources and those that are most hurt by rising inflation, such as utilities.

What stands out is that it's likely the winners and losers would be sharply divided across the scenarios, based on whether they are exporters versus domestically focused, cyclical versus defensive, and more versus less inflation sensitive. For investors following the markets, new information comes quickly and can have a significant impact on relative sector performance.

ETFs provide a ready toolkit with which to easily realign portfolio exposures – whether to increase exposure to target sectors or reduce exposure to potential underperformers. The granular nature, wide offerings, and flexible trading characteristics of ETFs allow investors to be nimble, especially in preparation for today's burgeoning US-China trade war.

Matthew Tagliani is head of ETF product and sales strategy at Invesco

The dynamic market in Japanese equity ETFs

PRITPAL LOTAY
NIKKO ASSET MANAGEMENT

Opinions of Japan as a market tend to be quite polarised and the country has looked cheap on a valuation basis for quite some time, both historically and relatively.

However, is the story different this time and what does the data tell us?

Many domestic fund managers remain optimistic, placing faith that the 'Abenomics' rally, forged by prime minister Shinzo Abe in 2013, is likely to continue. As a reminder, Abe's three arrows are centred on monetary policy, fiscal measures and growth strategies. These policies are driving the economy toward a growth trajectory and, so far, the objectives seem to be working.

The Abe administration has been working proactively on long-term initiatives to address Japan's changing social structure, such as the ageing and shrinking population. In addition, the government has positioned promoting economic growth and structural reforms to support the economic recovery as its top priority and continues to coordinate with the Bank of Japan (BoJ) on the policy front. With the government focused on economic policy, the likelihood of the BoJ switching to a very tight monetary stance is low, underlining the country's continued monetary-fiscal co-ordination.

Additionally, and importantly is the change we are seeing in terms of corporate profitability. Companies are experiencing all-time high profit margins. While yen depreciation has always been a factor in profitability, it's important to note that profit margins are diverging from currency movements, more driven by productivity improvements such as labour-saving automation.

Historically, equity investment has been dominated by external investors but, year-to-date, there has been a significant increase in domestic investment.

Finally, with the 2020 Olympics in Tokyo not far away, preparations are in progress, and this infrastructure development will support the economy and should encourage investment activity.

In summation, Japan's outlook remains positive relative to that of other countries and regions.

THE BANK OF JAPAN'S ETF PURCHASING PROGRAMME

Further supporting the overall equity market and ETF market in Japan is the BoJ. In 2010, the central bank began its ETF purchasing programme. The objective of the programme was to encourage a decline in longer-term interest rates and various risk premiums, with a view to further enhance monetary easing. The BoJ has been buying ETFs tracking the TOPIX, Nikkei 225 and the JPX-Nikkei 400 indices.

Many critics have argued that the BoJ involvement through its purchasing programme has distorted the governance of Japanese companies. However, this is a common misconception, as asset managers continue to manage the proxy voting rights for the ETFs owned by the BoJ.

The BoJ's ETF purchases, which are currently targeted at ¥6trn (approximately $54bn) annually, have no doubt supported the market. At the bank's meeting in July it was decided to shift more of its purchases into the broader TOPIX Index, and away from the Nikkei 225 index. The composition of the Nikkei 225 index means that the top 10 stocks account for approximately 33% of its overall total value.

By contrast, the TOPIX index holds a significantly broader range of stocks and stock weightings are less concentrated (the top 10 accounting for 16% – half the equivalent amount for the Nikkei 225). Unlike the Nikkei 225, the TOPIX is free-float adjusted and market-cap weighted (figure 1).

The BoJ announced at its monetary policy meeting in July that it intends to continue purchasing ¥6trn of ETFs over the next year. However, its attitude has changed slightly. The BoJ indicated that if market or economic conditions change, it could decelerate ETF purchases. It is worth bearing in mind though that purchases should remain at the current rate if equities decline. This would reduce one bullish factor for the market. But the 50% reduction of the amount of bank reserves subject to the BoJ's negative interest rate is positive for banks' profitability and to a degree clears negative fears about the whole policy. This should help the overall equity market.

A MASSIVE AND GROWING ETF MARKET

The growth of the Japanese ETF market has been phenomenal. Asia is the third-largest ETF market globally and Japanese-domiciled ETFs dominate the Asian ETF market, accounting for more than half. As of 31 July 2018, the total AUM of ETFs listed on the Tokyo Stock Exchange was $324bn.

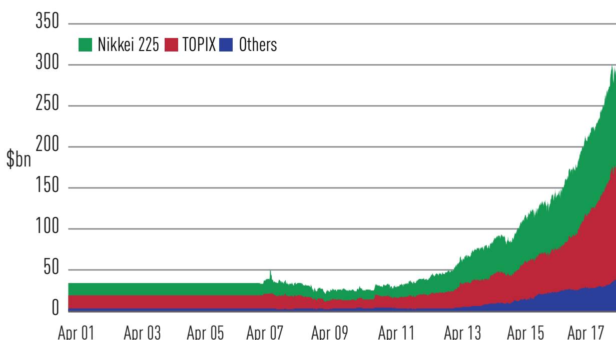
Figure 2 illustrates the huge amount of growth. Most investment has come from the BoJ, but many regional banks in Japan are also entering the market due to negative interest rates and to gain a better return on their reserves. Additionally, retail investors in Japan and overseas investors are identifying economic indicators to be supportive for growth in the Japanese stock market and ETFs act as an efficient means of accessing the market.

1. Nikkei 225 vs TOPIX

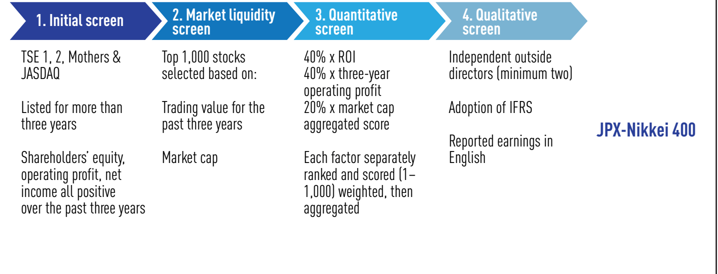
	Nikkei 225	TOPIX
Universe	Domestic common stocks listed on the first section of the Tokyo Stock Exchange, excluding ETFs, REITs, preferred equity contribution securities and trading stocks (on subsidiary dividends)	All the domestic common stocks listed on the TSE first section
Number of stocks	225	2,016
Selection method	Stock selection is based on liquidity and sector balance, with the latter determined according to six sector categories which have been consolidated from Nikkei's 36 industrial classifications	All the domestic common stocks listed on the TSE first section
Calculation method	Price average	Free-float adjusted market capitalisation-weighted
Total market cap ($bn)	3,215	5,504
Average market cap ($bn)	14.28	2.73
Average daily market liquidity ($bn)	14.85	26.35

Source: Bloomberg, index providers' websites, 21 August 2018

2. AUM of ETFs listed on the Tokyo Stock Exchange, April 2001–July 2018



Source: Nikko AM, Bloomberg, as at 31 July 2018



Liquidity in the ETF market is made up of onscreen and OTC trading. The major players in onscreen trading include individuals and offshore investors. Most domestic institutions will primarily trade OTC.

Some 85% of the total assets on the Tokyo Stock Exchange are ETFs with TOPIX and Nikkei 225 as the underlying indices. The Nikkei 225 has traditionally been more retail focused and the index itself is geared toward mid/large cap stocks. In contrast, the TOPIX index has more of an institutional following and is a much broader market index with a very large amount of constituents. Indices such as the MSCI Japan tend to be more popular amongst European investors.

It is worth mentioning that, while the MSCI Japan is highly correlated with the TOPIX, its index has less small-cap exposure and can therefore be seen as less representative of the broader Japanese market.

There is currently growing development into other areas of the ETF market. For example, the emergence of high-yielding products such as REIT ETFs and ETFs weighted toward higher dividend-paying stocks have seen rising demand in the current market environment. In addition, there are a variety of smart beta products emerging.

The JPX-Nikkei 400 index is a strategic beta index that was introduced in 2014. The index combines quantitative and qualitative factors onto a wide universe of companies screened for quality and liquidity. It provides exposure to Japanese companies with efficient capital management policies, managed in an investor-orientated manner. The idea of the index is to hold the most shareholder-friendly companies. To some in Japan it is known as the 'shame index'. Its nickname has gained traction as companies not included during constituent reviews or those that are removed from the index receive a lot of public pressure to improve for example from the media.

ACCESS

Japanese-domiciled ETFs have been popular for a number of reasons. Putting aside the fact they have high trading volumes and are highly liquid, one of the most significant advantages of being locally domiciled is the fact that the ETF trades when the underlying market is open. As you can see from figure 4, market open hours between western and eastern markets rarely cross over and this creates a lack of price transparency and liquidity for non-Japan-domiciled products.

Prices of western-domiciled

4. Market open hours

Tokyo	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	1	2	3	4	5	6	7
Hong Kong	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	1	2	3	4	5	6
London	23	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
New York	18	19	20	21	22	23	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

ETFs such as those listed on the New York and London Stock Exchanges deviate much further from their i-NAVs, demonstrating the benefits of underlying market liquidity and trading while the market is open. Thus, a locally domiciled ETF leads to enhanced tracking and decreases any tracking error through price discovery mechanisms.

While there are many passive options to access the Japanese stock market, western ETFs such as UCITS tend to be more expensive with wider spreads while Japanese-domiciled ETFs can offer tax advantages for tax-exempt investors over some non-Japan domiciled equivalents.[1]

Pritpal Lotay, ETF specialist, Nikko Asset Management

1 Tax treatment is different according to the ETF's domicile and the investors tax jurisdiction. This constitutes general tax information. The information given does not constitute tax or legal advice. Prospective investors should consult with their own professional advisers as to the tax implications under the laws of the jurisdiction in which they may be subject to tax.

How commodities strategies can help investors diversify their portfolios

CHRISTOPHER GANNATTI
WISDOMTREE

The search is on. In the current market environment, investors are looking for asset classes that can lower overall portfolio volatility without sacrificing returns. As a result, many investment managers are working on a variety of diversification solutions and if there is one concept that encapsulates the goal of investment managers in this regard, it would be a low correlation to other mainstream asset classes. However, when looking to lower portfolio volatility, it's important to weigh costs and transparency against any potential benefits gained. In our view, one of the simplest, yet most effective ways to potentially reduce portfolio volatility is through the use of commodities.

COMMODITIES – THE LOGICAL WAY TO DIVERSIFY

When reviewing asset class correlations over nearly 20 years (from 31 December 1998 to 31 August 2018), both the Bloomberg Barclays US Aggregate and the Bloomberg Barclays Global Aggregate Bond indices have exhibited low correlations, and in some cases, negative correlations to equities. However, the correlation of these two indices to each other has been medium to high, measured at 0.71, suggesting that US bonds and global bonds do not offer much in the way of diversification from each other. Intuitively, this makes sense, as global interest rates do exhibit relationships to one another.

In contrast, although the Bloomberg Commodity index did not exhibit the lowest correlation to any of the other assets, its highest correlation with any other asset class was 0.52, and this was to the returns of the MSCI Emerging Markets index. This suggests that commodities, overall, have generally offered low correlations to a mix of different global asset classes in the past and are therefore capable of providing investors with valuable diversification benefits.

Equities are considered by investors to be 'risky' assets. This perception translates into certain behaviours – most notably that when investors feel positive about markets, global growth and corporate earnings, money tends to flow toward equities.

Conversely, when sentiment turns negative, money flows out of equities. As it has become easier in recent years for investors to invest globally, correlations between regional equity markets have increased.

Certain large global bond markets such as US Treasuries, German Bunds and Japanese government bonds are considered to be 'risk-off' assets. While returns are generally not high, there is a perception that these markets offer near risk-free returns, with a high probability that capital will be returned at maturity and interest will be paid as scheduled.

As a result, when investors become concerned about equity markets, they often sell equities to buy these assets, and this accounts for the historical negative correlation between equities and these bond markets. Given that the US, Germany and Japan are some of the largest

debt issuers in the world, the behaviour of these markets tends to dominate the behaviour of global bond indices, such as the Bloomberg Barclays Global Aggregate Bond index.

Yet, commodities are perceived differently by investors as the asset class behaves in a unique way. Fundamentally speaking:

- When the demand for a particular commodity is greater than the supply, the price of that commodity will rise.
- When the supply of a particular commodity is greater than the demand, the price of that commodity will fall.

For this reason, commodities as an asset class can provide investors with diversification benefits as returns from commodities often have a low correlation to the returns of equities and bonds.

COMMODITY PRICE MOVEMENTS AND FUTURES

While the concept that commodities have a low correlation to other assets makes sense, any investor interested in including commodities within a portfolio needs to consider at least one further issue and that is how exposure to commodity price movements is to be best achieved.

When it comes to certain commodities, such as gold or silver, buying physical commodities is an option. However, not all commodities are as easily stored as precious metals. As such, many investors turn to futures contracts for exposure to commodity price movements, as with futures there is no need to physically hold and store each commodity. Yet do futures capture commodity price movements effectively? Let's examine the case for oil.

Frequently, investors think of a commodity like oil and see the price portrayed through popular platforms and news outlets. The performance of this observable price is what they aim to capture.

However, the total return associated with oil involves rolling one futures contract to the next, incorporating a concept known as roll yield. Roll yield is the impact on performance that comes from needing to roll one futures contract to the next each time a contract expires. In 2017, we saw 'contango' in the oil market where each successive futures contract was indicating a higher price for oil, leading to a negative roll yield and a total return that lagged the spot price. In contrast, in 2018, we saw 'backwardation' in the oil market where each successive futures contract was indicating a lower price for oil, leading to a positive roll yield and a total return that outperformed the spot price.

Therefore, instead of rolling one futures contract to the next in the same manner at set intervals, we would advocate considering approaches to broad commodities that account for backwardation and contango, to help achieve the diversification benefits that commodities can provide, without the negative impact of contango, if it occurs.

DIVERSIFY WITH A BROAD BASKET OF COMMODITIES

Perhaps the best way for investors to diversify their portfolios with commodities, in our view, is through an exchange-traded product (ETP) that tracks a broad diversified basket of commodities, such as the Bloomberg Commodity index. Consider that:

- Many see gold, a precious metal, as insurance against the loss of purchasing power of global currencies.
- Many see oil as the fuel for economic growth. As growth increases, it is reasonable to expect demand for oil to increase, pushing prices higher. On the other hand, higher oil prices inspire further exploration and production of more oil, which increases supply.
- Wheat is important in feeding the global population. While it would be logical to relate demand for wheat to economic and population growth, supply is more related to weather and growing conditions in major producers around the world.

While individual commodities within different broader commodity groups in the Bloomberg Commodity index are likely to be correlated to each other, there is no reason to think that the groups should be highly correlated.

CONCLUSION

Commodities, as an asset class, have a relatively low correlation to both equities and bonds, and as a result, can help investors lower overall portfolio volatility. We believe the best way to add commodities to a portfolio is through a broad index that includes exposure to different commodities, including precious metals, industrial metals, energy-related commodities and agricultural commodities, to capture the full diversification benefits of the asset class.

Christopher Gannatti is head of research, Europe, at WisdomTree

Getting to grips with cryptocurrencies

PAUL AMERY

For institutional investors and asset managers, cryptocurrencies pose a triple dilemma.

Their origins and investment characteristics are deeply unfamiliar. Holding them safely is difficult and fraught with technical detail. And if cryptocurrencies were to succeed, institutions and asset managers would have had next to no say in their development, governance and distribution.

Could cryptocurrency exchange-traded products (ETPs) help bring the conventional financial market closer to the anarchic, internet-based platform for digital assets?

AN UNFAMILIAR, VOLATILE ASSET – BUT ONE THAT REFUSES TO DIE

The appearance of bitcoin, the most popular cryptocurrency, in the depths of the 2008–09 financial crisis was marked by a cryptic comment on the failing monetary system.

Satoshi Nakamoto, the pseudonym of bitcoin's creator, added a data 'tag' to the first batch (or 'block') of transactions in the digital currency, citing a headline in the UK press.

"The Times 03/Jan/2009 Chancellor on brink of second bailout for banks," Nakamoto wrote.

The early days of bitcoin were experimental, with a small group of cryptographers, computer geeks, libertarians and anarchists passing tokens amongst themselves to prove the system worked.

Those mining the currency – anyone able to solve a computationally intense puzzle – were rewarded by tokens that initially had little monetary value.

Things started to change when bitcoin took off in fiat monetary terms: bitcoin rose from under a dollar in value in 2011 to over $1,000 in 2013, before falling back to around $150 a coin in 2015.

The hack of the most widely used bitcoin exchange, Mt. Gox, in late 2013, attracted headlines in the mainstream press, as did the use of bitcoin as the transaction currency on the most popular dark net market, Silk Road, closed down by the FBI in the same year.

But it was 2017's stratospheric rise in the value of bitcoin and other cryptocurrencies that caught even professional investors' attention. The dollar price of a single bitcoin rose from under $1,000 a coin to nearly $20,000 by mid-December, before falling back.

At a collective market capitalisation of under $300bn, cryptocurrencies remain tiny relative to the global M3 money supply of $90trn. But their claims to serve as money have upset many in the conventional financial system.

Bank for International Settlements general manager Agustín Carstens has called bitcoin "a combination of a bubble, a Ponzi scheme and an environmental disaster", referring to the electricity consumed by those mining the cryptocurrency.

JP Morgan CEO Jamie Dimon

Source: coinmetrics.io. Logarithmic scale for y-axis.

last year described bitcoin as a "fraud worse than tulip bulbs" and threatened in 2017 to fire any of his firm's traders who touched the asset class.

"Bitcoin's intrinsic value must be zero," Stefan Hofrichter, Allianz's head of global economics and strategy, said earlier this year.

"A bitcoin is a claim on nobody – in contrast to, for instance, sovereign bonds, equities or paper money – and it does not generate any income stream."

Some asset managers, perhaps nervous that they might be missing a new opportunity, are more measured in their dismissals.

"We don't see huge demand for cryptocurrencies," BlackRock CEO Larry Fink told Bloomberg Television in July.

"I don't believe any client has sought out crypto exposure. I've not heard from one client who says 'I need to be in this'," Fink said.

But, according to a recent report, BlackRock has now devoted internal resources to the topic, setting up a working group to examine cryptocurrencies and their applications.

BlackRock, Fidelity and Invesco all declined to comment for this article.

Mark Fitzgerald, head of ETF product management, Europe, at Vanguard, told IPE of the difficulty of classifying the new asset class, noting its uncertain prospects.

"Any new product we introduce must help diversify idiosyncratic risk, have an enduring investment rationale, offer a real return over the long term and have a clear and transparent structure. It's not clear that cryptocurrencies meet any of those tests," Fitzgerald says.

"Cryptocurrencies could perform a role as a means of payment, for example in countries where access to hard currency for international payments is somehow restricted. But to my mind that's not the same as an investment case."

One well-known equity investor has spoken out in favour of the cryptocurrency, however.

Bill Miller, CIO at Miller Value Partners, told Bloomberg TV in July that bitcoin's prospects are improving with time.

"It's an interesting technological experiment and we don't know how it will play out," said Miller, who has invested in bitcoin.

"But at around $8,000 a coin, I'd argue it's a lot less risky than it was at $100. Every day it doesn't blow up and go to zero, or get regulated out of existence, more money flows into the ecosystem and more people are looking at it."

Yves Choueifaty, CEO at asset manager TOBAM, which operates a bitcoin mutual fund with around $10m in assets, observes how cryptocurrencies divide opinions.

"Many people have polarised views on cryptocurrencies: some are almost hateful, while others are totally for them," Choueifaty says.

But interest in the topic among professional investors is now stronger than ever, he adds.

"The intellectual appetite for cryptocurrencies is very strong: everyone is very eager to discuss the subject," Choueifaty says.

Matt Hougan, head of research at Bitwise Investments, which manages a cryptocurrency index fund and has recently filed an application with the US securities regulator for a cryptocurrency ETF, highlights the peculiarities of the past price behaviour of cryptocurrencies.

"Institutions are unfamiliar with an asset class that offers

high potential returns, high volatility, daily liquidity and low correlations to other assets," Hougan says. "They are doing more research, but there's career risk in being an early mover."

Gabor Gurbacs, director of digital asset strategy at Van Eck, which is awaiting regulatory approval for two different bitcoin ETFs in the US, quantifies institutions' continuing absence from the cryptocurrency markets.

"We estimate that the digital asset space is about 95% retail. Institutions and banks haven't yet entered the market in a meaningful way," Gurbacs says. "This is the first time when Main Street beat Wall Street to the game."

CAN ETPs HELP BRIDGE THE FAMILIARITY GAP?

According to those developing cryptocurrency ETPs, the introduction of tracker vehicles will help institutional investors overcome the difficulties they face establishing trading and custodial relationships in the digital assets market.

"It's still difficult to invest in bitcoin directly," says Laurent Kssis, CEO of XBT Provider, which offers trackers of bitcoin and the second-largest cryptocurrency, ether, listed on the Nasdaq Stockholm exchange.

"It's quite technical and people may not want to disclose their identity and bank account information to relatively unknown counterparties based outside any European jurisdictions.

"You may not know who they are or even where they are based. Buying an ETP via a broker is a safe option. It takes care of the custody and all the issues related to setting up your own wallet or exchange account."

XBT's trackers are structured as debt securities, collateralised by holdings in the respective cryptocurrency. Europe's UCITS fund structure, which offers the widest scope for distribution to retail investors, and which is used by most European ETFs, sets minimum diversification requirements and would not permit a tracker investing in a single underlying asset.

In the US, funds issued under the 1933 Securities Act can hold a single commodity or currency, however. The 1933 Act structure is used by popular gold and oil ETFs and several promoters have now registered applications with the Securities and Exchange Commission (SEC) for bitcoin trackers.

However, the SEC has so far refused to grant a green light to such funds. In a recent public release denying for the second time a request by the Winklevoss Bitcoin Trust to launch an ETF, the regulator cited concerns about the potential manipulation of bitcoin prices and the lack of surveillance-sharing agreements with exchanges where the spot price of bitcoin is determined.

Nevertheless, many observers believe that the SEC will come round to approving cryptocurrency ETFs some time in 2019.

The US regulator has cited the late-2017 appearance of listed futures on bitcoin as a positive development. A number of the proposed new ETFs plan to use bitcoin futures, rather than direct holdings in the cryptocurrency, as their underlying asset.

"For the 1933 Act applications, which include both futures-based ETFs and ETFs holding cryptocurrencies directly, everything pivots on the Division of Trading and Markets of the SEC", says John Hyland, global head of ETFs at Bitwise Asset Management.

"Is there enough liquidity there? Are prices representative of the underlying? We've filed for an ETF that could hold either futures or the underlying asset. In the long run, ETFs should probably physically hold the coin. But it's not the worst thing if cryptocurrency ETFs have to hold futures."

"The rationale behind a futures-based bitcoin ETF is that the best way to hold the cryptocurrency is not to hold it," adds Van Eck's Gabor Gurbacs.

Van Eck has two outstanding applications for bitcoin ETFs with the US regulator, one based on a futures underlying, one planning to hold physical cryptocurrency.

"Custodianship is one of the big outstanding issues in the space. But institutions are also missing proper valuation and pricing benchmarks, sufficient liquidity and regulatory oversight," Gurbacs continued.

However, TOBAM's Choueifaty cautions that investors in cryptocurrency need to make sure they have full control of the underlying asset in order not to miss out on potential forks—effectively, bonus issues of new currency.

For example, bitcoin split into two currencies on August 1 2017 – bitcoin (ticker symbol BTC or XBT) and bitcoin cash (ticker symbol BCH). Owners of BTC before the split gained an equal

number of coins in BCH on that date.

"If you buy and hold bitcoin via a platform, you may not gain access to all the forks of the cryptocurrency," Choueifaty told IPE.

"Since the launch of our fund, we have been able to access 30 forks, benefiting the holders of the fund. We use an open-source wallet, which means we don't have to rely on a trusted third party. If you use an ETN, you own a debt instrument with credit and legal risk. For example, the ETN may also not give you access to all the forks in the underlying, depending on how its prospectus is written."

PRICE vs CONVENIENCE

By comparison with the razor-thin fees of many conventional ETFs, cryptocurrency trackers do not come cheap. XBT's bitcoin and other trackers, Bitwise's HOLD 10 cryptocurrency index fund and TOBAM's bitcoin fund all charge 2.5% a year.

Bitwise's John Hyland expects US-listed bitcoin ETFs, if approved, to charge between 1-2% a year at launch, though he says this figure will come down over time, reflecting declines in custody costs.

If these headline charges seem high, it's a matter of perspective, he says, drawing an analogy with gold and oil trackers, which have proved highly successful.

"ETFs offering exposure to a single cryptocurrency would be providing the same kind of packaged convenience as USO and GLD do for oil and gold," says Hyland.

"In the case of those two ETFs, 80-90% of holders were hedge funds and trading desks, most of whom could have saved themselves the fee and bought the underlying themselves. But they preferred to hold the ETF. It's far less time-consuming."

Paul Amery is founding editor of New Money Review (newmoneyreview.com)

Esoteric ETFs: egregious or genius?

ELIZABETH PFEUTI

From companies capitalising on cannabis decriminalisation to the streaming of Quincy Jones's music, you can almost guarantee there is an ETF available to enable you to invest in it. This pair were launched in the past two years, alongside another that tracks companies making money from ... selling ETFs.

Yet despite the vast range of these increasingly esoteric ETFs, or funds based on a specific theme, they have so far failed to entice institutional investors. A recent report from DWS's Xtrackers, in association with CREATE-Research, found pension funds and other institutional investors had very little inclination to engage with these sorts of products. Their quirkiness, though attractive for retail investors who appreciate more of a story to their financial commitments, does not fit with the overall strategy of most long-term investors' portfolios, the research found.

But ignoring some of the more gimmicky ideas, are these large investors missing out on potential alpha opportunities? In May, the ETF that tracks ETF providers reported its first-year performance had been more than 35%.

For Kenneth Lamont, a passive fund analyst at Morningstar who is about to publish a detailed report into these thematic ETFs, the reticence from institutional investors has been understandable.

"These funds tend to not have a long track record," says Lamont. "The theme the fund is investing in has yet to play out, so you often cannot look at past performance to assess the quality of an idea."

Thematic ETFs launched in the past year have included one shorting large retail names in North America, as many struggle with the advent of ecommerce, and another that invests in international brands with recognisable logos to capitalise on increasing globalisation, partly via social media.

Both these themes ring true, but institutional investors, as fiduciaries, need more than just a gut reaction before allocating capital. Due to the newness of the phenomenon, there is no way to back test it. "You can research the fund provider and look at how it accesses the theme," said Lamont, "but it is hard to assess how the theme will perform in future."

UNCONSTRAINED

Additionally, due to both the originality and idiosyncrasy of these themes, there is no way to benchmark how they are performing – a must for the majority of institutional investors.

These funds are often entirely unconstrained, which causes another stumbling block.

"Even factors, size, style and the value of the fund change over time," says Lamont, pointing to an unpredictability that is not favoured by institutional investors with strict risk budgets, investment principles and guidelines.

Their cost – usually significantly higher than more traditional ETFs – and relative transiency – 84% of thematic ETFs launched before 2012 have

closed, according to Lamont – also strikes them off pension funds' list.

However, there are a couple of compelling reasons why large investors might want to take another look at these types of vehicles – and some providers have begun to trying to help them.

Legal & General Investment Management bought relative minnow Canvas in 2017 to help build out its ETF platform in Europe. The former Canvas chief executive, Howie Li, now heads up the £1trn fund manager's whole ETF unit.

Li has brought his entrepreneurial style to LGIM and has created a set of ETFs that have a thematic basis rather than track a traditional index.

"As an investor, you have to understand what is changing daily lives," says Li. "At LGIM, we consider the impact of technology, energy transition to cleaner forms and demographics, such as the ageing population and growing middle class in developing economies."

Unlike investing in a range of large technology disrupters, such as Amazon, Google and Facebook, one of the ETFs LGIM has launched examines the critical use of tech in a variety of business models, and along the supply chain in various industries.

Another considers the dramatic increase in the need for cyber security, with a further fund looking at logistics after the explosion of ecommerce.

"It's about structural change," says Li. "These themes will play out regardless of what happens in the economy. They are not connected to economic cycles."

For Lamont, this is one of the strengths of thematic investments. "They are very pleasing as they disregard the traditional sectoral and geographical breakdowns that are usually found in the industry," he says.

For Li, all investors considering this type of allocation must think about what they believe is happening in the long term, rather than jump on the bandwagon of a short-term fad.

A recently opened, and then closed, whisky ETF would probably have not passed this test.

"You have to understand the drivers," says Li. "Are business models being disrupted? Are we seeing a change to accepted structures?"

With this in mind, and investors anticipating another market downturn or at least correction, it is possible that more providers could begin producing similarly thematically driven ETFs.

Antoine Lesne, head of SPDR ETF investment strategy at State Street Global Advisors, said providers loved coming up with new ideas – the key for them was working with investors to create something they wanted, too.

The company launched a gender diversity ETF, with the ticker SHE, to coincide with the placing of the Fearless Girl statue opposite Wall Street's Charging Bull in 2017.

It was an unusual move for SSGA, but the drivers were specifically grounded in long-term, global change, says Lesne. LGIM launched its GIRL fund – not yet available as an ETF – to follow the same theme a year later.

Creating these types of products are more complicated than traditional ETFs, according to Lense. Using an index constructed by a provider itself is not accepted in some jurisdictions, while back-testing and gathering enough analysis, before even trying to protect all the intellectual property and still being first to market, can be too onerous for giant companies with plenty of existing products to sell.

iShares, the world's largest provider, has just nine thematic ETFs available to UK investors, four of them boasting just a one-year track record.

NO SMOKE WITHOUT FIRE

The other ETFs mentioned – cannabis industry, ETF providers and retail giants falling – are all run by relatively small companies.

"There is room in the market for newcomers," says Lesne at SSGA, pointing to the range of ideas that his firm, as one of the largest ETF providers, do not consider directly.

"A lot of the established players do not really know how to get into creating these funds," said Lamont. "And if they do it, it has to be in a logical way. These funds can be interpreted in the media as being gimmicky and they would prefer to not be associated with that."

Some of the biggest international ETF providers declined to participate in this article.

However, as the largest fund managers in the world are fighting for a piece of the ETF action, they may have to change tack.

"The ETF business is saturated with core offerings," says Lamont. "Thematic funds are the new battleground. The 16% of esoteric ETFs launched before 2012 that are still trading today are based on themes that are still relevant. The key is getting the timing right."

Spotlight on liquidity, transparency and viability

LYNN STRONGIN DODDS

Exchange-traded funds (ETFs) may represent a tiny speck on the overall investment landscape but they are one of the fastest-growing products in the investment industry. It is no wonder then that they have been thrust into the global, regional and national regulatory spotlight. There are different angles, but liquidity, transparency and viability are the main themes.

The past two years have been a hive of activity with the European Securities and Markets Authority, the Central Bank of Ireland, France's Autorité des marchés financiers (AMF), the UK's Financial Conduct Authority (FCA) and the US Securities and Exchange Commission (SEC) all launching their own probes. This is not even mentioning the guidelines being mulled over by the International Organisation of Securities Commissions (IOSCO), which are due to be published at some point later this year.

"The regulatory interest is pretty straightforward," says Andrew Craswell, senior vice-president at Brown Brothers Harriman, the US private bank. "The industry has had rapid growth and the regulators want to ensure that they do not pose a threat if there is a market event. They are looking into whether they could create a bubble and what the systematic risks are, even though they account for a fraction of overall global AUM."

A NEW MILESTONE

Recent figures from data provider ETFGI show that global ETFs hit a milestone earlier this year, breaking through the $5trn (€4.3trn) mark in assets, a significant hike from the $774bn recorded at the end of 2008 but still a pin prick compared with the almost $80trn of assets currently managed worldwide. They are more established in the US, which accounts for approximately $3.5trn of assets and has a mainly retail following, although they have been steadily gaining traction in Europe where the investor base is predominately institutional. Both regions have benefited from the ongoing shift to passive from active investing which is encapsulated in MiFID II's focus on the total cost of investment including fees and transaction costs.

Sander van Nugteren, managing director in the iShares EMEA team, also believes that the interest is part of the regulatory information gathering exercise that is typical of any investment product, particularly one with such exponential growth. He notes that regulators not only want a better understanding but also to ensure that the end users comprehend the investment strategies employed and that the product is well supported.

The industry view is that ETF prices can change constantly as the value of their underlying assets fluctuate, but any difference in price between the two in liquid markets is typically shortlived as traders take advantage of any gaps, which in turn helps to restore equilibrium. The problem, of course, is when

markets are unsettled, although this has been more of an issue at the more complex exchange traded product end of the spectrum.

This was evident in February when the VIX index – which measures volatility – hit a two-and-a-half-year high of 115 while the S&P 500 suffered its biggest one-day decline since 2011. Inverse VIX ETF prices plummeted by more than 90% while the more mainstream vehicles weathered the storm with generally tight offer-bid spreads, heavy volumes and high liquidity, according to research from BlackRock.

As Vitali Kalesnik, a partner and senior member of Research Affiliates' investment team, notes: "Liquidity is always part of the regulatory equation and a core focus. Most of the established ETFs have decent liquidity but more recently there has been white labelling of products and a proliferation of exotic products which has caught the regulators' attention."

Keshava Shastry, head of ETP Capital Markets at DWS, the recently listed fund management arm of Deutsche Bank, agrees, adding "around 95% of the assets under management in the product range are in the easy-to-understand plain vanilla ETF range, but there have been concerns noted in relation to retail investors and inverse and leveraged products, which are in the exchange-traded product universe. Investors here need to have a thorough understanding of these types of products and how they behave."

Not surprisingly, February's episode triggered calls from the fund management community for a clearer delineation between the complex ETPs and the more traditional products that are registered investment companies under the Investment Company Act of 1940 and other regulatory regimes, such as UCITS.

RISK OF MARKET DISTORTION

At the global level, there is IOSCO, which plans to build upon its Principles for the Regulation of Exchange Traded Funds published in 2013 as well as the more recent investigation into the liquidity risks of mutual funds and ETFs. The umbrella organisation of regulators, which works closely with the Financial Stability Board, is currently looking at whether serious market distortions might occur as a result of the growth of ETFs as well as liquidity and valuation matters.

"IOSCO provides a forum for the different voices around the table and it will incorporate industry best practices," says Axel Lomholt, head of ETFs, international at Vanguard. "It will feed down to the local jurisdictions but they will have their own nuances and tweaks according to their own regulatory regime. However, there will be the common threads of investor protection, transparency across the entire value chain and the need for education at all levels."

Industry participants also expect that the IOSCO review will leverage the work and feedback garnered from a recent Confederation of British Industry (CBI) discussion paper. For many, this 100-page tome is a must-read because of the in-depth and insightful nature of the analysis of trading arrangements, liquidity, transparency and the various players in the so-called ETF eco-system. The UK is well placed to comment because it has a 56% stake of the European ETF market.

"The CBI issued a very detailed discussion paper that not only poses questions at the European level but also at the global level," says Lisa Kealy, partner and European ETF leader at EY. "The drivers behind the scrutiny are the increased media attention that the ETF flows have gathered and to ensure that problems such as mis-selling, which we have seen before with other products that have grown so fast, do not happen again. It's not about hampering innovation, but ensuring there is an appropriate framework for products such as active ETFs."

A list of recommendations was supposed to be published this summer but it has been pushed to the end of the year due to further consultations that the CBI is holding with ETF participants. One example is the part played by the authorised participants (APs) who are mainly responsible for the creation/redemption mechanism. The main concerns are around overall price manipulation and more specifically the impact on smaller investors if APs stop trading ETFs during periods of market stress.

"The 'interconnectedness' of the ETF industry is another source of potential regulatory scrutiny," according to Craswell. In some instances, APs are connected to the ETF issuer and they are also acting as market maker. "In such a structure, the overall risk profile of the ETF

may be amplified and regulators want to determine whether ETFs using the same counterparty to conduct all or some functions, will heighten systemic risk in the overall market," he adds.

Portfolio transparency is also in the spotlight. Currently, there are no uniform European regulations for the disclosure of active ETF portfolios and some exchanges, such as the London Stock Exchange, do not require portfolio holdings to be divulged. As Craswell notes, most ETFs publicly disclose their holdings daily, which is prohibitive to some active asset managers entering the ETF market. As part of its 2017 discussion paper, the CBI has requested industry feedback around portfolio transparency rules.

Van Nugteren adds there is a high level of information in Europe because most ETFs are sold under the UCITS wrapper which requires a Key Investor Information Document (KIID). "Also under MiFID II, there are post-trade reporting requirements and more emphasis on the view of liquidity, but the situation would greatly be improved if there was a consolidated tape for ETFs," he adds.

As for the US, the regulators will heed the IOSCO dictates but the SEC is moving forward with reforms to create a more uniform ETF regulatory framework. The proposals, which are subject to industry feedback, will allow ETF issuers to launch plain vanilla versions without first seeking the often time-consuming and expensive exemptive relief under Investment Act 40.

The rule change would apply to open-ended ETFs, a type of mutual fund that does not have restrictions on the amount of shares it can issue, which covers the vast majority of ETFs. Currently, the industry's 80-plus issuers all operate under different requirements in a complex system which many believe inadvertently has allowed some firms to gain a competitive advantage. The US regulator says it hopes the changes will boost competition and innovation by lowering the barriers to entry.

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1 All figures and data are provided by Amundi ETF, Indexing & Smart Beta at end June 2018.

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1 Source: Lyxor International Asset Management, as at 11 September 2018

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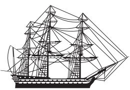
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