2019 EXCHANGE-TRADED FUNDS GUIDE

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2019 EXCHANGE-TRADED FUNDS GUIDE



Bespoke approaches

f you can't find the product you want, why not build your own?
When Ilmarinen backed the creation of a suite of ESG focused
ETFs this year, it underlined two trends. The first is the continued ascent of ESG as a consideration for large institutional investors the world over. The second is the way these asset owners are seeking to work with asset managers to develop strategies suited to their needs.

Ilmarinen, Finland's largest pension provider with assets in excess of €47bn, co-created the ETFs with BlackRock, DWS and Lyxor, seeding them with investments of more than €1bn. The ETFs invest in US and European variants of the MSCI Leaders index series, which includes companies with the highest ESG scores.

The fact that an ETF was the chosen vehicle for this new product underlines the breadth of its utility as a transparent, accessible structure suited to a broad array of asset classes and investor types. Working with the providers allowed Ilmarinen to tailor the strategies to its needs, while using the ETF vehicle allows 'crowding in' of further capital, leveraging the positive change Ilmarinen seeks to effect. A traditional segregated account would not have had this crowding in effect.

At \$5.7trn today, ETF assets continue to grow, with assets set to reach \$10trn in the next five years, having easily outpaced mutual funds in asset growth terms in the years following the financial crisis. As such, the ETF continues to embed itself in the world's asset management architecture.

Liam Kennedy, Editorial Director, Investment & Pensions Europe

Editor's note: this guide contains a number of articles by the sponsors indicated opposite the frontispiece. The publication of these articles should not be taken as an endorsement of their contents.

Editor Liam Kennedy Project editor Paul Amery Group Commercial Director Ben Pritchett-Brown

Director, UK Business Andy Hill Production Manager – Advertising Sam Smith

Production Miles Smith-Morris

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The ETF boom continues

PAUL AMERY

round the world, exchange-traded funds (ETFs) continue to grow in assets and importance, breaking records along the way.

• Global ETF assets grew by nearly a trillion dollars in the first seven months of this year, increasing from \$4.68trn (€4.22trn) in December 2018 to a record \$5.58trn by July 2019;

- The first US ETF was launched in 1993 and it took nearly 20 years for the US ETF industry to reach \$1trn in assets (in 2012), but going from \$3trn to \$4trn took only two years (2017 to 2019);
- ETFs and exchange-traded products (ETPs) listed in Europe celebrated a record 55 consecutive months of net inflows earlier this year.

ETFs are steadily encroaching on other types of collective investment fund: by assets, they overtook hedge funds in 2015 and now they are taking an increasingly large chunk out of the \$43trn global mutual fund market.

Can this continue? Analysts at Morningstar find it hard to

imagine the growth faltering.

"Even under conservative assumptions, assets in European-domiciled ETFs are well on course to hit €1trn by 2020. And we now believe that assets could reach €2trn by 2024, under the positive assumptions of accelerating inflows and upward-trending market prices," says Hortense Bioy, the firm's director of passive strategies and sustainability research.

ETF asset growth of course depends on the progress of markets, which are unpredictable, particularly in an environment of increasing global tensions over trade.

But there are several structural trends supporting the ETF industry's progress. And, as always, there are a few potential risks to the growth outlook.

GROWTH SUPPORTS

First and foremost, the marketwide trend towards index-based investing shows no sign of slowing down.

"Day after day we get evidence that it's tough to beat indices in



Arnaud Llinas, Lyxor Asset Management

liquid markets like developed market equities and government bonds. All the evidence suggests that in such markets an ETF is an obvious choice," says Arnaud Llinas, head of ETFs and indexing at Lyxor Asset Management.

And while index-tracking funds, including ETFs, increased their share of aggregate investment fund assets from 8% in 2007 to 20% by 2017, according to the Bank for International Settlements, ETF market participants say their funds' overall footprint in the asset markets is still small.

"Measured against the size of the underlying market, ETFs have a penetration rate of under 4% in equities and under 1% in fixed income. ETFs have come a long way but they could go a long way further," says Wei Li, EMEA head of investment strategy at iShares.

A second growth driver is the increasing adoption of ETFs in asset classes or for types of investment strategy that have traditionally been the preserve of active managers: for example, in thematic fixed income, equity smart beta, or environmental, social and governance (ESG) strategies.

European fund flow figures from 2019 show that investor demand for ETFs has been heavily concentrated in fixed income, ESG and smart beta.

"In ESG there's the pull of regulation and the push of clients increasingly demanding sustainability. Investors want an ESG version of their portfolio. delivered in a cost-efficient way," says iShares' Wei Li.

Third, ETFs are encroaching on the territory both of traditional index funds and of active mutual funds. Here, they rely on an engineering argument: ETFs are simply more efficient and cheaper.

LGIM's 2018 acquisition of ETF Securities' Canvas platform is a sign of the increased interest among traditional index fund managers in ETFs.

Meanwhile, a recent regulatory change in the US, detailed by Rachael Revesz in her article 'Will all mutual funds become ETFs?', suggests increasing scope for active managers to embed their strategies in an ETF 'wrapper'.

Finally, a fourth growth driver for ETFs is the increasing interest in the market from new categories of client, whether selfdirected retail investors or emerging financial institutions like digital challenger banks, who are looking to sell services such as automated financial coaching. ETFs may serve as building blocks for the these new mobile-based savings products.

RISKS TO THE OUTLOOK

But forecasts of blue skies always invite the contrarian view. What are the risks to the ETF growth story (apart from the arrival of a long-overdue bear market)?

One is indirect: the steady compression of fees could reduce competition and eventually force newer market entrants to pack up shop.

"Margin compression is happening across the industry and it's getting harder to launch new blockbuster products. The revenue pool in passive is probably peaking, even if assets continue to grow. So the onus will be on improving efficiency," says Manooj Mistry, head of ETFs and index investing at DWS.

Adding to the potential profit squeeze for ETF issuers, the cost of running benchmarks is going up as a result of the recent European Benchmark Regulation. says Gareth Parker, co-founder of Moorgate Benchmarks.

"The regulatory hurdles in Europe to issuing an index are becoming significant. Regulation will increase the cost burden. The race to the bottom in index pricing has probably stopped," Parker says.

A second potential risk is that of a liquidity shock, perhaps



Wei Li. iShares

focused on an ETF in a relatively less liquid underlying market.

It's important to mention that ETFs are now seen by regulators as less of a risk to the financial system than other mutual funds. This is a big win for ETF firms, since regulators used to argue the opposite.

As an example, it was a well-hyped active manager, Neil Woodford, who recently had to suspend redemptions from his £10bn (€11.1bn) UK mutual fund, while ETFs have so far continued to do their job (see Lynn Strongin Dodds' article on the fallout from the liquidity crisis at Woodford Investment Management).

But while ETFs may handle liquidity stresses better than some daily dealing mutual funds, there's no room for complacency. The outgoing Bank of England governor, Mark Carney, recently warned of liquidity risks across the fund business. And as several articles in this guide demonstrate, fixed income ETFs are now seen by many as tradeable proxies for whole segments of the bond market.

A final concern relates to the

increasing complexity of some ETF strategies: whether seeking to embed a new ESG approach in a fund, creating a new smart beta strategy or trying to produce an ETF version of an active fund, product developers are now moving far from ETFs' origins as a cheap and easy way to track a market capitalisation-based index.

The US securities regulator, the SEC, has recently warned that taking an index concept too far into specialist investment territory risks the direct regulation of the index firm as an investment adviser. And complexity carries other risks.

Finally, as perhaps the most disruptive force in asset management during the last 20 years, could ETFs themselves end up being displaced by something faster, easier and cheaper?

If you read Lynn Strongin Dodds' article, 'What could disrupt ETFs?' you will see that ETF market participants are not too worried yet about the impact of new technologies like distributed ledgers and blockchain.

But they don't rule out something like a radically new and simplified securities infrastructure eventually taking root. If in a few years' time we are all buying and selling market exposures from our mobile phones, will we need the expensive, legacy, duplicative funds system to run the records of ownership?

The competitive battle intensifies

GAIL MOSS

espite the growth in European ETF assets, issuers are facing margin pressure caused by fee cuts.

"The downward pressure on ETF fees continues apace, and it is no longer exclusive to mainstream exposures," says Hortense Bioy, director, passive strategies and sustainability research. Morningstar.

"In the past two years we have seen the first signs of fee competition in the strategic-beta ETF space. There has also been increased fee competition in the field of ESG-focused ETFs."

However, the focus for ETF providers in their business strategy is not necessarily pricing policy (see our three issuer profiles in the boxes overleaf).

"There is an increasing trend where asset managers are using their deep expertise and experience to bring innovation to index design," says Howie Li, head of ETFs at Legal and General **Investment Management** (LGIM).

"Given our heritage in thematic investing, for instance, we've been looking forward to identify opportunities that are driving structural and foundational changes in the way we live and work," says Li.

"Thematic ETFs have been a real area of growth for the industry and it's important that these strategies offer investors a pure exposure to a given theme. rather than a proxy through conventional sector classifications."

As an example, Li points out that traditional methods of rebalancing indices were costing people money.

"When we investigated how prices moved between the announcement of an index rebalancing and the execution dates for the rebalancing, we discovered that investors potentially lost up to an annualised 6.5 basis points of performance in the long term - the

"Over the past couple of years, ETF options have expanded dramatically"

Hortense Biov

equivalent of a year or more's worth of fees," Li says.

LGIM's index business has been managing this risk for years, and this expertise has now been taken into its ETF range.

Another important competitive battle is over ETFs incorporating ESG characteristics.

"Improved ESG data on companies and technological advancement over the past decade or so have made new approaches to passive sustainable investing possible," says Biov.

"Prior to 2017, choice was limited in the ESG ETF space. But over the past couple of years, ETF options have expanded dramatically. There are now more than 100 ESG ETFs available to investors in Europe."

And for some investors, she says, the combination of simplicity, low cost, and lack of consistently strong actively managed alternatives makes ETFs a superior 'buy-and-hold' option for core market exposures. Private banks and wealth managers are amongst the most

Xtrackers: focus on scale and performance

Xtrackers, the ETF offering from DWS, had \$100bn in assets under management as at end-June 2019.

Investors have the choice of 238 Xtrackers ETFs, covering equities, fixed income and many other asset classes in what the firm calls its 'supermarketstyle' offering.

"Having established one of the most developed and diverse product ranges, our product development strategy is now more targeted," says Manooj Mistry, head of index investing, DWS.

In the past few years, the provider has built its ETF offering in fixed income, given the structural changes in fixed income markets that are attracting more investors to ETFs.

It is also developing its ESG line, in response to increased demand from clients.

Despite new launches, however, Xtrackers' key focus now is gathering more assets into its existing products, and ensuring that they deliver good performance versus their underlying indices.

"Here, it means being as efficient as possible, with low tracking errors and tracking differences relative to the underlying index," says Mistry.

Other focuses are a quality service and responsiveness to client enquiries, and transparency, with the firm providing daily updates on the website.

Institutional investors are given detailed performance attribution analysis, where the performance of the ETF versus its index is split down, to the last basis point, into its individual market components.

In terms of future strategy, Mistry says: "We recognise that technology and the emergence of the digital age will fundamentally change the asset management industry and we aim to



Manooj Mistry, DWS

lead and not follow that process."

As an example, DWS recently announced the acquisition of a minority stake in ESG scoring provider Arabesque S-Ray to further strengthen artificial intelligence and ESG capabilities.

Lyxor: commitment to low costs

Lyxor ETF – a wholly owned subsidiary of French bank Société Générale – is the oldest indigenous European ETF provider, launching its first products in 2001, and now has €62bn under management in ETFs.

It offers its clients 200 ETFs, including an ultra-low-cost core fund range, one of the largest US equity ranges, single-country equity funds, especially for Europe and emerging markets, and Europe's largest range of inflation-protected products.

As a European company, the ETF provider has a major focus on European clients. To date, these have been multi-asset funds, private banks and wealth managers, but it is now rapidly expanding in the retail distribution market.

The company is committed to low costs, with its core range including annual total expense ratios (TERs) from



Adam Laird, Lyxor

4bps to no more than 12bps. It recently cut fees in other parts of its range.

Lyxor distinguishes itself from competitors mainly in two ways.

"Being European is a key point – we're free of some of the shackles faced by our competitors with US parents," says Adam Laird, head of ETF strategy, Northern Europe, at Lyxor ETF.

"Innovation is also a key point for us, and we know we're able to react quicker than other competitors."

For example, Lyxor's rapidly expanding ethical range includes a water fund, the first green bond ETF and a gender equality ETF.

Laird says that as the company is devoted to offering low-cost products to investors, cuts in fees are not necessarily changing its business strategy.

Lyxor's local knowledge and expertise also places it well in dealing with regulatory changes.

"We're seeing changes as an opportunity – and these factors have probably accelerated ETF adoption amongst investors," says Laird.

Amundi ETF: exporting franchise outside Europe

Amundi ETF was the fourth biggest ETF provider in Europe as at end-June 2019, with €48bn in ETFs under management.

Fannie Wurtz, head of Amundi ETF, Indexing & Smart Beta, and a member of Amundi Group executive committee, attributes this primarily to pricing, but also quality products, and innovation to match the changing investment needs of clients.

"Coming from Europe's largest asset manager, we are also a solid player," she says.

"More and more clients want to have safe and stable providers, and are using fewer providers for their fund selection. They are selecting Amundi ETF because we can answer these needs. At the end of the day, prices won't be an end in themselves," she says.

Amundi launched its ETF business in 2001. It now offers a full range of 130 ETFs including equity and fixed income exposures, ESG, smart beta and factor investing.

Amundi's ETF business is part of a broader business platform, which also includes index funds and active and passive smart beta solutions.

"We strongly believe there is a continuum which our clients can use



Fannie Wurtz, Amundi ETF

around ETFs, and we're happy to offer to them the possibility to complete their allocation according to their needs," says Wurtz.

In 2018, Amundi ETF, Indexing & Smart Beta announced ambitious plans to double the assets under management of its business line, with a target of €200bn over the next five years. Its future strategy is based on three pillars.

First, it intends to increase client proximity and coverage, as well as its marketing.

"Reinforcing our coverage will allow us to reach new clients we currently don't talk to," says Wurtz. It is also expanding into new markets, especially Asia and Latin America. launching a range of ETFs on the Mexican Stock Exchange last year.

"Exporting our UCITS ETF franchise outside Europe has been one of our expansion drivers, as we believe this strong regulatory framework can in particular meet investors' needs," she

Second, it intends to strengthen its portfolio management and solution teams in order to stay at the forefront of product innovation, with a special focus on ESG.

Third, the company is strengthening its retail presence as a complement to its institutional offering: "We understand the needs of European clients and have a very strong retail DNA," says Wurtz.

Earlier this year, Amundi launched a low-cost core ETF range to serve retail clients with charges on its new Prime range set at just 5bps a year.

"These are the essential equity and fixed income building blocks to build a diversified portfolio for our clients," says Wurtz.

frequent users of ETFs for these strategies, says Morningstar.

Meanwhile, during 2019, European providers have also proved they can sometimes take on the Americans in their own

territory.

Earlier this year, Xtrackers launched a new sustainable ETF in the US market, tracking MSCI's USA ESG 'Leaders' index. That ETF, which listed in

March, with an initial investment of over \$800m from Ilmarinen. Finland's largest insurance company, was the biggest launch of any ETF in the US over the past 15 years.

The drum beats on: ETFs for the ongoing trade war

CHRISTOPHER MELLOR

INVESCO

his time last year, we were looking at how trade relations between the US and China might play out and the best way to position a portfolio - especially in terms of sectors - according to which scenario an investor thought was most likely. What has really changed in the past 12 months? Aside from the main protagonists turning up the heat a fair few degrees, the biggest difference can be seen in the sharp reduction in economic growth. In this article, we will revisit the most likely scenarios and focus on the potential macro implications to give us a steer towards asset classes worth considering.

The three possible scenarios highlighted by Invesco's asset allocation research team last year were:

- A 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 ever-widening range of tariffs introduced by both sides make the odds seem heavily skewed towards the first two scenarios. You could argue that tension between the world's two largest economies seem to play into the political agendas of both Presidents Trump and Xi. with neither willing to yield ground to the other, and both trying to claim victory. With the most comprehensive list of tariffs introduced at the end of August, the stage looks set for when the two sides square off at the negotiating table in September. However, we do not expect this to be the final scene.

THE GLOBAL ECONOMY HAS TAKEN THE HIT

The biggest casualty of the war so far has been the global economy, which we flagged as the main probability in our outlook a year ago. There is no doubt that the slowdown in growth is the result of a reluctance for the manufacturing

sector to commit investment, due to the uncertainty related to the escalation of the trade war and the possibility that US companies may be forced to relocate factories and operations currently based in China. We expect the global economy to remain sluggish.

The Fed has suggested that it is prepared to loosen monetary policy further if necessary, although chairman Jerome Powell has stressed that the central bank is not responsible for supporting trade policy and has warned that the Fed may not be able to counteract the effects of an all-out trade war. On the other side, we see a Chinese economy that appears capable of continued growth even with tariffs in place.

China has imposed tariffs on agricultural commodities imported from the US, which it can easily source elsewhere, but which directly hurts the US farming community. Meanwhile, Trump's attention has so far been on the big Chinese technology companies to protect the

intellectual property of US firms and due to what the US president sees as security risks. More generally, tariffs have been placed on raw materials and manufacturing components, including semiconductors, but have now been expanded to include just about everything made in and imported from China.

WINNERS AND LOSERS?

The question for investors to consider is who ultimately pays for these increased costs. It is unlikely that low-margin industries can absorb the costs, so they will have to pass them on to consumers, whereas bigger ticket items like white goods may see consumers simply defer purchases. Expect this to translate into lower consumer spending, a deterioration in both consumer and business confidence, and lower corporate profits and margins across several kev industries. If costs are eventually passed along to consumers, especially on staple goods, we could see an uptick in inflation.

BONDS, GOLD AND NO AUTOMOBILES

Deciding the best way to position a portfolio depends on your outlook and how much risk you are willing to take. While that task is made more difficult with the growing market uncertainty, high-quality government bonds and gold are generally useful tools for diversification and may be able to help cushion the downside risk within portfolios that are heavily exposed to equities.

Fixed income is typically one

of the first places investors turn to when equity markets are volatile. US Treasuries and other high-quality government bonds tend to offer relative security, although current low yields mean they may not offer much value. Other fixed income segments may be more attractive for investors looking for higher yields and who are able to take more risk. This ranges from investment grade credit to high yield but also could include more innovative segments such as Additional Tier 1 (AT1) bonds.

Investors who do not need income may instead think about gold, which has long been viewed as a relative 'safe haven' during volatile and uncertain times, with historically low correlation with risk assets. The fact that gold does not pay an income is not an issue in the current environment with interest rates already low and potentially moving lower if economic conditions worsen. In fact, real yields on some government bonds are now in negative territory, making a zero-income asset such as gold even more attractive on a relative vield basis. Exchange-traded products that invest in physical gold offer a cost-effective way for investors to gain exposure.

In terms of equity allocation, markets will remain sensitive to trade-related developments as well as more general economic data, so investors should be prepared for some volatility. The US and China equity markets should react the most, to both good and bad news, so investors who believe that the two nations will manage to avoid an all-out trade war may see market dips as possible entry points.

If you are considering a sector

allocation, the more defensive sectors such as consumer goods, telecoms and utilities are likely to hold up relatively well during volatile periods, while cyclicals would normally be expected to lag. This is especially relevant given the weakness in manufacturing, as industrials, tech and consumer discretionary sectors, especially autos, are potentially susceptible to a general slowdown in the economy.

For those who believe that trade tensions will ease or who expect an agreement to be reached between China and the US, the recent pullback in equity markets may offer a buying opportunity. Many companies could benefit from an advantageous trade agreement, including US technology firms if their intellectual property rights are protected, while companies across sectors may find themselves on a level playing field with their international competitors. That scenario is not only possible but may benefit both countries in the long run. However, it may be a little while off.

GAINING EXPOSURE TO EXPRESS YOUR VIEW

Whatever view you have of the economy or how you believe the trade war will impact investment markets, you should be able to find an exchange-traded fund (ETF) that helps you gain exposure efficiently. From low-cost gold products and government bond funds to more innovative strategies to access niche segments of the market, including individual equity sectors, ETFs offer wide choice, intraday trading and cost-effective exposure.

Can European ETF assets double again?

GAIL MOSS

arlier this year, ETFs and ETPs listed in Europe celebrated a record 55 consecutive months of net inflows, only 19 years after the first ETFs in Europe were launched.

The signs are that this growth will only continue.

"ETF adoption across Europe is set to accelerate, spurred by favourable regulatory changes like MiFID II, innovation, and an increasing acknowledgement of the long-term benefits of low-cost investing," says Hortense Bioy, director, passive strategies and sustainability research, Morningstar.

"Even under conservative assumptions, assets in European-domiciled ETFs are well on course to hit €1trn by 2020. And we now believe that assets could reach €2trn by 2024, under the positive assumptions of accelerating inflows and upward-trending market prices," she says.

Interviewed by IPE, ETF market participants cited several key reasons for this optimistic growth forecast.

LOW RATES DRIVE BOND ETF INFLOWS

Simon Klein, head of passive sales for Europe and Asia, DWS, says: "We've seen strong inflows into bond ETFs this year on the back of political uncertainty and fear of an economic slowdown, which is pushing investors to seek safety in fixed income."

Antoine Lesné, head of SPDR ETF strategy & research at SSGA, says that assets under management in funds overall have grown significantly over the past ten years. "This trend has lifted all boats," he says.

But among the potential drivers of ETF market growth, he considers that low rates are also a major factor.

"In the low-rate environment since the financial crisis, investors have been focusing particularly on funds' net of fees performance, benchmark choice and the fact that over a long horizon, the index can often be in the first quartile of performance," Lesné says.

As a consequence, he says, the move to indexing has continued



Simon Klein, DWS

unabated.

"While low rates mean investors need to focus on the expected returns from their strategy, this is an even more acute question for fixed income exposures," he continues.

"In a buy-and-hold framework, expected returns from high-grade developed bonds are lower, so as a result, cost-efficient solutions like ETFs have become a way to control expenses and performance expectations."

Lesné observes that the search for yield has also meant flows into fixed income ETFs have gravitated across strategies such as high yield, investment grade corporate bonds and emerging market debt, with demand coming especially from investors based in currency regions with low or negative interest rates, such as Europe and Japan.

Detlef Glow, head of Lipper EMEA research, Refinitiv, says bond ETFs are increasingly being used as a proxy for higher-yielding investments such as BBB bonds

"If an investor cannot find a bond with issuer quality, or invest as much as they want because there is insufficient liquidity, they can choose an ETF in the respective rating category like BBB as a proxy," says Glow. "They also get the exposure without the risk of a single issuer."

LOW COSTS, TRANSPARENCY AND LIQUIDITY

The low cost of ETFs is of course another pull for investors.

"For instance, you can get exposure to the S&P 500 for less than 10 basis points, which is super cheap," Glow says. "It gets more expensive the more complex the product, for example, active ETFs. But in most European countries, this is still way cheaper than actively managed products."

And, says Glow, the transparency of ETFs is also helping attract investors.

"ETFs are regulated products so they have exceptional transparency," he says.

"At every point of the day you know what underlying invest-



Armit Bhambra, BlackRock

ments you are in and how much they are worth. Even with swap-based ETFs you can see the index constituents."

"Transparency, diversification of broad indices, cost and liquidity have been supporting the growth of the market," agrees Lesne.

Adam Laird, head of ETF strategy, Northern Europe, at Lvxor ETF, notes a wholesale shift from active asset management as a key driver for ETF asset growth.

"The biggest contributor for ETFs is probably the swing away from active managers towards passive," says Laird.

"There's more and more scrutiny on closet trackers, which is pushing investors towards low-cost, passive ETFs."

WEALTH MANAGEMENT

DWS's Klein says he is also seeing the increased use of ETFs by wealth managers, driven by two trends.

"First, investors are increasingly paying wealth managers a transparent fee based on assets, instead of traditional transactionbased advisory." he says.

"Meanwhile, regulatory directives seeking to improve fee transparency have also pushed the transition to fee-based advisory models. For example, MiFID II in Europe requires independent financial advisers and private banks to disclose commission and retrocession fees paid to them by fund managers."

He says the second trend is the growing adoption of model portfolios, which mainly use ETFs to scale the investing process.

ESG AND ETFS

Will ETFs play an increasing role in passive ESG investing? Yes, say several observers.

Index providers assess ETF indices according to environmental criteria, starting with the levels of companies' carbon footprints. In fixed income, ETFs can provide access to green bonds, which are tied to specific environmental projects.

"The data is of high quality, and comparable between industries." says Glow.

"Across the board, all ESG sectors can be built into a fund." he adds.

"Index providers employ large numbers of analysts covering the companies in their indices and they also include corporate governance."

Lyxor's Laird also sees ESG as a key growth driver for ETF

"This is just kicking off – with a regulatory push towards ethical investment happening across Europe, more investors are looking at ESG ETFs," says Laird.

"ETFs have covered whole of market investments - but also

specific themes. For example, ETFs led the charge in gender equality investing."

THE ROLE OF DC PENSIONS

Turning to the issue of whether the growth of defined contribution (DC) pensions is also feeding demand for ETFs, he says it has not been a big driver until now, but he has seen the early signs of growth.

"ETF monthly savings plans are growing in some European countries, allowing investors to drip-feed money into ETFs," he says. "I've spoken to a number of providers of private pension schemes which are looking at implementing this."

"We expect indexing to play an increasing role in the growth of European DC markets in the coming years," says Armit Bhambra, director and head of UK asset owners at BlackRock.

"The rise of indexing options in ESG investing has coincided

with the increasing regulatory pressures faced by European pension schemes."

He says that as time goes on and European DC markets mature, schemes are becoming more specific and granular in their asset allocation.

"Part of this is ESG, but it also includes single countries, themes and sectors," he notes. "In a continuing low-yield environment, indexing will empower schemes to take greater control of what is the single most important driver of returns – their asset allocation."

Lesné observes that the growth of DC pensions is at different stages of development across the globe.

"Given the ease of use of ETFs and the diversity of exposures that can be achieved transparently through the instrument, it has become easier for DC pension investors to build a well-designed portfolio and invest efficiently," he says.

"The US is more advanced in

the journey, but Europe is gradually taking it up and at SPDR we are starting to see some of our ETFs being used in DC solutions, in the UK in particular, from mainstream exposures to listed infrastructure and real estate. But we are still finding that the biggest users of ETFs are asset managers and private wealth managers."

STILL ROOM FOR NICHE PRODUCTS

"The ETF industry in Europe is still on a growth path and will continue to be so," says Glow. "A number of market players are still not considering investing in ETFs, so there is a education job to encourage them to do so."

He says one route may come from the niche-type products coming onstream from ETF providers: "This is a great space which has not been exploited properly, so there are still a lot of opportunities."

Woodford fallout renews focus on ETF risks

LYNN STRONGIN DODDS

he recent suspension of redemptions from Neil Woodford's Equity Income fund is a cautionary tale and one that has further sharpened the spotlight on the liquidity of mutual funds, a category that includes exchange-traded funds (ETFs).

ETF industry participants argue, though, that their funds are a different breed to traditional, daily-dealing mutual funds and should not be tarred with the same brush.

Woodford, who is one of the UK's best-known fund managers, ran into trouble in June because of his fund's exposure to illiquid securities and its inability to live up to the performance hype: the fund was down 18.1% over the three years to 5 June, versus a positive 23.3% for the IA UK All Companies sector.

Disappointed investors, who piled in during the 2014 launch, left in droves, driving the value of the fund down to £3.6bn (€3.9bn) from its peak £10bn. Woodford could not keep pace with the steady stream of

redemptions and quickly exhausted the buffer of liquid stocks. The only recourse was to impose redemption 'gates' as the thornier illiquid securities that were left were much harder to offload. Reports are that investors may have to wait until at least December 2019 to get their money out.

The situation was succinctly summed up in a report by Fitch Ratings, which stated that the Woodford episode exposed the inherent weaknesses of openended funds and the liquidity



Matthieu Guignard, Amundi ETF

mismatches that could occur when there is a spike in redemptions.

"The gating could significantly damage the reputation of its investment manager, Woodford Investment Management Limited, particularly given its labelling as an equity fund," the rating agency added.

In the European Union, the regulatory framework governing mutual funds and ETFs is called UCITS (Undertakings for the Collective Investment in Transferable Securities).

However, the Woodford scenario could not play out in the ETF arena, according to Matthieu Guignard, global head of product development and capital markets at Amundi ETF, Indexing & Smart Beta.

This, he explains, is because ETFs are listed on stock exchanges, where they can be bought and sold at any time during trading hours and with a variety of counterparties. Mutual funds, on the other hand, are traded at the end of the day and only through the fund sponsor.

Jason Warr, EMEA head of iShares global markets at BlackRock, also stresses the significance of European secondary market ETF trading, where volumes will exceed \$2trn (€1.8trn) in 2019. This enables better risk transfer and greater price transparency, he says. Moreover, he points to the importance of authorised participants (APs), who have the ability to create and redeem shares in ETFs. In turn, this acts as a release valve in keeping ETFs priced at fair value, says Warr.

Portfolio transparency also sets ETFs apart. "It is tough to be an active manager and there was style drift of the Woodford fund into less liquid securities in order to generate a return," says Kenneth Lamont, an analyst at Morningstar.

Woodford, it turned out, had breached his own funds' limits for illiquid securities on an intra-month basis, but this was not picked up because the funds' authorised corporate director had only reviewed holdings at month-end.

"This could not happen with ETFs because they are transparent and holdings are disclosed on a frequent basis," says Morningstar's Lamont. ETFs typically reveal their holdings daily.

"For example, if an ETF fund invests in small caps, investors know what the holdings are because it is benchmarked against a small cap index. By contrast, holdings in an active fund may be opaque."

However, as Guignard explains, an ETF, like any investment, is not immune from the vagaries of market conditions. "In unfavourable market



Jason Warr, iShares

situations, if the liquidity of the underlying index components deteriorates too much, the ETF may face the same liquidity issues as a mutual fund. But all European ETFs benefit from the UCITS regulation of liquidity provisions," he adds.

ETFs are also covered by MiFID as transferable securities although, as Lamont notes, APs are not regulated as such, falling instead under banking regulation or MiFID investment firm provisions, where applicable. To the extent that ETFs use derivatives underpinning synthetic replication strategies, they are subject to the European Market Infrastructure Regulation (EMIR) adopted in 2012.

ON THE REGULATORY RADAR

Unsurprisingly, given the sheer potential of the market, ETFs have been on the regulatory radar screen for several years. In November 2018, the European Central Bank said ETFs may amplify risks in the financial system. In June 2019 the European Systemic Risk Board expressed a similar view, saving

ETFs could cause higher volatility and co-movement of security prices, especially at times of market stress and if the constituent securities are illiquid.

"It is inevitable that the ECB and regulators view the growth of the ETF industry with some concern," says Federico Cupelli, senior regulatory policy adviser at EFAMA, an industry body representing asset managers.

Currently, ETFs account for a small proportion of the overall market, with figures from BlackRock showing that as of 31 December 2018, the worldwide tally was \$4.7trn, representing around 5% of the global market capitalisation. However, some forecast that global ETF assets will more than double to \$12trn by the end of 2023, and could even reach \$25trn by the end of 2027.

Cupelli believes regulators may underestimate the resilience of the ETF structure.

"The main issue we have with the ECB point of view is that it does not sufficiently appreciate the secondary market as being a shock absorber," he adds. "Their thinking is that if there is a massive sell-off in ETF shares then it inevitably impacts the price of the underlying securities. However, this is not true."

He gives the example of a FTSE 100 ETF on the day after the Brexit referendum, when there was a significant market correction. "We can see that there was a huge pick up in secondary market activity but there was absolutely no underlying dealing in the FTSE 100 stocks," he adds. "The effect of the take up in the secondary market did not translate into the real economy. This proves that

there are no feedback loops and ultimately no systemic effects."

Bryon Lake, head of the international ETF business at JP Morgan Asset Management, also highlights the effectiveness of ETFs during the Greek sovereign debt crisis in 2015. "The Athens Stock Market shut down, but investors were still able to trade US-listed Greek ETFs, which helped price discovery because they were the funds that set a new price for the market," he adds.

As for the concerns raised over counterparty risks, EFAMA says the usage of multi-swap counterparty platforms is already considered an industry best practice for providers of swapbased (or 'synthetic') ETFs, plus ETF providers conduct rigorous selection procedures when choosing an eligible counterparty, independently from derivatives

or securities lending transactions.

Instead, EFAMA is calling for a proper classification system which clearly delineates between ETFs and other exchange-traded products (ETPs). This would not only help investors better assess the risks inherent to each type of ETP, but also aid regulators to focus their efforts on protecting investors and guarding financial stability, it says.

In the UK, the Bank of England's Financial Policy Committee. along with the UK's Financial Conduct Authority, recently produced its half-yearly report into financial stability. It identified two main risks ETFs pose to financial stability - redemption risks in ETFs holding less liquid assets, like emerging markets and corporate bonds, as well as an overall liquidity meltdown in the entire ETF market. The FPC concluded,

though, that the ETF secondary market helped smooth the waters and that potential liquidity mismatches in mutual funds were far more serious.

"We already have existing rules such as UCITS. MiFID and EMIR that have put safeguards around ETFs and so the case for further regulation is not clear at this point," says Mark Fitzgerald, head of ETF product management at Vanguard Asset Management. "The growth of ETFs globally needs to be put in context and there has to be a greater understanding of what they are and how they function. ETFs are more generally part of the growth of indexing story, with the vast majority of ETFs still following index-based strategies. And approximately 90% of ETFs in Europe are UCITS regulated."

Liquid beta sleeves: bespoke solutions with index building blocks

ARMIT BHAMBRA

iSHARES

iquidity 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 the 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 while retaining enough liquidity to meet member benefits, if done correctly, can improve the returns generated from a scheme's asset allocation.

As of 1 May 2019, the UK pensions industry was £1.66trn (€1.85trn) of assets, earmarked to meet liabilities of over £1.84trn (€2.06trn).² In the UK, 73% of

pension funds have become cash flow negative, and across Europe this number stands at 64%. This change in cash flow profile has been brought on as pension funds have increasingly closed their schemes to new entrants and future accruals. Many funds 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.

To put these liabilities in perspective, UK pension funds have approximately £20bn in cash and European pension funds around £100bn.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 increase dramatically from its current position.

Those schemes that plan effectively 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 map assets versus 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, especially for those with negative cash flow.

In this context, liquid beta sleeves form a small percentage – perhaps 5-10% – of a pension

^{1, 2} Source: Mercer 2019 European Asset Allocation Survey.

³ Source: Willis Towers Watson, Global Pension Asset Study 2019, Thinking Ahead Institute.

fund's total asset allocation, 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

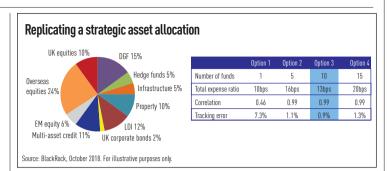
CASE STUDY

As the UK Local Government Pension Scheme (LGPS) continues with pooling and consolidation, cash management at the individual scheme level presents a cash drag against the overall strategic asset allocation (SAA). One UK local government pension fund committed to private markets approached BlackRock to help address an increasing need to hold cash to meet capital calls over a number of years. In order to achieve this, the client set four key priorities: Mitigating cash drag against its

- SAA: Retaining daily liquidity for meeting cash flow requirements;
- Lower expenses than holding cash at custody and lower trading costs than holding indexed mutual funds; and
- Ease of implementation.

BlackRock's Portfolio Analysis and Solutions (BPAS) team conducted a bespoke analysis mapping the client's portfolio to a series of options that replicated its existing SAA to a correlation of >0.99 on a rolling one, three and five-year basis at a range of 13-20bps at no incremental cost.

The client was pleased with the solution and the cost-effec-



tive implementation, which removed the burden for the client in managing cashflows by creating a liquidity sleeve.

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: While 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.4
- Wrappers: Pension funds have a variety of implementation options when it comes to indexing. Index mutual funds remain the mainstay for most pension funds. However, the price dynamics around deriva-

4 Source: BlackRock, as of 30 June 2018.

tives and ETFs have changed. Since the financial crisis, the implicit cost of holding certain index derivatives has increased as a function of changes in regulation. Meanwhile, the holding costs associated with ETFs are trending downwards, making them much more comparable to traditional index mutual funds. As the ETF market has grown, transaction costs have also shrunk as a result 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 defined benefit (DB) pension schemes continue to navigate towards the end game, managing the drawdown 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 addressing the challenge of negative cash flows.

Will all mutual funds become ETFs?

RACHAEL REVESZ

t took almost five years, but the US regulator still surprised many in the exchange-traded fund (ETF) industry when it gave preliminary approval to Precidian Investments' ActiveShares in May.

The new ETF, once it is listed and traded, will differ from existing US-based active ETFs by not revealing its holdings on a daily basis. It will also not disclose its holdings directly to the ETF's authorised participants (APs).

Instead, it will place its assets in a 'blind trust', whose constituents are visible only to the fund manager, the custodian and a new category of intermediary called the AP representative.

To help APs price the fund in the secondary market, an ActiveShares ETF will release a verified intra-day indicative value (VIIV) every second. In other US ETFs, the intraday net asset value (iNAV) is published only every 15 seconds.

After the model was granted exemptive relief by the Securities and Exchange Commission, Precidian's CEO, Dan McCabe, said in a statement: "Active-Shares will enable active managers to offer new and existing strategies in an ETF vehicle, combining the best of active management with the many benefits of an ETF."

ADDRESSING ACTIVE MANAGERS' DISCLOSURE FEARS

Active asset managers have long been wary of revealing their holdings on a daily basis, fearing front-running by other market participants. Could the new ActiveShares ETF address this concern by leading to more hybrid structures, or even by encouraging mutual funds to convert to ETFs?

Jane Heinrichs, associate general counsel at the Washington DC-based Investment Company Institute, points out that a mutual fund conversion to an ETF has never been done in the US before – although several conversions have already taken place in Canada.

"Many regulatory and operational issues still need to be

resolved before the first mutual fund to ETF conversion takes place," she says.

Yet law firm Ropes & Gray said in a paper in May 2019, "[...] we do not believe that there is any legal reason such obstacles cannot be overcome [in converting or merging a mutual fund into an ETF]". It outlined steps that would need to be taken, such as getting exemptive relief from the SEC, consolidating share classes within the ETF structure and redeeming fractional shares.

Law firm ThompsonHine added in its own paper that hurdles also include possibly having to seek permission from shareholders and the board, as well as modifying the portfolio strategy, such as only purchasing "liquid securities as well as securities that trade on a market that is open at the same time the ETF shares trade".

The benefits of the new structure, according to the law firms, are tax efficiency, lower operational costs and a way to satisfy investor demand.

There is no doubt that interest in ETFs is growing every year, measured against other types of fund. ETF assets have already overtaken those of hedge funds, and ETF inflows are beating mutual fund inflows.

An interest in active ETFs could therefore be a defensive move by major asset managers. The nine firms that have licensed the Precidian model, including BlackRock, JP Morgan, Legg Mason and Nationwide, have collectively lost \$3.3trn from their active funds over the past 10 years, according to Morningstar data.

Although law firms have said there are more non-transparent ETFs in the queue to be approved in the US, many eyes will be monitoring the success of Precidian's new vehicle.

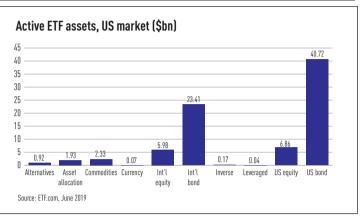
ACTIVE ETF ASSETS ARE STILL SMALL

But we should beware of hype from those promoting active ETFs. They only account for 2% of global ETF assets, according to ETFGI, and just 1% in Europe. according to Morningstar.

In the US, for example, active ETF assets are \$82.4bn, compared to a \$4trn overall market.

The last type of actively managed, non-transparent ETF was NextShares from Eaton Vance. It launched in 2016 and required brokers to rewrite their entire order system to handle pricing updates. It failed to gain the traction that many had hoped for.

"The ActiveShares structure may, in the end, suffer from an investor demand problem, but we have no way of knowing," says Dave Nadig, CEO of ETF.com.



"The big difference [from NextShares] is that the solution is elegant and requires nothing on the part of anyone except the APs, and they're all on board and excited."

He adds: "I remain a bit of a sceptic on the long-term asset potential, but I could easily be proven wrong. As I said, the structure is elegant, and the Precidian guys are, quite literally, the smartest financial structure engineers in the business. I'd never bet against them."

ACTIVE ETFS IN EUROPE

In Europe, there is no Precidian equivalent - yet. Close to three quarters of the existing €8bn in



Dave Nadig, ETF.com

European active ETF assets is invested in just three funds from PIMCO and Lyxor.

One provider hoping to change that dynamic is JP Morgan, now the largest provider of actively managed ETFs in Europe by number of funds, with six in fixed income and four in equity.

Bryon Lake, managing director, head of international ETF at JP Morgan Asset Management, says the Precidian innovation in the US would be a 'learning curve' for market participants in Europe.

"We think investors have needs in their portfolios that can be met through the ETF wrapper but if we had to have daily transparency the performance might be impacted and we haven't done it until this point," he says. "Now with Precidian's approval, it's something that might be available to us and something we are actively exploring."

In what way? Lake responds that while he has no concerns about daily transparency and the risk of front-running with fixed income or low tracking error equity products: "if we were doing a more concentrated portfolio or one with a higher

alpha target, [the non-transparent model] is something we'd take into consideration"

EUROPE'S CONFUSING RULES ON DISCLOSURE

In Europe, the standards on active ETF transparency are set by local listing venues, rather than centrally.

For example, the London Stock Exchange and Borsa Italiana do not require full daily portfolio disclosure for active ETFs, whereas the German, Swiss and Euronext stock exchanges do.

However, the Central Bank of Ireland (CBI), which oversees the domicile of choice for more than half of Europe's ETFs, has so far taken a pro-transparency stance. It said in a statement that it had reviewed the Precidian filing "with interest" but the model still had a number of features that concerned it.

As of mid-July 2019, the CBI told IPE that it had not received any applications for similar structures and therefore "has not considered how this model would translate into a European ETF taking into account the specificities of European ETFs".

In practice, most European ETF providers adhere to the daily transparency standard to make sure their active ETFs can easily be cross-listed across Europe.

Providers including HanETF and Vanguard previously told IPE they were either hoping for a change in the rules or were taking a 'wait-and-see' approach.

"I'm not surprised," responds



Caroline Baron, Franklin Templeton

Deborah Fuhr, managing partner of research firm and consultancy ETFGI. "Many would say the ETF industry in Europe is behind the US in terms of relative assets and the embracing of ETFs as a whole.

"The other big challenge is that we're still two years into the whole 'Brexit means Brexit' debate and we don't know what that means. There is uncertainty for products coming to market: where to domicile them, and what will be allowed going forward."

There has been some progress, however, when it comes to traditional active houses' ability to enter the ETF market. That's because in 2018 the CBI decided to allow fund managers to set up ETF and non-ETF share classes within a single fund structure, mirroring the rules in Luxembourg.

The goal, found Morningstar, was to allow managers to benefit from scale, lower costs and more liquidity. The CBI's move should allow more index fund and active fund providers to expand into the ETF market.

LOOK BELOW THE SURFACE

Some experts argue the active ETF wrapper is just a label. Caroline Baron, head of ETF distribution EMEA at Franklin Templeton, which has just over €30m in three LibertyShares actively managed ETFs, said clients were after products that fit their needs, such as liquidity and transparency.

"We need to stop saying that one vehicle is superior to another or one will replace the other," she says. "We are talking to clients about their challenges and how can we help them. We risk going back to the days of debating active versus passive. This is not the way clients look at it."

Fuhr agrees the conversation should be about investor needs rather than product. She points to US savings products like 401(k)s, which require the ability to buy a fraction of a fund on a platform. As a result, she says, the money is mostly sitting in mutual funds.

"ETFs may not be the right product for everyone so I think it will come to this equilibrium where you will have different wrappers for different purposes," Fuhr says.

"I'm still positive on ETFs but I do think the ETF is a wrapper and it's important to remember that. For many investors, ETFs are not always the right tool. Sometimes that tool could be futures, separately managed accounts, buying securities and sometimes it's ETFs."

A cost comparison: futures versus ETFs

PAUL WOOLMAN

CME GROUP

n this article, we use a cost comparison framework to contrast index futures (CME Group's E-mini S&P 500 index futures) and three popular US-listed exchange-traded funds (ETFs) tracking the same index - SPY, VOO and IVV.

COST ESTIMATES AND ASSUMPTIONS

The implementation costs for ETFs are relatively simple. ETFs incur trading costs (commissions and price impact costs), holding costs (management fees) and possibly also financing costs (eg, for the deployment of leverage or for short positions).

The implementation costs for futures are only slightly different.

1 Transaction cost estimates are based on the average execution fees among institutional clients (based on a survey conducted by CME in December 2018). For details, see Futures are Still on a Roll with the Buyside, Aite Group, March 2019.

2 Source: Bloomberg

3 Dividend withholding tax may apply for non-US investors

In the analysis set out below, we assume a hypothetical institutional investment of \$100m.

TRANSACTION COSTS

Transaction costs are expenses incurred in the opening and closing of trades and apply regardless of the investment time horizon.

Commission: commissions are charged by the broker for trade execution. This analysis assumes execution and clearing costs of 0.21bps for E-mini S&P 500 futures and 1.25bps for each

Market impact: this measures the adverse price movement caused by executing the order and is dependent on trade size. Given that an order of \$100m represents less than 0.04% of the average daily notional value traded in E-mini S&P 500 (ES) futures (\$220bn) and 0.45% of the average daily notional value in SPDR S&P 500 ETF (SPY) (\$22bn), this analysis assumes a market impact of 1bp for ES futures, 2bps for SPY and 2.5bps for both iShares S&P 500 index (IVV) and Vanguard 500 index fund (VOO).

HOLDING COSTS

Holding costs are expenses that accrue over time. Most grow linearly with time (eg, ETF management fees), although there are also some periodic ones (eg, execution fees on quarterly futures rolls). We make the following assumptions. ETFs: for fully funded investors, the full notional value is deployed. The management fee charged by the fund is 9.5bps per

annum for SPY, 4bps for IVV, and 4bps for VOO.² ETF holders receive dividends.3 Futures: initial margin is

required to secure the position. 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 this analysis, we use an implied financing cost of 3-month USD LIBOR (3mL) plus 16bps.

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.

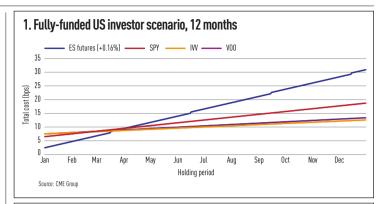
Scenario 1: fully-funded long investor

For a fully-funded investor, the total cost is the sum of transaction costs plus the pro-rated annual holding costs. The starting point for each graph in figure 1 represents the round-trip execution costs: 2.10bps for E-mini S&P 500 futures (ES), 6.50bps for SPY, 7.50bps for IVV, and 7.50bps for VOO.

When futures are trading rich, they are the most cost-efficient vehicle for the first three months. After that the ETF 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.

The futures implied financing cost can vary over time and in the scenario where it is valued at a discount to LIBOR, futures would be the most cost-effective alternative, regardless of holding period.

Scenario 2: international investor Foreign investors in the US equity markets are subject to a dividend withholding tax at a rate of 30% if those dividends are paid by a US corporation. This tax is also effective in US-listed





ETFs paying fund distributions (distribution of dividends received on the equities held by replicating the index), and it takes place quarterly.

For this analysis, the historical 12-month dividend yield of the S&P 500 is assumed to be 2.14%. Dividend withholding taxes therefore add 64.2bps each year to the holding costs for international ETF investors.

Futures, by comparison, do not pay dividends; however, the market price reflects a full dividend-yield basis. As there is no cash distribution, there is no withholding tax increasing the holding costs.⁴

Figure 2 describes the costs incurred over a period of 12 months. The quarterly steps on the ETF line represent the dividend withholding tax. By the

end of the period, the cost difference is 48.13bps.⁵ In this scenario futures are the more cost-effective vehicle, regardless of the time horizon.

CONCLUSION

Investors are reminded that the analysis rests on a number of assumptions and should compute the cost for their own specific situation. A useful tool for the transaction cost analysis can be found on the CME website.

4 IRS rule 871m does not apply to E-mini S&P 500 futures and the futures are therefore withholding tax-exempt.

5 Some international investors may be eligible for reduced withholding rates. For a UK investor, whose withholding tax rate is 15% under a double tax treaty with the US, the cost difference would be 16bps.

The shifting sands of index provision

CHARLOTTE MOORE

s ETFs are created to track ever more specialised market exposures. competitive pressures and new regulations are impacting the complex relationships between asset managers and index providers.

Fees in the \$6trn (€5.4trn) global ETF market are under constant downward pressure, but the manufacturers of the indices underlying those ETFs seem immune to the price war. In 2018, the global revenues of index firms were up 18.8%, reaching \$2.8bn, according to consultancy Burton-Taylor.

Though brand-name indices like the FTSE 100, Euro Stoxx 50. S&P 500 and MSCI World still dominate the ETF market. some asset managers have explored self-indexing - creating their own benchmarks, then managing ETFs to track them as a way of sidestepping the expensive licensing fees paid to benchmark providers.

But now new regulation is playing an important role in determining how far asset

managers can go in bringing the index development process in-house.

The European Union benchmarks regulation (BMR) was introduced in January 2018, largely in response to the LIBOR tampering scandal. The BMR provides a framework to ensure investors in regulated products are protected from manipulation of the underlying benchmarks.

Steffen Scheuble, chief executive officer at Solactive, says: "This regulation provides guidance for index providers on how to deal with conflicts of interest and it ensures transparency."

BUILDING A BENCHMARK

To understand how the emergence of new regulations and disruption of the market place has reshaped the provision of indices, it's important to grasp the process involved in producing a benchmark.

The first stage is developing the methodology - this is the

intellectual property of an index. It determines the universe of stocks or bonds, how companies will be selected and weighted. and how the index will be maintained.

Drawing up the rules underlying the benchmark from scratch has advantages for asset managers. Mandy Chiu, managing director and head of ETF product for SSGA, says: "It gives them greater control over how the index should be constructed, as well as how it should be branded"

Once devised, the index will need to be calculated, based on the criteria set in the methodology. And there needs to be an index administrator which plays an oversight role, monitoring and rebalancing the benchmark over time.

In theory, an asset manager could create its own index, calculate and administer that index as well as selling products which track the benchmark to its own clients. But the BMR makes this amalgamation of duties much more difficult.



Howie Li, LGIM

Chris Woods, managing director of governance and index policy at FTSE Group, says: "The BMR makes clear if the asset manager wants the index to be used in the European Union as a benchmark, there has to be an authorised administrator overseeing it."

The regulation sets out a range of specific responsibilities for an administrator. For example, it is required to maintain a robust governance structure, including policies for approving changes to the benchmark's methodology and for handling complaints.

The administrator must also ensure that input data to the benchmark calculation accurately and reliably represent the underlying market. It should also publish a benchmark statement which summarises the objective of the benchmark, the nature of the input data and the limitations of the benchmark, for example in times of stress.

If the administrator contravenes any of these responsibilities, it can be fined by the regulator. Gareth Parker, co-founder of Moorgate Benchmarks, says: "Those payments can very steep – up to 10% of the administrator's annual global revenue."

Given the potential legal liability, it's unsurprising that few asset managers now want to become regulated benchmark administrators. Howie Li, head of ETFs at Legal & General Investment Management, says: "Most asset managers ask a third party to administer and calculate the index on their behalf."

The administrator can then either calculate the index themselves or outsource it to a third party. But the asset manager cannot dictate that decision, says Woods.

SMART AND SPECIAL

So has the BMR killed off the self-indexing movement? Not necessarily, particularly when it comes to specialised, custom indices.

So-called 'smart beta' investment strategies have proved popular in recent years. This category includes indices which use methodologies other than market capitalisation to weight constituents, as well as more active strategies targeting multiple factors.

Asset managers often develop a smart beta strategy, then look for a third party to develop and calculate an index embedding it.

In the past, most asset managers would have baulked at outsourcing the strategy in this way. Scheuble says: "This used to be an expensive process."

But now, competitors to the large index firms have reduced the cost of administering and calculating bespoke indices, making it more economic for



Chris Woods, LGIM

asset managers to provide these products, says Manooj Mistry, head of index investing at DWS.

"Over the last two to three years the industry has been disrupted, with new index providers coming into the market," he says.

However, the practice of creating a customised investment strategy that is then embedded in an index and then outsourced to a third party for administration and calculation is now attracting regulatory scrutiny in the US.

In March 2018, Dalia Blass, head of the Division of Investment Management at the SEC, the US regulator of financial markets, queried whether US-based index providers should continue to enjoy what is called the 'publisher's exemption', something which allows them to escape direct regulation as investment advisers.

Index firms have always maintained that they do not offer investment advice, but merely represent the underlying financial markets in an objective and transparent way via their indices.

Now, the SEC appears to be seeking to draw a line between

indices that have broad public recognition - say, an S&P 500 and those that have been created for a much more limited audience, in extreme cases for one fund or client only.

If an index had such a restricted client base, or if an asset manager had had significant input into its design, then the regulator might want to bring the index firm itself within the scope of fund regulation, suggested Blass.

Whether or not the SEC intends to take further steps towards drawing index firms within the scope of investment adviser regulation is uncertain. However, the US regulator says it may in future enforce better index disclosure requirements. or impose a requirement on fund

boards to vote on retaining an index if it makes a significant change to its methodology.

Another factor impacting the competitive position of the asset manager vis-à-vis the index provider is investor inertia.

SSGA's Chiu savs: "US retail investors are less benchmarksensitive." For example, some years ago Vanguard switched the benchmarks underlying some of its US-based international equity ETFs from MSCI to FTSE indices, citing cost reasons.

But a willingness to switch the index underlying an ETF appears less prevalent in Europe, where the market for passive products is more institutional than retail, and where changing a policy benchmark is a more complex undertaking.

Chiu savs: "This will require consultation with numerous stakeholders, as well as the necessary due diligence."

"And institutional investors do not want the reputational risk associated with a new index not performing as expected." she adds. "Investors in this region prefer recognised brand names."

If, in the early days of passive investing, ETFs tracked indices that were already out there, now the relationships between the entities involved in creating index-tracking products seem harder to define. And the dividing lines between asset managers, index administrators and index calculators seem likely to shift further in the years ahead.

Why passive makes sense for ESG

FANNIE WURTZ

AMUNDI

SG investing – the incorporation of environmental, social and governance (ESG) factors into investment criteria – has grown rapidly in recent years.

With it, approaches to ESG investing have also evolved considerably. In the past, investors and asset owners viewed ESG as a constraint to portfolio performance. Now they see it as a way to enhance performance and add alpha.

Banks and asset managers have created a wide range of passive ESG solutions for investors of differing sizes, maturities and risk appetites. The early adopters may have been in Europe and North America, but there is also considerable growth now in Asia.

WHY ARE INVESTORS TAKING A MORE RESPONSIBLE APPROACH TO INVESTING?

Investors have a number of reasons for integrating ESG factors into their portfolios. Some are motivated by a sense of responsibility, and deploy their assets to encourage companies to adopt responsible business practices. Others believe this approach could help enhance performance by reducing the impact of climate change or poor governance.

Whatever the motivation, professional investors around the world are increasingly committing to ESG. Some 1,900 institutions worldwide have signed up to the UN-backed Principles for Responsible Investing. This represents over \$70trn of assets under management.

WHY DATA PROVIDES THE KEY FOR FURTHER GROWTH

While the relationship between higher ESG scores and better performance sounds plausible, proving it requires high-quality and consistent data. Traditionally, ESG data has been fraught with inconsistency as the defining characteristics were too new, or were not clearly defined.

However, the amount and quality of data has improved

dramatically over the last five years. Amundi, for example, has a long history in responsible asset management, and is keenly aware of how a particular ESG risk can translate into a long-term financial risk for a company: for example, managing carbon emissions for a utility company, or governance issues for a bank.

To better assess ESG risk, we have analysed more than 5,500 global companies and hold data going back to 2010. By marking each company according to each ESG characteristic, we can provide an overall ESG score for every company in its database. This gives us a robust platform to assess the true impact of ESG criteria on the performance of a portfolio.

POSITIVE RELATIONSHIP BETWEEN ESG FACTORS AND PERFORMANCE

Our analysis (see figure 1) found that between 2010 and 2013, tilting a portfolio towards stocks with a high ESG rating had a slightly negative impact on performance, whatever the region. However, from 2014-17, ESG factors were a source of outperformance in both Europe and North America.

If an investor had bought the top quintile of ESG stocks and sold the bottom quintile, they would have generated an annualised return of 3.3% in North America and 6.6% in the euro-zone during this period. But between 2010 and 2013, they would have underperformed by -2.7% and -1.2%, respectively.

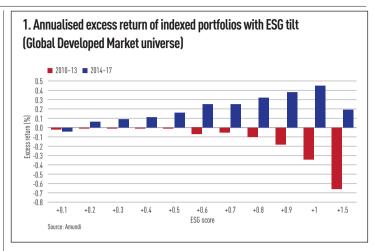
The data also shows that the environmental factor was most responsible for outperformance in North America and the governance characteristic performed the strongest in the euro-zone. In general, ESG characteristics were a greater contributor to outperformance in the euro-zone than in the US.

The analysis shows ESG has become a risk factor, particularly in Europe. In other words, those companies with high ESG scores tend also to be characterised as 'high-quality' stocks. Over the long run, these stocks tend to deliver excess returns. At the same time, there has been increased allocation of capital in recent years to equities with a high ESG score, so this could also help to explain the strong performance of these stocks.

INTEGRATING ESG INTO A **PASSIVE PORTFOLIO**

While investors have often preferred an active approach to ESG, as they believe it is better at selecting the required investment characteristics, research from Amundi shows that a passive approach can be just as effective.

There are two options



available to investors in passive funds or products: they can either buy a product which tracks an index that is specifically designed around ESG criteria, or they can ask a passive manager to integrate ESG screens into a standard index. In other words. the index manager will tilt the portfolio towards a specific ESG outcome. This allows the client to take a bespoke approach to these factors.

For example, the portfolio could exclude certain stocks to reflect the investor's stated philosophy when replicating the index. Or it could have a more complex objective, such as, for instance, improving the overall ESG score while also reducing the carbon footprint of the portfolio and improving the overall exposure to green technologies.

THE BESPOKE ESG APPROACH TO PASSIVE INVESTMENT

Improved accuracy and increased datasets give Amundi and other asset managers the ability to offer more customised solutions to clients. However, investors

need to be aware that the more complex they make their requirements, the greater the tracking error to the benchmark market index will be. If the goal of the passive portfolio is to match the performance of a particular index, then investors will want to match the benchmark as closely as possible.

It is, however, possible to achieve a significant improvement in the ESG characteristics of a passive portfolio. With limited additional tracking error, investors can improve the portfolio's overall ESG scores, reduce its carbon footprint and increase the influence of green technologies.

Some investors have specific ESG requirements to ensure their portfolios fit with their individual strategies. Amundi's approach to this is to gradually layer ESG criteria into the passive elements of the portfolio.

For example, this involves the phased implementation of an exclusion policy towards companies that produce prohibited anti-personnel mines and cluster bombs. This usually adds a small amount of tracking error. The

next step is to incorporate other layers of ESG. We can either work with the client's list of companies it wishes to exclude or we can use Amundi research to analyse the client's ESG policy, excluding companies on that basis.

As an additional laver of customisation. Amundi can work with the client's own tracking error budget. We will work within this range to help the client reach its ESG targets. The latter may involve reducing the portfolio's fossil fuel footprint by removing coal mining companies, for example. A social target could be the exclusion of tobacco firms or arms producers. There are many optimisation techniques that we can apply using the ESG data now available.

TAKING A MORE OFF-THE-SHELF APPROACH

For those who do not have their own specific criteria to follow, the off-the-shelf approach may be more suitable. The breadth and quality of ESG data in the market means that index providers can now respond to investor demand by producing more sophisticated indices.

For example, MSCI has used its large ESG data services to develop its socially responsible investment (SRI) index range, which was selected by Amundi as the benchmark for its equity (MSCI US SRI, MSCI Europe SRI, MSCI World SRI and MSCI Emerging Markets SRI indices) and fixed income SRI ETF range.

The methodology of the MSCI SRI index excludes stocks which are known as 'ESG controversies'. That includes those firms which

2. MSCI SRI methodology – the highest ESG selection level

Three levels of ESG inclusion	
Stock universe	The constituents of the MSCI Global Investable Market indices
Eligibility	The MSCI SRI indices use company ratings and research provided by MSCI ESG research to determine eligibility for index inclusion
Exclusion	
ESG controversies	Red flag
	Controversial weapons
Controversial activities	Business activities excluded from the MSCI SRI indices:*
	Civilian firearms
	Tobacco
	Alcohol
	Adult entertainment
	Conventional weapons
	Gambling
	Genetically modified organisms
	Thermal coal
	Nuclear power
Selection	
Minimum ESG rating	"B", "A" (new constituents)
Minimum ESG controversy score	"4" (new constituents)
Stock selection	25% of each sector with the best ESG score

Source: MSCI, September 2018

are in breach of international norms, such as the UN Global Compact. The benchmark also excludes stocks participating in 'controversial activities', such as firms involved in the manufacturing of civilian firearms, conventional weapons, gambling, genetically modified organisms, nuclear power, tobacco, alcohol, thermal coal or adult entertainment.

The remaining stocks are only included in the index if they meet the minimum ESG rating criteria. Taking the remaining stocks, each sector is then built using only the top scoring 25% of stocks. As a result, the index narrows the investable universe to around 400 stocks with the highest ESG ratings, from a starting total of 1,600 in the case of the MSCI World index.

A MORE RESPONSIBLE APPROACH TO BOND INVESTING

It's possible to apply similar investment criteria to corporate bond indices. Not only does this make sense as it helps to identify more specific factors which could impact a company's credit risk, but it also allows investors to take a consistent approach across their portfolio.

Amundi's SRI ETF range includes three bond ETFs using the Bloomberg Barclays MSCI US Corporate SRI, Bloomberg Barclays MSCI Euro Corporate SRI and Bloomberg Barclays MSCI Euro Corporate ESG BB+ Sustainability SRI 0-3 indices. These benchmarks combine Bloomberg's and Barclays' expertise in corporate bonds with MSCI's ESG research capabilities, offering investors a

^{*} For further information on tolerance levels, please consult the MSCI SRI Indexes Methodology document available on www.msci.com

way to invest responsibly in the corporate bond markets of Europe and the US.

Like their equity counterparts. these indices do not invest in companies involved in alcohol, civilian firearms, gambling, military weapons, nuclear power, tobacco, thermal coal, adult entertainment, and genetically modified organisms. They also use a 'controversial activities' filter and a minimum ESG score to filter out unwanted companies. Despite excluding companies, MSCI's approach has a very low level of tracking error compared to reference benchmarks. This makes it possible to use these ETFs as a core allocation.

IS PASSIVE JUST TOO PASSIVE?

In the different passive solutions it provides. Amundi has found that voting and engagement are two important levers it can use to deliver both ESG adherence and portfolio growth. In passive investing, a portfolio manager does not have the same power as an active manager to influence how the companies they invest in are managed. Voting is one of the opportunities passive managers have to exert such influence.

Amundi's approach is to have a dedicated team to manage voting and engagement in both active and passive portfolios. Managers

of invested companies become more open to outside views when they see Amundi bringing both active and passive teams into the discussion.

All these developments especially the ability to incorporate ESG data into portfolios mark a turning point in passive approaches to ESG investing. When we see how passive investing has grown in the US and Europe, it's clear what's ahead. We've proven that we're able to significantly improve the ESG score of a portfolio, while reducing the tracking error. This is helping to create a virtuous circle of ESG investing.

The ESG governance challenge

RACHAEL REVESZ

n increasing number of institutional investors are interested in investments with an environmental, social and/or governance (ESG) focus.

Globally, institutions own \$31trn of sustainable investment assets, according to the Global Sustainable Investment Alliance, up 34% in two years. Assets in European ETFs with an ESG theme are growing even faster, up 190% in two years, according to Morningstar. There are now 72 ESG exchange-traded funds in Europe, with a combined €13.5bn in assets.

But an investment in ESG that replicates an index – as most ETFs do – carries its own challenges.

CORPORATE ENGAGEMENT AND VOTING

Although ETF providers cannot divest from securities in the indices they are replicating, providers argue that they have an impact as long-term investors.

"We can't walk away so easily, therefore it's even more important to have sound guidelines and strict expectations in place where companies understand what we stand for and what we expect from them," says Nicolas Huber, head of corporate governance at DWS, home to X-tracker ETFs.

In-house governance teams are also growing, allowing ETF providers to increase their regional presence. BlackRock CEO Larry Fink said in his annual letter to CEOs in 2018 that the firm planned to double the size of its investment stewardship team within three vears - it currently has more than 40 people globally. Vanguard's corporate governance team has grown from 21 in 2017 to 35 today. While Amundi has one corporate governance team member in Tokyo and five in Paris, Invesco's team of eight people is split across London, Texas and India.

"A regional presence is very important as you cannot sit in London and write to Japanese companies and expect them to behave as UK companies," says Amra Balic, managing director,



Amra Balic, BlackRock

BlackRock EMEA, investment stewardship, which also has a governance team in Tokyo. "That just doesn't work. There are cultural and historical issues to take into account, as well as nuances and differences to understand in overseas markets."

As shown by a 2019 Morningstar report, when it comes to voting, most European ETF houses use research from proxy voting companies like ISS and Glass Lewis to help them decide how to vote on thousands of companies every year.

But Balic stresses that proxy research is only one reference point in the engagement process, and that voting is a last resort.

"This 'engagement first' approach also gives us an opportunity to make more informed voting decisions," she says. "Voting also tends to be annual in nature, on issues like financial statements, board members, non-routine business. and can be backward-looking on matters like executive pay, so often you are not really dealing with long-term strategic issues that are critical for the success of companies. Voting is not the be all and end all."

Hortense Bioy, European head of passive strategies and sustainability research at Morningstar, says information on ESG and voting activity in Europe can be hard to find, particularly for investors. Unlike in the US, there is no requirement for fund companies to publicly disclose how they voted at a fund level.

"At the moment I ask fund managers to send me voting information and they send a PDF of companies, and I sometimes think, what am I supposed to do with this? I don't care about this company; I care about my fund," she says. "Investors want to know more about voting and engagement practices, and how responsible their asset managers are."

It is expected that by 2020 several regulations from the European Commission will require investment houses to disclose how they consider ESG factors - preventing products with very little ESG activity being



Hortense Bioy, Morningstar

labelled as 'green' - and will ask product providers to integrate ESG risks and opportunities into their processes.

A LACK OF DISCLOSURE **MEANS A LACK OF DATA**

One hurdle is the amount and quality of data provided from the underlying companies in indices.

"There is no doubt that we have seen progress over the last 10 years but for ESG to be properly captured and for investors to be able to look at the impact and influence of ESG in a tangible way, on company performance, that all depends on data and the quality of the data," says BlackRock's Balic.

A lack of disclosure is prevalent across many areas, from staff diversity to management pay and carbon footprint. According to ISS's ESG Review 2019, of the 25,000 companies monitored for their climate performance, just 3,100 reported their greenhouse gas emissions in 2018. Huber says DWS uses half a dozen data vendors alone.

To tackle the issue. Solactive

CEO Steffen Scheuble bought an equity stake in European-based research and proxy firm Minerva this year. Scheuble says Minerva collects data from company disclosures and shareholder meetings, and he can use the data to build enhanced indices and products, including ESG.

INDEXERS MAKE THE RULES

Another limitation for ESG ETFs is that they are replicating indices, and index providers make the rules - unless the index is customised, which can cost a lot more in licensing fees.

Following IPOs from companies like Dropbox and Snapchat, which gave disproportionate power to founders and other insiders, index providers consulted in 2017 on whether to include shares with limited or no voting rights.

FTSE Russell now requires 5% voting rights with public shareholders and has given companies until September 2022 to comply. S&P Dow Jones decided in 2017 no longer to allow any new stock with limited voting rights to enter the S&P Composite 1500 index family, which includes the widely followed S&P 500 index. Existing constituents with multiple share classes, such as Google and Facebook, were allowed to remain.

However, MSCI still includes non-voting shares in its MSCI Global Investable Market indices. It also created a set of mirror indices earlier this year which specifically included voting rights. BlackRock agreed with MSCI's stance, writing in an open letter that indexers should not supersede regulators in setting corporate governance standards.



Steffen Scheuble, Solactive

"There is a need for a benchmark which is focused on the full opportunity set," says MSCI's global head of ESG indexes Deborah Yang. "We want to provide investor choice."

TO REFLECT THE WHOLE MARKET OR NOT

Not everyone agrees on the thesis of reflecting the whole market.

In January, Swiss Sustainable Finance wrote an open letter to index providers, asking them to remove controversial weapons from their mainstream indices.

"MSCI's response [that it could not exclude them as a default] is representative of the attitude of a large share of the players in the index industry who consider that ESG is a good business opportunity

rather than an opportunity to do good," wrote Noël Amenc, CEO of Scientific Beta.

But where should indexers then draw the line?

Scheuble says Solactive tends to act in line with the client's wishes, rather than define ESG for everyone else.

"Should supervisory boards be comprised of former board members? What is a good and bad company? What is the right ratio of women at board level or other levels? There are so many areas where you will not find a consensus."

NEGATIVE SCREENING RULES IN EUROPE

The complexity and nuance of ESG perhaps explains why "negative screening" – excluding certain stocks or industries from an index – is the most popular strategy in Europe, as shown by the Global Sustainable Investment Alliance's 2018 review. For example, MSCI launched ex-tobacco indices last year. In June, the UK's largest pension fund, NEST, announced it would divest from tobacco.

"We wrote a blog last year that said if you just take out an industry, say, and then reconstruct your portfolio to make up for the fact that you have these exclusions, it shows that your risk and return profile is improved and even historic performance would not have costed your portfolio," says Yang.

BlackRock research shows that a stronger focus on ESG results in stronger shareholder protections and better performance. Between 2012 and 2018, investors with an ESG focus would have outperformed the parent index in global and emerging market equities by 0.6% and 1.3% per annum, respectively.

THE FUTURE OF ESG

Industry experts think we are likely to move beyond simple negative screening and towards ESG integration. One example of this is iShares, which launched ESG ratings across all of its ETFs this year.

"I'm convinced that we will see a lot more sophistication, know-how, customisation and assets in this space," says Solactive's Scheuble. "One thing is clear: we will see substantially more products coming to market and products that really have more [ESG-related] IP included."

In future, according to Balic and Yang, there is still likely to be a distinction between ESG products for clients with specific views and mainstream investments with more ESG analysis.

Bioy goes one step further.

"ESG integration is becoming mainstream, and is used to perform better analysis and risks of the companies funds invest in. If you're interested in ESG, it doesn't mean you have to go specifically for an ESG product."

Sustainable investing is here to stay

ARMIT BHAMBRA

iSHARES

Sustainable investing was once viewed as a trade-off between value and 'values'. Yet today, it's something investors can no longer afford to ignore. What has changed? More granular data, more sophisticated analysis and shifting societal understanding of sustainability, as well as growing awareness that certain factors – often characterised as environmental, social and governance (ESG) – can be tied to a company's long-term growth potential.

Regardless of investor views, ESG is increasingly on the agenda – especially for UK trustees who, from October 2019, will be required to show more formally how they have taken ESG into consideration. The Department for Work and Pensions statement of investment principles requires clear indications on how ESG and investment stewardship factors are considered within investment arrangements. These are:

- 'Financially material (ESG) considerations' over the appropriate time horizon for investment;
- 'Non-financially material' ESG considerations, if trustee boards

have any;

• A statement on engagement activities.

This new requirement has varying levels of engagement from different schemes. This may be partly due to differing circumstances, but also the range of attitudes in the sector towards what can be a controversial subject. One point worth stressing, however, is that there is an increasing tendency to take more informed views on this area, and this focus will steadily increase as more and more reliable data becomes accessible to investors. Access to good quality information on prospective investments at worst does not change your investment thesis and, at best, it transforms an investor's view. Taking this into account is a key part of the process for pension scheme arrangements.

BlackRock defines ESG integration as the practice of explicitly incorporating environmental, social and governance information into investment decisions to help enhance risk-adjusted returns.

As a result, we have launched a firm-wide, global effort to integrate sustainability considerations into the investment process. This mirrors the diversity of clients we serve, as well as the range of investment strategies and asset classes we offer. Across BlackRock, we provide all our investment teams with data and insights to keep them well-informed of sustainability considerations.

This leads to our interest in offering sustainable solutions that allow our clients to attain their financial objectives. The range of sustainable investing options is broad, reaching all the way from green bonds to renewable energy infrastructure. Furthermore, BlackRock is the largest provider of sustainable ETFs, including the largest low-carbon ETF in the market. ETFs are a great choice to navigate this new sustainable environment, for three main reasons.

First, they offer a minimal tracking error, being a relevant substitute for those products that track traditional indices. Second, they have a low cost and are an easy way for schemes to show their ESG involvement without having to invest all their time into this trend, which is here to stay. Finally, ETFs allow investors the opportunity to invest in a wide range of products, with varied exposure to the amount of sustainability they are willing to get involved in.

However, even though the proliferation of ESG options is good, it is important to understand what you are looking at. The BlackRock iShares ESG ETF range can be divided into five areas, which start from avoiding exposures that conflict with your social objectives, all the way to target outcomes that advance your social and financial objectives:

- ESG Screened Range: this eliminates exposures to companies or activities that pose certain risks, or which violate an investor's values. It is designed for investors looking to screen out controversial business areas while maintaining a profile similar to traditional benchmarks.
- ESG Enhanced Range: the objective is to maximise ESG scores (calculated and provided by MSCI), subject to a target tracking error. It is designed for those investors building sustainable portfolios.
- SRI Range: a socially responsible investment (SRI) approach is used to gain exposure to the top ESG performers in each sector. It is designed for those investors with the highest commitment to, and conviction towards, the top ESG performers.
- Thematic Investing: this type of investing focuses on an ESG trend, allowing investors access

to structural economic themes such as low carbon, clean energy or inclusion and diversity.

• Impact Investing: this approach focuses on generating a measurable sustainable outcome alongside a financial return. It is designed for long-term investors looking to drive measurable change.

ESG data has evolved. New technologies and methodologies have allowed us to make great strides in improving sustainability data, as can be seen from the wide range of options that ESG ETFs have to offer. Our research, which relies on back-tested data, shows how ESG-focused indices have matched or exceeded returns of their standard counterparts, with comparable volatility.

We find ESG has much in common with existing quality metrics such as strong balance sheets, suggesting ESG-friendly portfolios could be more resilient in downturns. This suggests that ESG is not just a box-ticking exercise, to be performed by schemes to satisfy the criteria of new regulations. It can enhance returns and ETFs offer a cost-efficient and operationally efficient way to get exposure to this theme.

In the UK, we have seen that, ahead of new regulations, local authorities have been shifting their index allocations into low-carbon alternatives. The shift in other regions, such as the Nordic or Benelux countries, has been remarkable over the last few years, forcing investors to include ESG into their investment processes. Regulation and social awareness have been key to the growth of this type of investment. We saw this with one of the largest private pension insurance companies in the Nordic region.

BlackRock worked in close collaboration with the client to create a core sustainable solution for its US equity allocation, which was a part of a broader integration of ESG characteristics within the investment strategy. This case is a testament to the transformation we are seeing in the Nordic region, with institutional investors shifting their portfolios from standard to sustainable benchmarks, and it highlights the importance of collaborating with clients to build solutions that meet their criteria.

Assets in dedicated sustainable investing strategies around the world have grown at a rapid clip, driven by societal and demographic changes, regulation and increased investment conviction. Incorporating relevant sustainability insights can provide a more holistic view of the risks and opportunities associated with a given investment. There is no one-size-fits-all approach, but the opportunity to improve investment processes by integrating material sustainability considerations is real and growing.

To that end, a perfect storm is brewing, that will mean ESG climbs towards the top of the agenda for European pension funds and consultants. Between a changing regulatory environment, improving data and a proliferation of investable products and solutions, the scene is now set for European pension funds to become significant investors in investment strategies that help meet their liabilities, as well as delivering a positive societal outcome. The road won't be smooth, nor will it be immediate, but a continuing increase in ESG investing across the sector is becoming irrefutable.

The devil in the detail of 'low carbon' ETFs

DEWI JOHN

ustainable market indices are nothing new. The Dow Jones Sustainability index was launched in 1999 and the FTSE4Good index in 2001. Fixed income investors can also get in on the act: the first green bond was launched in 2007 by the European Investment Bank, and indices followed in 2014, driven by major World Bank issuance.

Index providers and fund managers have responded to investor demand by issuing ever more specific product offerings: there are now ETFs focusing on solar, women's empowerment, clean energy and sustainable water. And, of course, low carbon.

GREENWASHING

But embedding a sustainable investment strategy in an index is challenging. Some commentators even see passive investing as antithetical to the effective implementation of environmental, social and governance (ESG) principles within a portfolio, arguing that indexing may be

great for reducing fees, but not so great for raising standards.

At worst, say critics, passive ESG funds risk the accusation of 'greenwashing', where the bar for index inclusion is set too low.

Indeed, certain aspects of ESG investing are notoriously difficult to quantify, particularly social factors. For example, how does one score a company's labour practices, or draw an equivalence between a miner and a tech company?

This is something that index



Remy Briand, MSCI

provider MSCI is mindful of, says its head of ESG, Remy Briand: "On the social aspect of ESG, we focus on material issues by sector," he says.

"For example, in retail, we look at such factors as the way retailers manage their supply chain. In other sectors the emphasis can be human capital, workforce diversity or data security. So, for example, Equifax, the US consumer credit scoring agency, had its data hacked, exposing half of the US population. Its rating is very low, driven by poor data privacy management."

State Street Global Advisors (SSGA) uses third-party indices for its ETFs, but says it also does its own research to refine specific metrics.

"In our ETFs on gender diversity we create the parameters, such as around board diversity," explains Ana Harris, global head of equity portfolio strategists, indexing, at SSGA. "We are doing a lot of work on ESG data sets with a view to developing our own scores."

Another challenge for passive funds is that they rely, almost by definition, on data that is both historic and standardised.
However, for ESG investors, value may be added more by anticipating changes in corporate behaviour, say some researchers.

"Many ESG metrics are historic, collected from company disclosures, for example," acknowledges Harris.

"But the metrics we use aren't that different from what an active manager would look at.

"We are also looking to capture the change in ESG scores, so even if you don't have specific forward-looking measures, you can pick up on a company's change in direction in relevant metrics or behaviours."

This can also include metrics such as green revenues and other indicators that can measure the level of resilience to climate change, she says.

The problem for providers and investors alike is that there is little consensus on what metrics are most relevant for positive ESG outcomes.

In one area – carbon emissions – ESG data quality appears less of an issue, though. After all, emissions are measurable and in many jurisdictions are part of mandatory corporate disclosures.

ALTERED CARBON

But even headline carbon emissions data may not be so reliable, according to some observers.

In a recent report, 'Who Owns the World's Fossil Fuels?', a UK-based non-profit called InfluenceMap queried the description of certain ETFs as being fossil fuel-free or low carbon.

InfluenceMap identified two SSGA ETFs, constructed using MSCI indices, as worthy of particular criticism. Although they are marketed as fossil fuel-free, said InfluenceMap, these two ETFs have a thermal coal intensity (TCI) metric that is a hundred times greater than State Street's flagship \$250bn (€227bn) SPY ETF, which tracks the S&P 500 index.



Thomas O'Neill, InfluenceMap

One reason for this surprising result is the market capitalisation-based methodology used by the S&P 500: it has a relatively low exposure to coal because the main US coal miners are now too small to be in the index.

Meanwhile, the SPDR MSCI EAFE Fossil Fuel Reserves Free ETF and SPDR MSCI Emerging Markets Fossil Fuel Reserves Free ETF contain significant fossil fuel reserves through holdings of companies such as Wesfarmers, RWE and Vale, says the report.

However, Thomas O'Neill, research director at InfluenceMap, says you still wouldn't expect to find much coal exposure in a fossil fuel-free ETF. "I find it hard to understand how you could include RWE in a low-carbon index," he says.

Details of the composition of the underlying indices are not disclosed by MSCI; however, State Street does publish the holdings of all of its listed funds in the ETF section of its US site, according to the report.

"We only looked at the ownership of reserves, so it's possible that some of these ETFs are constructed using different methodologies," says O'Neill.

And this illustrates a broader point: ESG methodologies are very diverse.

"Low carbon indices have a single objective and are built around companies with lower exposures to carbon emissions or reserves," explains Briand.

This is done on a relative basis (by reduced weighting and not by exclusion) and Briand says this gives a 70% reduction of carbon emissions compared to the MSCI World index, the universe from which the MSCI World Low Carbon Target index is constructed.

"If investors want to do this by exclusion, it can be done, but this approach can create other issues such as higher tracking error, which they may not want," he says.

SSGA's Harris says the two ETFs highlighted by InfluenceMap were built using a simple methodology.

"These are first-generation products, focused on fossil fuel reserves, not carbon intensity," she says.

"When these two ETFs were developed almost three years ago, the objective was to divest from companies owning fossil fuel reserves and to reduce exposure to potential stranded assets. rather than to reduce the overall portfolio carbon footprint. They were created for those who wanted straightforward exclusion criteria for fossil fuels."

CONFUSION

According to O'Neill, this example highlights what he sees as a general problem.

"It's not clear what 'low carbon' means," he says.

"There is little regulation covering what you can call ESG. This has to be clearer – such as, for example, being in line with the Paris Agreement – otherwise there is a chance that these funds are being mis-sold."

Harris, however, is adamant that SSGA hasn't misled investors with these funds, but is instead "providing a simple way of addressing carbon concerns.

which was particularly attractive to the US market".

She contrasts this to the situation in Europe, where "investors are more concerned about the total carbon footprint, and have a potentially more sophisticated approach, and it's likely that simple exclusion as an approach will be superseded".

MSCI's Briand concedes "there can be a degree of confusion with what investors buy regarding ESG passive solutions", but adds that there are initiatives to make this more transparent: for example, "you can go on the iShares website and see the characteristics of all their ETFs, including ESG factors". EU legislation on ESG disclosures will also increase this transparency, he says.

He also says that MSCI's indices are becoming more refined, with one new approach reallocating capital away from companies with higher exposure to carbon reserves and deploying it towards those with green revenues or positive forwardlooking climate targets. "We are doing this with our Climate Change index," he says, and while there are no ETFs based on this yet, "we have an asset owner ready to fund one".

So the answer to 'are low carbon ETFs low carbon?' appears to be: 'it depends on what risk you want to mitigate'.

Reducing direct fossil fuel exposure is one thing, excluding it another, and lowering the carbon footprint of the entire portfolio yet another – and here, again, methodologies can diverge widely. While such instruments are a useful tool for investors, it pays to ask what result you're looking for, and to see to what degree each ETF addresses this.

Corporate governance for passive investors in Japanese equities

PRITPAL LOTAY

NIKKO ASSET MANAGEMENT

he Japanese economy has been experiencing significant and positive change since the election of Prime Minister Shinzo Abe in 2012. After a sustained period of economic stagnation, Japan's return to growth is being fuelled by Abe's transformative economic policies.

ETFs can provide a costeffective and efficient way of capturing this growth. However, investors may wonder how an index-tracking ETF can take environmental, social and governance (ESG) considerations into account.

To answer this question, it is important to understand Japan's corporate governance history and culture, and a particular push for change in recent years.

JAPANESE CORPORATE CULTURE

During the post-war era, Japan's economy was largely led by corporate banks under protective measures such as cross-share-holdings, and the repayment of

debt was traditionally prioritised over returns on equity (ROE) and dividend pay-outs.

Japanese companies tend to have significantly more cash on their balance sheets than those in other countries, and they are more reluctant to distribute this cash to shareholders. When coupled with the cross-shareholding culture, where companies (particularly in financial services) hold the shares of other firms for reasons of business relationships, this can lead to management complacency.

An example is when Japanese companies uniformly set a dividend payout ratio of 30% and a total payout ratio (including buybacks) of 50%, regardless of an individual company's earnings growth. In aggregate, this results in lower ROE and a less attractive investment case.

STEWARDSHIP CODE AND CORPORATE GOVERNANCE CODE

To help improve companies' attractiveness to outside investors, Abe introduced the Steward-

ship Code and Corporate Governance Code, in 2014 and 2015 respectively.

These codes have the dual aim of altering company behaviour and boosting the Japanese equity market. The aim is to ensure that shareholder returns are prioritised by reducing cross-shareholdings, enhancing capital efficiency, increasing governance and distributing excess cash on balance sheets. The Stewardship Code has since been revised to strengthen it further, with companies now urged to disclose details of proxy votes.

According to a survey conducted by METI (Ministry of Economy, Trade and Industry), approximately 78% of Japanese companies had soudanyaku or komon (senior adviser) positions as of June 2016.

We believe CEOs should have ultimate responsibility in making decisions, not advisers (ie, former CEOs) working behind the scenes. Since the revision of the code, there has been a focus on the unwinding of cross-share-holdings, enhanced board

committees and greater engagement by corporate pension funds. Figure 1 shows how the overall cross-shareholding ratio in Japan has fallen since 1990.

The revised Stewardship Code focuses on five key points:

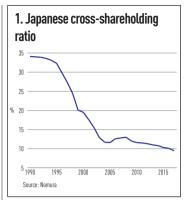
- Effective oversight by asset owners:
- Asset managers' governance and management of their conflicts of interest;
- Engagement in passive management:
- Enhanced disclosure of voting records:
- Self-evaluation of asset managers.

The engagement policies of passive (index-tracking) asset managers deserve particular attention, for a few reasons. The Bank of Japan (BoJ) is now the largest holder of Japan-domiciled ETFs as part of its ETF purchasing programme. Many believe that this in itself has distorted the governance of Japanese companies. However, it's important to note that asset managers continue to manage the proxy voting rights for the ETFs owned by the BoJ.

ACTIVE ENGAGEMENT IN PASSIVE HOLDINGS

Choosing the right ETF provider is of great importance when it comes to corporate governance and active engagement. ETFs will in many cases be chosen by investors as a cost-effective means of gaining exposure to a particular asset class or sector over the long term.

While it is easy for an active manager to dispose of a stock if dissatisfied with a company's management, this is not an option if a fund tracks a market index.



So passive funds require a deeper level of due diligence and it is important to choose an ETF provider that has a transparent policy when engaging with firms and exercising voting rights. Whether conducted in-house or through proxy voting agencies, there must be a clear policy.

Nikko Asset Management has addressed this by forming a team of in-house analysts (the Active Ownership Group), who are responsible for engagement with the companies Nikko AM holds in both active and passive funds.

The goal is to engage with all the companies held and also to enhance the shareholder value of these companies. The analysts in the Active Ownership Group specialise in determining how to exercise voting rights. They conduct governance meetings with the companies currently held, but also with those companies which are not covered in the core research universe.

Proxy voting rights are an important means through which shareholders can increase investee companies' medium to long-term corporate value. They should be exercised independently and solely in the interests of clients and beneficiaries in order to fulfil fiduciary responsibilities.

If an ETF provider conducts voting in-house, it is important to understand how the provider has voted historically. One that consistently votes in favour of management's proposals should be approached with caution and questioned.

A JAPANESE INDEX WITH STRONG CORPORATE GOVERNANCE

The JPX-Nikkei 400 index. introduced in 2014, selects and allocates larger weightings to Japanese companies showing good corporate behaviour, based on quantitative and qualitative governance factors.

Stocks are given a score based on ROE (40%), three-year operating profits (40%) and market capitalisation (20%). The qualitative score takes into account the number of independent directors. the adoption of IFRS reporting standards and earnings being reported in English.

The JPX-Nikkei 400 has developed the nickname 'the shame index' and it has gained traction as companies not included during index constituent reviews feel public pressure to improve their corporate behaviour.

THE FUTURE FOR JAPANESE **EQUITIES AND GOVERNANCE**

Whilst there is still room for improvements in Japanese corporate culture, there is growing evidence that governance has significantly improved and this change is driving an increase in profitability. We believe that this transformation will lead to a global recognition and a larger portfolio allocation to Japan by investors worldwide.

Gender equality ETFs gain a foothold

RACHAEL REVESZ

an a new category of ETFs help address one of the oldest economic imbalances of all?

The journey towards gender equality-focused ETFs started in the US.

In early 2017, State Street Global Advisors (SSGA) unveiled a bronze statue of a little girl, hands on her hips and hair flying in the wind, and placed her opposite the famous Bull statue on Wall Street.

The 'Fearless Girl', facing down the patriarchy, was also designed to celebrate the launch of the world's first exchangetraded fund to invest in gender equality.

The SPDR SSGA Gender
Diversity ETF (SHE), which
tracks 144 of the largest 1,000 US
companies that have the best
ratios of women to men in senior
positions, was the top new
fundraiser of 2016, after receiving around \$250m (€227m) in
seed money from CalPERS, the
largest public pension fund in the
US. But in the almost three years
since, and during a rising US



Noel Archard, SSGA

equity market, SHE still sits at just under \$300m.

Noel Archard, global head of ETF product for SSGA, insists the fund has had a big impact, with 400 companies adding at least one woman director since the fund's inception. He also predicts SHE will, over time, become the firm's 'flagship' ESG offering.

"You tend to see retail adoption for newer funds, and as the funds get bigger they move on to platforms, and when they hit \$1bn, you see institutions come into play. That's the normal trajectory and we think SHE is following that trajectory," he says.

A recent report from Veris Wealth Partners found that gender-lens investing mandates have grown in four years from \$100m to \$2.4bn globally, across more than 30 strategies.

Veris, however, noted that many of the funds are very new, with 10 vehicles alone launched between January 2017 and August 2018.

The relative novelty of gender-equality funds could explain their relatively slow start, argues SSGA's Archard.

"Anytime you move away from the standard market cap index, people want to see that threeyear track record," he says.

Meanwhile, the debate over how best to assess gender equality, or the lack of it, has moved on. And many investors now favour more nuanced gender metrics than a simple tally of the number of women in leadership roles.

One problem with using a female director count to determine investment strategy is evidence that having more women at board level does not ensure more diversity at lower levels, nor more women earning top salaries.

Other research shows that companies taking longer to choose their first woman board member are more likely to pick a woman who is already a director for another company.

EUROPEAN APPROACHES

In Europe, the collective passive assets in the three ETFs and one mutual fund that focus on gender equality, at just over £200m (€217m), are less than in SSGA's single US-listed SHE ETF. But here the methodology is arguably more advanced.

Data from Equileap, an organisation promoting workplace gender equality, underlie ETFs from UBS and Lyxor, both launched in late 2017.

The associated indices, run by Solactive, rank companies globally in terms of their gender equality efforts. The index methodology uses 19 criteria, including gender balance, gender pay gap, parental leave, sexual harassment policy and supply chain diversity.

Another gender equality ETF (OPEN) from iShares, launched in 2018, uses an index from Thomson Reuters to select 100 global companies out of more than 2,000, based on 24 metrics.

But the raw material for gender-equality strategies is still hard to obtain. Data providers have to rely on publicly available information and company

transparency, which means a challenge.

For example, according to Equileap's latest global report. 88% of 3,519 researched companies did not disclose details of the differences in salaries between male and female employees. In April 2018, the UK became one of the first countries in the world to require companies with more than 250 employees to disclose their pay gap every year.

"We start with, is there a policy [on, say, sexual harassment]? Does the company publicly acknowledge it? That's the first step and that's where we are," says Equileap CEO Diana van Maasdijk.

"The next step is, is it being implemented? Is it good quality and do employees feel that it's being taken seriously at the company? When it comes to counting women and men for the purpose of gender balance, that's quite easy. But seeing whether a policy is being implemented takes more work."

Gender equality-focused funds are typically marketed as part of a provider's environmental, social and governance (ESG) range. The UBS and Lyxor ETFs screen out any company that derives most of its revenue from controversial industries like weapons, gambling and tobacco, but most of the methodology is about picking the best-in-class stocks, rather than excluding bad players.

"ESG as a whole is a huge growth area and this [gender equality] is a core component," says Andrew Walsh, head of passive & ETF specialist sales, UK & Ireland, at UBS. "In the old days you'd remove tobacco or weapons but [the gender equality



Diana van Maasdijk, Equileap

ETF shows how we are] going about this in a more advanced and thorough way, taking a deep dive into these companies."

IMPERFECT COMPANIONS

They may sit under the same umbrella, but ESG and gender equality are not always a perfect fit.

For example, the £50m Legal & General Investment Management (LGIM) Future World Gender in Leadership UK index fund (GIRL) invests in companies with at least 30% women across senior and junior levels of the company, but the fund has received criticism for its controversial top holdings, including Royal Dutch Shell.

"The fund excludes, on a global basis, stocks that don't engage on climate change issues. None of them are based in the UK however, and GIRL is a UK-focused fund," says Helena Morrissey, head of personal investing at LGIM.

"But we are looking closely at other issues that people are concerned about, like tobacco and armaments, so watch this

space for further evolution to our range."

There are other potential reasons why asset levels in gender equality funds remain low. Just like in ESG, investors often believe that investing in gender equality means sacrificing returns.

But in the short term, at least, the data does not appear to support such concerns. For example, GIRL has outperformed its index since launch, returning 4.99% compared to the benchmark's 4.6% over the 14 months to the end of July 2019.

Gender equality ETFs also have relatively short track records: Lyxor's ETF, the oldest such fund in Europe, only just turned two in September. There is also a lack of regulation to prevent product 'pink-washing' – attaching the gender equality label to a fund even if such a concept is not its main focus or outcome – and investors are increasingly sensitive about fund providers proving that their own houses are in order. For example, LGIM reported a median gender pay gap of 29% in 2018.

Archard of State Street, whose own firm has settled multiple gender discrimination claims, says that his employer focuses on three pillars for long-term success in the arenas of ESG and gender equality: scoring (understanding how companies, including his own employer, are

performing in terms of gender equality), stewardship (active engagement with the marketplace) and solutions (what products they are selling).

Archard says his firm is aware of the risk of accusations of profit-seeking or hypocrisy when promoting a gender-equal investment fund.

"Clients are sensitive," he says.
"They want to know what your
stewardship and engagement are
in the larger sphere, or do they
think you are just putting products
out there because they're trendy?"

As an investment concept, gender equality is relatively new. But the flurry of initial interest in the idea suggests it may soon gain real traction.

The rise and rise of fixed income ETFs

117 PFFUTI

hen ETFs first broke up the active management party in the fallout of the financial crisis, it was equity funds that bore the brunt of the impact.

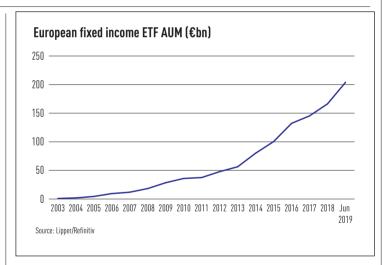
Ten years on, it is fixed income ETFs that are shaking up fund management - and potentially changing the bond markets at the same time.

June 2019 was a standout month for fixed income ETFs. They dominated sales in Europe, with seven of the top 10 selling ETFs tracking bonds, according to data monitor Lipper.

A net €6bn flew into bond ETFs in June, while investors withdrew a net €3.5bn from equity funds over the month. iShares' euro-denominated euro-zone corporate bond ETF drew 60% of net inflows to the ETF universe as a whole.

In Europe, bond funds now make up 27% of all €747bn in total ETF assets under management, according to Lipper – a huge jump from even five years ago.

With global trade tensions



reaching boiling point and geopolitical uncertainty reigning supreme, it might not be a surprise that investors are heading out of volatile equity markets. But global markets have seen stress before - and bond ETFs have never seen inflows like this.

Antoine Lesné, head of SPDR ETF strategy and research at SSGA, said fixed income ETFs may have started later than their equity-based peers, but they are

rapidly catching up.

"Fixed income flows have been almost growing in a straight line," says Lesné. "It's very rare to see such regular growth. There have been just 11 months of outflows since 2008. and in June, there were the highest flows ever."

For Nicolas Fragneau, head of ETF product specialists at Amundi, flows of this magnitude demonstrate how many institutional investors are using fixed

income ETFs, whereas few were doing so just a little while ago.

"ETFs have been a true game-changer for fixed income, on two levels," Fragneau says.
"ETFs have given better access to fixed income as an asset class.
Traditionally, fixed income is more complicated than equities.
To trade bonds, you need to be equipped and have specific relationships with market makers, which makes it more complex."

Buying a share in a well-diversified basket is clearly easier and more efficient than navigating through the bond markets for investors of all sizes.

"It also gives access to specific types of bonds, which are more complex to source and trade," says Fragneau.

"Local currency emerging market debt, for example, has to be sourced and the currency has to be dealt with – this can be complicated and risky. With ETFs, you can get this covered off in one transaction and there is no exposure to currencies. There is a currency exposure through the ETF, but there is no need to trade the currency."

This access to potentially complex underlying assets means fixed income ETFs now offer investors a way to diversify their bond portfolios at a relatively low cost.

Bryon Lake, head of international ETF at JP Morgan Asset Management, who is spearheading the asset manager's European push, says: "A basket of ETFs gives immediate diversification as an investor does not need to take a whole bond, but just a share in many. That tailors their exposure and can give them extremely targeted exposure."

BREAKING IT DOWN

This targeted exposure comes from being able to drill down into a wider range of fixed income securities than ever before, as managers and providers expand their horizons. This also means a bond ETF can also give wider diversification than a traditional bond fund, says Fragneau.

"The Global Aggregate index has more than 15,000 bonds in there," he says. "It is not possible for an investor to have exposure to and trade all these bonds – but with an ETF they can. There are a lot more options than there used to be."

While there are still many more equity-focused ETFs, the number and variety of bond options using the wrapper is creeping up.

"The initial exposure from fixed income ETFs was fairly broad. Now they are much more granular – it's the next level," says Paul Syms, head of EMEA ETF fixed income product management at Invesco. "Investors can get exposure to bonds of different ratings, different maturities – it's allowing a much more precise exposure to fixed income."

But one of the reasons why fixed income ETFs may have lagged their equity cousins may be down to this inherent granularity.

"There are many more benchmarks in fixed income than in equities," says Syms. "There are some standard equity benchmarks, but there are not necessarily the same standards in fixed income."

LOW YIELDS PRESSURE FEES

In the low yield world – with major central banks forcing down



Nicolas Fragneau, Amundi

interest rates once more – the returns on fixed income are still suffering. However, the yield environment may give a boost to ETEs

"Across the board, yields used to be higher, allowing investors to pay higher fees," says Invesco's Syms. "Now, even paying 25bps on something that is yielding very little – or even has a negative yield – will make people think twice about active funds."

It has also become more difficult to pick up alpha from some sectors – like core government bonds, given economic policies – so ETFs are a good option to act as building blocks for beta, freeing up fees to access alpha through active funds elsewhere.

Investors are also starting to use ETFs to access liquidity as they can get in and out quickly, according to SSGA's Lesné.

"Fees are also relatively attractive compared to active funds, ETFs can diversify and are easy to trade. Equity ETFs received a lot of assets as it was hard for active managers to outperform," he says. "For fixed

income, it has become a similar story."

MANAGING LIQUIDITY

ETF advocates point to the central role of these funds as a bond market price barometer.

"By their nature, bonds have been traded over-the-counter so you have a lack of pricing data." says Lake at JP Morgan. "That is already a challenge, but also there are hundreds more bonds than equities. Trading bonds through ETFs helps with price discovery as the price of an ETF is helpful input into the pricing of fixed income overall. Most investors meet at exchanges to see pricing and this is happening in real time with ETFs."

Fragneau agrees. "When you are concerned about the liquidity of the bond market, there is little data available to look into it." he says. "But when there is an ETF on that market, it functions as a measure of the underlying liquidity. Also, gathering data on 3,000 bonds one by one takes



Bryon Lake, JP Morgan Asset Management

time. With an ETF, you instantly have the information available on the underlying bonds. It is a very efficient proxy for liquidity."

It might also be a proxy for a focus group.

Amundi launched its first floating-rate ETF in 2015 - it was the first such ETF in Europe.

To ensure the fund did not face a liquidity issue, the manager placed a liquidity filter on the index it was tracking. The index

was meant to have fewer than 100 bonds, but 100 passed the test. A few years later, there were almost 250 bonds in the ETF as the liquidity in the sector was much better.

According to Fragneau, the market - issuers and their advisers – spotted investor appetite. "This is something we didn't have before and it helps the market by giving a clear view of what people want," he says.

In the three years since the launch, the amount invested in floating-rate ETFs has risen to €8bn.

"The ecosystem around fixed income is changing and ETFs is playing a big part in it," says Lake, acknowledging also that the options for investors are changing, too. "With active funds, you can do more research into the downside risk - defaults and downgrades - which can make a big difference in the long run."

The future is bright for fixed income ETFs - and the party has just got going.

ETFs: the natural home for fixed income

THOMAS STEPHENS

JP MORGAN ASSET MANAGEMENT

n recent years, fixed income ETFs have been grabbing a larger slice of the ETF market as investors look to capitalise on the enhanced diversification, tradeability, price transparency and liquidity they can provide to bond portfolios. According to the latest research by Citi Business Advisory Services, fixed income ETF assets have increased at a robust 25% annual compound growth rate over the last decade, hitting more than \$870bn by the end of 2018.

The growth in fixed income ETFs means that investors can now use ETFs to gain exposure to a wide range of bond markets, including emerging market debt (hard currency and local currency), investment-grade credit and global government bonds, using either market cap-weighted, strategic beta or actively managed investment strategies.

PASSIVE FIXED INCOME AT THE FOREFRONT

As with equity ETFs, passive index

funds have been at the forefront of fixed income ETF growth. Much of the demand for passive bond ETFs has been driven by the factors that have underlain the success of passive equity funds – namely, they allow investors to quickly and efficiently add low-cost and scalable bond market exposure to their portfolios.

However, while passive fixed income ETFs provide highly effective portfolio building blocks for investors looking to gain exposure to government bonds, or similar market segments where it is challenging to add value through active management, traditional debt-weighted bond indices suffer from well-publicised limitations when it comes to investing in riskier and less liquid bond markets, such as high-yield credit and emerging market debt.

ACTIVE FIXED INCOME DRIVING FUTURE GROWTH

As investors become more aware of the uncompensated risk exposures provided by pure passive index funds, actively managed and strategic beta fixed income ETFs are growing in popularity. Active and strategic beta ETFs seek to reduce the risk concentrations and biases inherent in traditional index funds by selecting bonds based on various criteria, such as credit risk, liquidity or maturity profile – while maintaining the cost, liquidity and trading advantages of the ETF structure.

Research also suggests that active managers are able to capitalise on the many inefficiencies in bond markets to deliver alpha on a much more consistent basis than in equity markets. According to PIMCO research, more than two thirds of active bond managers (mutual funds and ETFs) have successfully beaten the median passive fund in their peer group over the last five years, compared to just 43% of active equity funds.¹

Therefore, while passive fixed income ETFs will continue to

1 Bonds are Different: Active versus Passive Management in 12 Points, PIMCO, April 2017.

provide a highly effective tool for investors looking to gain efficient, scalable and cost-effective exposure to global bond markets, we would expect active strategies to play a much more prominent role in the future growth of fixed income ETFs.

CONFRONTING THE CHALLENGES OF BOND MARKET LIQUIDITY

Global bond markets present huge opportunities for investors but they can be tough for even the most sophisticated investor to navigate.

For example, the over-thecounter trading venues used for fixed income securities make it difficult to evaluate liquidity and fair pricing, while the complexity and relative illiquidity of parts of the bond markets themselves present particular challenges to investors looking to replicate bond market exposure in their own portfolios.

Fixed income ETFs provide a potential solution to these challenges, offering an attractive option for any investor requiring liquid, tradeable access to global bond markets - through a variety of market conditions.

TRADING AND PRICING

The first challenge faced by investors when participating in the global bond markets is the fragmentation of bond trading. Unlike equity markets, bond markets have no centralised trading venues. Instead, fixed income securities are mostly traded over-the-counter via a network of independent bond dealers, presenting operational hurdles for investors looking to run diversified bond portfolios.

Over-the-counter trading with multiple dealers means that liquidity can be spread across trading venues, making it difficult for investors to assess the full liquidity profile of a bond or to execute programme trades featuring multiple securities at the same time.

Over-the-counter trading also means that prices may often need to be negotiated with several dealers rather than at a single quoted price. Furthermore, many bonds are relatively illiquid, while prices may not be up to date, making it hard for investors to know the fair value for the bond they are buying or selling. Particularly in times of market volatility, the last traded price may well diverge significantly from current fair value.

Fixed income ETFs can help investors overcome these trading challenges as the ETF vehicle brings together bond baskets that investors can trade easily and efficiently on exchange throughout the day. While the stock exchange that a fixed income ETF is listed on is open, investors

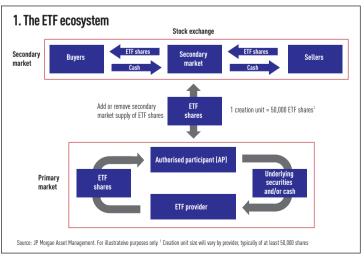
can buy and sell shares just like they would for an equity stock, at a single, transparent price that is kept in line to fair value - even through volatile markets.

To find out how fixed income ETFs achieve this level of tradeability, we need to look at how ETFs work, starting with the ETF creation and redemption mechanism in the primary market - which is the ultimate driver of an ETF's valuation and liquidity.

THE ETF CREATION AND REDEMPTION MECHANISM

Fixed income ETFs can increase liquidity and achieve efficient fair value pricing by utilising two 'levels' of liquidity: the primary market, where authorised participants (APs) are able to create or redeem ETF shares to meet demand; and the secondary market, where buvers and sellers of an ETF's shares can be matched directly, negating the need for APs to create or redeem shares in the primary market.

The first level of liquidity is provided by the primary market ETF creation and redemption



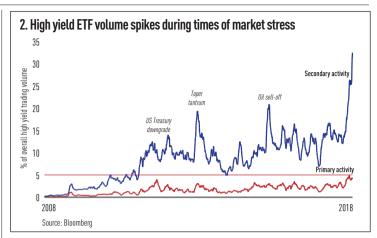
mechanism, through which APs can exchange ETF shares for the ETF's underlying basket of securities. This mechanism incentivises APs to create new shares, or cancel shares, whenever a fixed income ETF is trading above the value of its underlying investments (at a premium) or below (at a discount), thereby preventing the price of an ETF from deviating too much from the value of its underlying investments.

If a large buy order comes in, new shares can be created to meet the demand. If a large sell order comes in, shares can simply be removed from the market to reduce supply. In both cases, the dozens (or hundreds) of different securities inside the fixed income ETF's basket will be bought or sold to handle large transactions.

SECONDARY MARKET LIQUIDITY

Although primary market liquidity is robust, some investors are concerned about the ability of fixed income ETFs (and mutual funds) to sell securities to meet demand for redemptions at times of market stress. These concerns have risen as banking regulations introduced in response to the 2008 financial crisis have reduced the ability and appetite of banks to hold bonds on their balance sheets – reducing an important source of liquidity for the market.

Fortunately, significant liquidity remains in the bond markets, with other non-bank actors stepping in to supplement the banks, while evolving market dynamics (including the growth of bond ETFs) and the development of new trading technologies by sell-side firms (such as fixed income programme trading) are



all helping to maintain adequate levels of underlying market liquidity in various market conditions.

Furthermore, while it is prudent to assume that the liquidity of an ETF may need to be derived from the liquidity of the underlying market in which it invests, fixed income ETFs don't always need to access bond market liquidity to be actively traded themselves. If an ETF suffers a redemption or receives inflows, it can avoid trading in its underlying securities if an AP or market maker is able instead to find a willing buyer or seller for the ETF's shares on the secondary market. In certain instances, an AP or market maker may also choose to hold the ETF as inventory instead of redeeming in the primary market, again avoiding underlying trading of the ETF's constituents.

When buyers and sellers are matched, the ETF secondary market offers a significant additional liquidity venue through which to transact either on exchange or over the counter – often at lower bid-ask spreads than through the primary market

helping to maintain the liquidity

of fixed income ETFs through various market conditions.

By way of contrast, an investor looking to create or divest a diversified portfolio of the same underlying bonds as an ETF would need to trade each bond individually – a process that would not only be time-consuming but also potentially challenging in volatile markets.

Such is the importance of the secondary market that it's not exceptional for an ETF's secondary market trading volume to be significantly higher than the trading volume of its underlying holdings. Take high yield ETFs as an example. Over the past 10 years, secondary market activity has been consistently higher than primary market activity. Most trading in high yield ETFs has therefore occurred between investors and only a relatively small proportion of trading has resulted in the creation or redemption of shares in the primary market - even in volatile markets.

In fact, investors are often likely to find a deeper secondary market in times of market stress as buyers and sellers use ETFs as price discovery tools. This is because the ETF secondary market may provide a more accurate picture of the value of the underlying basket of bonds.

Ultimately, however, it's the trading of bonds and ETF shares in the primary market that drives an ETF's valuation and liquidity. If the ETF market price deviates too far from the NAV, the ETF creation and redemption mechanism kicks in. When APs exchange ETF shares for the ETF's underlying basket of securities, they ensure that fixed income ETFs remain close to their 'fair' price.

The secondary market provides a significant liquidity cushion, providing greater pricing transparency that can help to alleviate episodes of market volatility. Furthermore, thanks to the secondary market, the ETF manager is less likely to be a forced seller, avoiding the need to sell high quality, liquid assets at low prices into market weakness. It's also worth noting that banks and investment institutions are not allowed to own ETFs as part of regulatory liquidity buffers, further reducing the pressure on ETFs to sell assets. When there are macro or systemic shocks, the liquidity and diversification benefits of fixed income ETFs really stand out.

DIVERSIFIED EXPOSURE TO COMPLEX MARKETS

Bond indices are far more complex than equity indices, making them much more difficult to replicate or track effectively. Whereas equity indices may contain a few hundred equities, bond indices can contain thousands of issuers, and each issuer can issue multiple securities, each with different coupons and maturities – and

each requiring a separate price.

To complicate matters further, many bond indices hold a large number of smaller, illiquid securities. A recent study by rating agency FitchRatings² into the underlying holdings of five major US corporate bond ETFs revealed that bonds with an issuance between \$250m and \$499m only traded on 28% of the days covered in the review period. Many bonds will never be traded but are simply held to maturity.

Fixed income ETFs have the ability to optimise their portfolios to overcome these challenges, while still benefiting from the additional liquidity of the primary and secondary markets. Active bond ETF managers will tend to employ a liquidity screen and a quantitative research screen to filter out illiquid securities when selecting bonds. Passive bond ETFs will look to invest in a subset of their chosen bond index that has the lowest tracking error, and then screen securities to maximise the liquidity of the index subset while maintaining the lowest possible tracking error.

The aim at all times is to build portfolios that provide exposure to the bond markets and provide high levels of underlying liquidity. By investing only in liquid and tradeable underlying securities, the bond ETF can be easier to trade than the basket of bonds that it represents, allowing the cost of creating and redeeming shares to be minimised – even in volatile markets.

Investors should therefore ensure that the bond ETF

2 https://www.fitchratings.com/gws/en/ fitchwire/fitchwirearticle/Bond-Trade-Frequency?pr id=978847 provider has the resources in place to optimise ETF tracking error and liquidity, and the strongest trading resources to secure the best possible pricing and drive down trading costs. It's particularly important to choose a bond ETF provider with robust and proven investment processes and strong portfolio construction.

Furthermore, ETF managers should also be able to demonstrate robust liquidity risk management across their fixed income portfolios, ideally including regular independent review of the liquidity of fund holdings to provide investment teams with clear guidelines.

CONCLUSION: FIXED INCOME ETFs PROVIDE LIQUID BOND MARKET ACCESS

The complexities of fixed income markets can make building and maintaining diversified bond portfolios challenging, even for the most sophisticated of investors. However, the ETF structure, when combined with robust investment processes and liquidity management, can help provide investors with liquid, easily tradeable access to bond markets.

By bringing together liquid bonds in an ETF format, and by accessing the valuation mechanism of the primary market and the additional liquidity of the secondary market, ETFs are able to maintain levels of liquidity across a broader portfolio of bonds (and at lower cost) than it would be possible for investors to achieve by trading the same bonds individually. It's these attributes that have helped maintain fixed income ETF liquidity, even in times of market stress.

Do fixed income ETFs distort the market?

ANTOINE LESNÉ

STATE STREET GLOBAL ADVISORS

n this article, which is an excerpt from a recent State Street Global Advisors publication, we address one of the key misconceptions about fixed income (bond) ETFs - namely, that they have become so large that they are distorting the underlying bond market. Instead, we argue, despite their recent growth, fixed income ETFs represent a relatively small proportion of the world's debt markets.

And although ETFs generally account for less than 5% of assets in almost all segments of the broad USD fixed income universe, in many cases ETFs represent a higher proportion of the traded volume in the relevant bonds. Fixed income ETFs therefore provide a source of additive liquidity to those markets.

FICTION: THE FIXED INCOME **ETF MARKET HAS BECOME SO** LARGE THAT IT DISTORTS THE **BOND MARKET**

Fact 1: ETFs still have a small asset footprint

The fixed income ETF market is

still relatively young: the first fixed income ETF was launched only in 2002. Even 10 years ago, assets under management in fixed income ETFs represented \$48bn, only around 1.9% of the global fixed income fund industry, according to Morningstar.

Meanwhile, ETFs accounted for a mere 0.2% of the investable global fixed income universe, as measured by the Bloomberg Barclavs Multiverse index, which includes investment grade and high yield bonds issued in developed and emerging market currencies.

By 30 June 2018, fixed income ETFs had seen a remarkable growth in assets. On this date they represented 10.2% of the global fund market, with \$800bn in assets.

While the growth of these instruments has been robust, they still only account for 1.5% of the total investable fixed income universe. And flows into fixed income ETFs have not occurred solely at the expense of other types of investment

vehicle. Instead, they have helped the overall market to

Figure 1 shows the recent market footprint of ETFs within sectors of the fixed income universe, including US high yield corporate bonds, US investment grade corporate bonds, US investment grade floating rate notes, US senior loans, US municipal bonds, emerging market bonds, US government bonds and US mortgage-backed securities (MBS).

ETFs' ownership share across these sectors remains relatively small, varying from 0.4% to 3.2%.

Fact 2: In some fixed income sectors, ETFs are becoming a critical source of additive liquidity

But when measured by their contribution to trading, ETFs have a more significant role. Figure 2 illustrates how much ETFs account for in terms of trading activity, again measured by fixed income sector. Figure 2 also shows that in some fixed income sectors. ETFs are

becoming a critical source of additive liquidity.

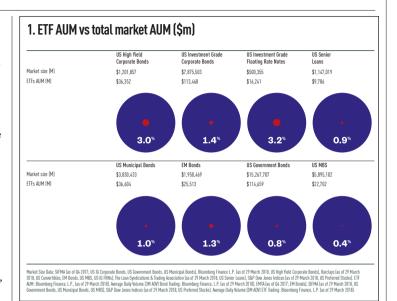
Whereas ETFs generally account for less than 5% of assets in almost all segments of the broad USD fixed income universe, in many cases ETFs generate a significantly higher proportion of the trading volume in the underlying bonds.

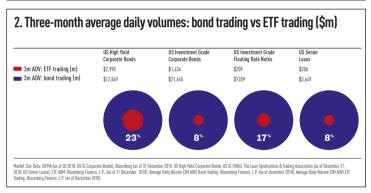
How do fixed income ETFs become an extra source of liquidity? The stock exchange upon which an ETF is traded becomes the venue where a variety of investor types congregate to position their portfolios and to express a fixed income beta exposure in either direction. long or short.

The resulting two-way flow in the shares of the ETF typically results in muted impact on the underlying market (for example, an ETF consisting of senior loans or high yield bonds may see only \$1 of net share creation or redemption for every \$6-8 of secondary trading value).

In high yield bonds, ETF trading may have begun to supplant volumes in synthetic products such as total return swaps and credit derivative swap indices (CDX).

By comparison with the unfunded, margin-based nature





of exposure to these synthetic products. ETFs offer a fully funded exposure. This generates a performance profile that better matches the cash bond market and avoids the multiple basis risks that exist with a synthetic exposure.

Bond ETFs, the Swiss army knife in a time of need

ARMIT BHAMBRA

iSHARES

ixed income will play both a pivotal and multi-faceted role in European pensions scheme portfolios. Whether it be for growth, income or liability and cash flow matching, many schemes in the region will need to hold bonds as they de-risk in a low yield environment.

Following the global financial crisis, regulatory changes and increased capital requirements have reduced investment banks' willingness to hold bond inventory, impacting market liquidity. In areas like high yield and emerging market debt, bond ETFs allow access to the asset class at a fraction of the cost you would expect from investing in the underlying bonds.

This article explores why schemes should add bond ETFs, the Swiss army knife, to their toolkit in a time of need.

SOURCES OF ETF LIQUIDITY

One feature of ETFs is unique and not shared by mutual funds: they have a secondary market, whose benefit is accentuated when the underlying market is costly to trade. For example, the round-trip cost of trading cash bonds in the US high yield market can be around 75bps. However, the iShares iBoxx USD High Yield Corp Bond ETF (HYG) has an average daily volume of \$2.1bn and trades at 1bps wide.¹

In the past, it was common belief that Europe-domiciled ETFs lacked the liquidity required to facilitate trades of institutional scale. But the volume of large trades in these markets continues to grow. This is because liquidity between US-domiciled ETFs and Europe-domiciled (UCITS) equivalents is fungible. In other words, clients can consider the combined liquidity of US and UCITS bond ETFs that track the same index.

For example, a client looking to trade a UCITS ETF can benefit from the secondary market liquidity of the US-domiciled ETF if the authorised partici-

1 Source: BlackRock, the Exchange Traded Product Landscape.

pants facilitating the trade use the same underlying bonds in each fund's creation units. This is common practice across several iShares ETFs that track markets such as US investment grade credit, hard currency emerging market debt and US dollar floating-rate bonds.

What has all of this meant for bond ETF usage by pension schemes? Meaningfully lower transaction costs have resulted in a plethora of applications that have helped solve challenges pension schemes face. Initially, we saw schemes use ETFs for interim beta when, for example, switching between managers and tactical asset allocation. However, some schemes have become more sophisticated, using bond ETFs as a replacement for credit derivatives, building custom liquidity sleeves and, for some exposures, strategic asset allocation.

FOUR KEY TRENDS TO DRIVE BOND ETF MARKET GROWTH

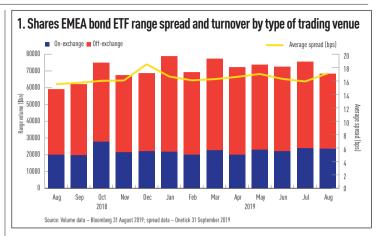
Over the past 10 years, the global bond ETF market has grown five

times and assets now stand at just over \$1trn. However, bond ETFs still comprise only 1% of total cash bonds outstanding.2

At BlackRock, we believe that global bond ETF assets are well positioned to double to \$2trn by the end of 2024, for four reasons:3 An evolution in portfolio

- construction: bond ETF investors are hardly passive. Millions of people are actively using them in innovative ways to achieve a variety of outcomes.
- Modernisation of the bond market: bond trading as a percentage of debt outstanding has declined in the post-crisis. dealer-centric world, and market participants look to ETFs and electronic trading to help improve liquidity.
- *ETF innovation:* the development of new bond ETF exposures will add convenience for investors, provide new tools to customise portfolios and drive future bond ETF adoption. More bond ETFs will incorporate environmental, social and governance (ESG) inputs into their methodologies, or target green bonds used to fund sustainable projects.
- ETF adoption by institutional investors: other institutions than pension funds are increasingly using bond ETFs. Insurers are deploying short-term government bond ETFs to manage cash reserves, fund managers hold bond ETFs instead of cash in anticipation of new issues, and endowments are using bond ETFs while transitioning between non-liquid strategies and active managers.

So what does this mean for the bond ETF market? We will likely see a deepening of the same dynamics we have seen



play out in this market already. As institutional usage of bond ETFs continues to drive the overall bond ETF market growth, schemes looking to use them will benefit from increased volumes and depths, and thus larger sizes can be traded at low cost, relative to transacting in the underlying market.

We have seen larger trade volumes as a result of MiFID II, which has resulted in a significant enhancement in the reporting and transparency of overall secondary market activity. To put this into context, over 75% of the average daily volume recorded since January 2018 has been recorded on over-the-counter venues (see figure 1).

Already, the enhanced reporting of ETF transactions has enabled larger ETF transactions; the largest trade in a European bond ETF to date, worth \$550m, took place in January 2019.4

In normal market conditions. market makers can enable cost-effective and sizeable trades into and out of credit ETFs. In times of stress, being able to transfer risk, whether to get out of positions or to increase allocations when prices are

depressed, is crucial. ETFs can serve as an efficient, open-access vehicle for those who need to invest. Furthermore, they provide investors with price transparency in the underlying bond market when it seizes due to closure or a lack of liquidity in the primary market.

Pension schemes are faced with a plethora of challenges in meeting their primary objective, being sufficiently funded to make member benefit payments. The time is now to seek new efficiencies, especially for those schemes underfunded in a lower for longer environment. Bond ETFs, when used and traded in the right way, can be an effective tool when applied to pension scheme portfolios. We believe this is the time for schemes to consider adding this Swiss army knife to the tool kit.

² Source: Bloomberg and BlackRock 2019. 3 Source: BlackRock, Primed for Growth: Bond ETFs and the path to \$2 trillion. 4 Source: Bloomberg, Tradeweb, HIS Markit. Prints reflect the largest known trades on iShares UCITS Credit and ETFs as of August 2019 across exchange and over-the-counter trading venues.

Actively managing today's green bond opportunities

GAIL COUNIHAN

FRANKLIN TEMPLETON

n this article we examine the process for green bond labelling and certification and its implication for index investors. Passive (index-tracking) green bond funds are bound by eligibility rules and each index has its own labelling requirements.

We strongly believe that a well-balanced green bond portfolio should have a wider remit, to include issuance from companies that are actively contributing to the growth of a low-carbon economy, even if their debt is not labelled green. From an investment point of view, there are significant opportunities in this space.

WHAT DEFINES A GREEN BOND?

Green bonds first appeared in 2008 with an issue from the World Bank. Since then, environmental, social and governance (ESG) mandates, as well as issuance to finance climaterelated expenditures, have gained prominence as concerns over greenhouse gas (GHG) emissions

and climate change have grown. Green bonds are a key tool in efforts to decarbonise the global economy and are set to see rapid growth.

Given the absence of a legally binding system, the definition of a green bond is complex. The International Capital Markets Association (ICMA) maintains a classification framework, originally established in 2014, referred to as the Green Bond Principles (GBP). Although adherence is voluntary, it is worth looking at the key components in order to understand what is seen as green financing:

• Use of proceeds (UOP): this needs to be adequately defined in the bond prospectus. In standard bonds, the UOP is often simply 'General Corporate Purposes'. To be considered as green, at a minimum, the UOP should clearly indicate the projects to be financed or refinanced by the proceeds, why these projects are environmentally beneficial and their effectiveness in meeting the issuer's decarbonisation goals.

- Process for project evaluation: this includes a description of the issuer's sustainability objectives, its process for determining the eligibility of a project as green and the process for managing environmental and social risks.
- Management of proceeds: proceeds from green issuance need to be virtually (but not legally) segregated and linked to the green projects in a credible way.
- Reporting: the issuer should regularly provide up-to-date information on the progress of the projects detailed in the UOP. This can be an internally or externally certified process and allows the formal labelling of an instrument as a green bond.

The Climate Bond Initiative (CBI), an international non-profit agency, has introduced an independent Climate Bond Standard certification scheme to help reduce due diligence requirements for investors. This is also a voluntary scheme.

The GBP and the CBI certification system were

originally designed to provide a framework for companies that were not in the business of climate mitigation, but which could demonstrate to investors that certain issuance was for green investments.

Bonds from 'green pure-plays' - companies whose revenues are entirely from green activities - were almost non-existent at the time, something that has now changed significantly.

Examples of green pure-plays include companies producing solar panels, wind turbines or electric vehicle charging infrastructure. Such companies are part of the drive towards a decarbonised future and in our view their debt should be considered as being aligned with environmentally sustainable investment goals, even if they do not seek a formal label.

Crucially, only a third of the climate-aligned bonds identified by the CBI are labelled as green bonds. In addition, some companies may have projects that meet GBP criteria, are certified and index-compliant, but these businesses may still be in industries that are often avoided by ESG investors - such as oil and gas, industry, and mining. As green investors, we need to be mindful that the mechanics of the supply chain mean that most emissions occur upstream - so there is a requirement to extend the conversation to cover these industries.

Indices, and by extension passive green bond funds, are bound by eligibility rules. Each index has its own labelling requirement, either through strict or broad alignment with the GBP or CBI criteria. We believe that active management can add value in such a relatively new field as it can tap into opportunities around unlabelled company debt.

Beyond the green label (or lack of one), an active manager will primarily consider the fundamental credit profile of the issuer (using a bottom-up approach), ensuring that the manager picks companies that are fundamentally creditworthy.

In our view, the analysis should not stop there. A thorough review of the environmental sustainability of that company's business model, its performance on key environmental performance indicators and the governance arrangement in place - at the company and also surrounding its 'green' commitments - should also be carried out to ensure that the green projects will meet their goals.

Academic research² has demonstrated that there is a positive, statistically significant link between a company's environmental events and its valuation, with recent studies based on companies within the S&P 500 supporting the theory that there is a positive relationship between environmental performance and valuation. Other, broader studies have also backed the theory that stronger governance and shareholder engagement are linked to higher valuations.

A HOLISTIC APPROACH TO **GREEN BONDS**

In our opinion, there are merits in continuously benchmarking

each green bond against its peers and moving into issues that offer greater relative value, as opposed to following an index or holding bonds to maturity.

Franklin Templeton's European fixed income research team looks at green bonds holistically; we establish a baseline level of environmental impact reporting for all issuers held in a portfolio, regardless of whether any particular bond is labelled green. As a major global fixed income investor, we are also well-positioned to engage with the management of companies on an ongoing basis, both around their ESG commitments and the underlying credibility of their business plans. The research team then assesses issuers based on the extent to which:

- The issuer can pay the interest and coupon on the bond as it falls
- It supports the transition to a low-carbon future:
- It has an appropriate governance structure; and
- The operational processes and practices that make up the company's environmental management systems are adequate.

Our active approach to investing in green bonds allows our portfolio managers to apply discretion while still investing in bonds that provide environmental benefits. We believe this approach can also deliver superior risk-adjusted returns for investors in an area of the market which is still in its infancy.

¹ Climate Bond Initiative Annual Report 2018.

² Konar and Cohen, 2001; Guenster et al. 2011; Derwall et al. 2003; Konar, Bailly and Cohen, 2000.

Factor investing in commodities: a sector-based approach

BLOOMBERG

ommodities have long been a staple of multi-asset investors. Traditionally used to diversify exposure to fixed income and equity holdings, they are more recently also a source of alternative risk premia. Whatever the use case, the desired feature of any commodities allocation is some combination of attractive performance, sufficient liquidity, and a transparent methodology.

The literature covering optimal portfolio construction is extensive. Focused primarily on equities and fixed income, it covers topics such as balancing risk and combining alternative and asset premia. Commodities have been less well covered. Allocations to the asset class are relatively smaller and the variable liquidity of individual commodities can make it difficult to deviate significantly from standard benchmark weights.

Risk premia strategies, also referred to as factor investing, seek a positive long-run expected return as compensation for taking on identified risks other than the traditional market beta. Initially constructed as long/short portfolios, they have increasingly been used to systematically enhance long-only portfolios in the form of tilts from market value weights.

Among commodities investors, carry and trend following tend to be the most popular risk premia strategies. Trend following is an artefact of investors' behaviour, which include the bandwagon and disposition effects and the participation of non-economic players. Signals are used to identify price patterns over different frequencies, based on which long/short positions are entered into. Trend strategies are characterised by modest longterm Sharpe ratios and a positive skewness of returns. The carry trade involves taking long/short positions in high/low yielding assets. The returns profile is similar to that of an insurance underwriter. Small and steady gains are accrued over extended periods, which are interspersed by sudden, sharp declines when a risk, such as market sentiment

turning bearish, materialises.

Using commodity sectors as building blocks, we outline a framework to construct liquid portfolios that both balance risk and incorporate alternative risk premia. A standard use case would be asset allocators seeking efficient sources of commodities returns.

ASSET CLASS CHARACTERISTICS

Market weights in commodities can be viewed as some combination of liquidity measures such as open interest and production measures. One such benchmark is the Bloomberg Commodities index (BCOM), which is comprised of 23 commodities. The weight for each commodity varies considerably: in July 2019, constituent weights ranged from 1% (KC Wheat) to 13% (Gold). It can be challenging for large investors to allocate assets to individual commodities based solely on trading signals, such as price trends, while not taking into account their weights in a broader benchmark index.

Commodities are typically incorporated into a multi-asset portfolio to diversify equity and fixed income risk. Since the mid 1970s, the long-term correlation of commodities with US equities and fixed income has been 0.2 and -0.1, respectively. Commodities are also used to hedge inflation. Given that commodities are real assets and are included in consumer price indices, rising inflation is often reflected in higher commodity prices. This is especially the case for commodities in the energy sector. Regressing the returns of the BCOM and BCOM Energy indices on quarterly changes in CPI, we get slope coefficients (or 'inflation beta') of 2.4 and 5.5, respectively. Both slopes are statistically significant.

Commodities can be classified into four broad sectors - energy. industrial metals, precious metals, and agriculture and livestock. The key drivers of returns are store of value (precious metals), industrial production and growth (energy and industrial metals), and harvest cycles and weather (agriculture and livestock). Correlations between sectors are low and stable – ranging from 0.15 to 0.3 over the past 30 years. Correlations within the sectors tend to be higher – ranging from 0.2 between agriculture and livestock to 0.7 between energy and precious metals. Both the intra- and inter-sector correlations suggest we can view sectors as reasonably homogeneous building blocks. Since sectors are comprised of market valueweighted commodities, they provide a solution to the liquidity problem posed by individual commodities. In turn, liquidity

1. Sector statistics. 1991–2019

BCOM	Energy	Precious metals	Industrial metals	Agriculture & livestock
-0.6%	-3.1%	2.3%	0.7%	-3.3%
-5.2%	-7.3%	-2.9%	-1.8%	-6.3%
4.7%	4.2%	5.3%	2.6%	3.2%
14%	28%	17%	20%	15%
-0.45	0.15	0.06	-0.01	0.01
na	32%	13%	17%	38%
	16%	26%	23%	35%
	19%	28%	25%	28%
	18%	22%	28%	31%
		0.16	0.29	0.21
			0.34	0.27
				0.32
	-0.6% -5.2% 4.7% 14% -0.45	-0.6% -3.1% -5.2% -7.3% 4.7% 4.2% 14% 28% -0.45 0.15 na 32% 16% 19%	metals -0.6% -3.1% 2.3% -5.2% -7.3% -2.9% 4.7% 4.2% 5.3% 14% 28% 17% -0.45 0.15 0.06 na 32% 13% 16% 26% 19% 28% 18% 22%	metals metals -0.6% -3.1% 2.3% 0.7% -5.2% -7.3% -2.9% -1.8% 4.7% 4.2% 5.3% 2.6% 14% 28% 17% 20% -0.45 0.15 0.06 -0.01 na 32% 13% 17% 16% 26% 23% 19% 28% 25% 18% 22% 28%

Source: Bloomberg

facilitates the construction of portfolios that deviate from market value weights. We use the BCOM sector indices as proxies for sector returns.

Financing and storage costs and the hedging behaviour of commodity producers determines the shape of the futures curve. When the curve is upward-sloping (the price of a distant future is higher than one closer to expiry) the curve is said to be in contango. When the opposite is true, the curve is in backwardation. The difference between the excess return and spot return is called the 'roll return'. When the curve is in contango (backwardation), the roll returns are negative (positive). The differences in sector dynamics are evident through the roll returns (figure 1) and are important when constructing a carry strategy.

The systematic harvesting of roll returns is a carry strategy and there are two implementations. The curve trade takes long/short

positions at different points of the curve for the same commodity to account for differences in local slopes. A backwardation strategy positions long/short in different commodities, at the same point in the curve.

In the subsequent sections. results are discussed for the period 1980-2019 and performance statistics are in total returns unless stated otherwise.

BALANCING RISK

In the absence of strong views on sector performance, allocating between commodity sectors to balance risk makes sense. There are several ways to construct such a portfolio – ranging from equal volatility contribution to incorporating the covariance matrix, such as in the risk parity portfolio. Given the stable, low-to-modest sector correlations, a straightforward approach is allocating based on (inverse) sector volatility. Under this

approach, each month sector weights are assigned based on the inverse of their trailing historical volatility, calculated over the past year.

Relative to the BCOM index, risk weighting sectors effectively redistributes weight from energy to industrial and precious metals (see figure 1). Performance statistics (figure 2) show the annual total return of the risk-balanced portfolio (RBP) is 0.3% pa lower than the BCOM index. However, the accompanying reduction in volatility results in the same risk-adjusted return (0.19). The portfolio drawdown is reduced while the rolling portfolio volatility reveals a more stable profile. For asset allocators, these features can help size the commodities exposure. Also important are the unchanged diversification properties of the asset class. Reducing the energy allocation leads to a more negative skew since energy tends to have large upside price shocks. The inflation beta is still statistically significant but declines to 1.8.

INTRODUCING RISK PREMIA TILTS

We can use carry and trendfollowing signals to introduce
alternative risk premia to the
risk-balanced portfolio. The four
sectors are ranked based on
historical returns (trend) and
slope of the futures curve (carry).
Starting from a baseline allocation, the constituent weights are
then modified to reflect the
relative factor scores. This
results in a final portfolio which
is long-only, fully invested and
which combines asset class and
alternative premia. We consider

2. Measuring performance (total return statistics)

	BCOM	M Risk balanced portfolio	Risk balanced portfolio with tilts		
			Trend	Carry	Multifactor
1980-2019					
Nearby contracts					
Annualised returns	2.7%	2.4%	4.8%	4.0%	4.6%
Volatility	14.3%	12.7%	17.1%	14.2%	16.8%
Return/volatility	0.19	0.19	0.28	0.28	0.28
Max drawdown	-67%	-53%	-58%	-52%	-56%
Skewness	-0.39	-0.64	0.39	-0.51	0.26
Asset class correlations					
US equities	0.24	0.25	0.17	0.22	0.18
US fixed income	-0.04	-0.07	-0.05	-0.05	-0.05
US Treasuries	-0.11	-0.14	-0.11	-0.11	-0.10
Inflation beta	2.37	1.76	1.75	1.77	1.70
1991-2019					
Nearby contracts					
Annualised returns	2.0%	2.7%	4.5%	4.3%	4.7%
Volatility	14.3%	12.1%	14.7%	12.8%	14.5%
Return/volatility	0.14	0.22	0.31	0.34	0.32
3-month forward contract	cts				
Annualised returns	5.2%	5.1%	7.0%	7.1%	7.1%
Volatility	13.3%	11.8%	14.2%	12.3%	13.9%
Return/volatility	0.39	0.43	0.49	0.57	0.51

Source: Bloomberg

three cases: a trend signal, a carry signal and a combination of carry and trend (multifactor). The sector-based factor scores are a weighted sum of the individual commodity scores.

Case 1: Trend

Using the excess returns series, five individual trend signals measure the change in the price level (ie, -1/+1) over windows spanning 1-12 months. The aggregate signal for the sector is the average of the individual signals. Sector exposures in the RBP are then reweighted to reflect the sector trend signals. A higher dispersion in the signals translates to a larger deviation from risk weights.

Relative to the RBP, returns and volatility increase (by 1.4%

and 4.4% respectively), leading to a moderate improvement in risk adjusted returns (0.3). Asset class correlations remain unchanged and continue to provide diversification benefits for a cross-asset investor. The inflation beta remains significant (1.8) and, in keeping with one of the main characteristics of trend-following strategies, the skew of returns is positive (0.4).

Case 2: Carry

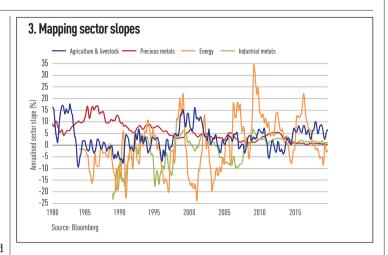
Used as a proxy for expected roll return, the backwardation signal measures the slope of the futures curve using the price of the nearby contract versus the corresponding calendar contract 12 months away. As noted earlier, a larger positive (negative) slope implies a more

negative (positive) roll return. Similar to the trend signals, we tilt the equal risk weights based on the slope: the tilting procedure overweights sectors that display a more negative slope. Figure 3 illustrates both the extent of the dispersion and the time-varying nature of the sector slopes.

Annual returns increase by 1.4% over the RBP, with a similar improvement in risk-adjusted returns as the trend case. Portfolio volatility is higher (14.2%), though not as much as with trend. The inflation beta and asset class correlations are virtually identical.

Case 3: Multifactor Is there a benefit to combining

the carry and trend signals? Combining the individual signals results in a portfolio with the same risk-adjusted returns (0.3). inflation beta, and asset class correlations. However, annualised returns are between the two stand-alone factor portfolios (4.6%), while the returns skew is positive and similar to the trend portfolio.



EXPLOITING THE CURVE

Commodities curves spend a majority of time in contango. During these periods, the shape of the curve is concave, which means investing in a deferred contract can potentially reduce the negative roll return (ie, there is less negative roll down). A simple way to enhance returns is to invest in the futures contract nearest to the three-month point instead of the nearby contract. Starting in 1991, this increases the annualised returns for the RBP and

tilted portfolios by approximately 2.5% per annum, with little or no increase in volatility (see figure 2).

The transparent framework discussed here to construct liquid commodities portfolios can be used by multi-asset investors to enhance returns. The results of incorporating risk premia factors are governed by requirements such as tracking error, turnover constraints, and regulatory frameworks. Using this approach, investors can customise portfolios to suit their needs.

China unleashed: taming the dragon through ETFs

JOSEPH MOLLOY



espite its favourable fundamentals and widely acknowledged growth potential, China continues to be under-owned by most global investors.

China is currently ranked as the world's largest economy on a number of metrics, including purchasing power. Its equity market is liquid and deep. The impact of these factors, along with the country's inclusion in the MSCI and other major equity indices, should not be underestimated.

This article aims to provide an overview of China and China-A Inclusion ETFs. We also discuss why investors should consider the access these ETFs offer to China, as well as the key considerations to help choose the right ETF strategy and issuer.

JOURNEY TOWARDS INCLUSION

The addition of domestic Chinese equities ('A-shares') to global indices has been in the news for more than half a decade. The key concerns that passive investors had prior to Chinese stocks' index inclusion centred on the availability of direct and simple access to the Chinese equity market, the capital controls imposed on international investors and a lack of clarity regarding the beneficial ownership of stocks held.

These concerns were removed with the introduction in 2014 of the Hong Kong (HK) Stock
Connect trading mechanism and clarification by the local regulator and exchanges regarding foreign investors' beneficial ownership status. In order to assuage concerns around capital controls, MSCI has limited index additions to securities within the Stock
Connect scheme, which is important as the trading mechanism has many benefits for international investors.

MSCI started to include China large-capitalisation shares in the MSCI Emerging Markets index on 31 May 2018. MSCI was originally planning to include both mid-size and large cap China shares; however, following extensive consultations with investors and beneficial owners.

this was reduced to only large-cap stocks and only those tradeable via the HK Stock Connect route. This addressed concerns related to the stock suspensions prevalent in the Chinese equity market at the time, which generally impact small- to mid-size companies.

Following the successful inclusion of the first two tranches of Chinese large caps, MSCI announced that it would further increase the inclusion factor and add China mid-cap shares as a result of enhancements to the inclusion criteria. Under the current partial inclusion plan, China-A shares will have an inclusion factor of 20% in 2019 (split into three phases). In the event of full inclusion (a 100% inclusion factor), Chinese equities would exceed 40% by weight of the MSCI Emerging Markets index. Regardless of the timetable for full inclusion, the key for investors is understanding that any emerging market fund tied to the MSCI Emerging Markets index will see a significant

jump in its exposure to China.

In the absence of a detailed understanding of the operational nuances of setting up access to Chinese equities, it may be preferable for investors to gain access via an ETF that offers exposure to A-shares and removes the cost and complexity associated with investing directly. The MSCI China-A Inclusion index is designed to track the progressive inclusion of A-shares in the MSCI Emerging Markets index. An ETF which is benchmarked to this index is the perfect vehicle to gain fast and cost-efficient access to this section of the market.

TRAVERSING A COMPETITIVE MARKET

While there's a vast choice of ETF issuers covering Chinese equities, there are a number of key considerations for an investor considering a China ETF:

- Which replication technique does the ETF issuer adopt - physical or synthetic? Synthetic
- ETFs tend to have lower tracking error compared to their physical counterparts but are not as transparent when it comes to tracking difference or the risk taken (due to swap spreads and transaction costs). Any increase in derivative exposure via swap transactions increases exposure to counterparties, which doesn't exist with physical replication.
- If the fund is using a full physical replication technique, does the issuer have the capabilities to effectively replicate the index?

- How long has the issuer been issuing ETFs and other index tracking products? A demonstrable tracking error history can help with calculating the total cost of ownership.
- Can the issuer demonstrate understanding of the local market from a regulatory, operational and trading perspective?

KNOWING THE LOCAL **MARKET: MINIMISING EXECUTION COSTS**

Local knowledge in China is key. This can be demonstrated through the most recent inclusion in the MSCI August 2019 reconstitution. In some cases, the new China A-share index members represented a significant portion of average daily volume both historically and on the index inclusion day. This meant that only with on-theground networks and deep knowledge of the market could the rebalance be traded with successful execution outcomes and subsequently good fund performance, resulting in low tracking error for investors. The China A market has ample liquidity, but identifying the outlier stocks at these inclusion points in a timely manner helps the portfolio construction, implementation and subsequently the performance of an ETF. It's all about going that extra mile to improve performance rather than blindly replicating the exact implementation by the index, which is essentially just a set of rules.

If not controlled effectively,

trade execution costs in passive portfolios can begin to be a significant source of performance drag. By identifying and taking advantage of efficiencies in execution methods, such as sourcing natural liquidity. diversifying trade timing and negotiating very low execution commissions, investors benefit from reduced costs and a boost in performance. As an example, by improving trading performance, HSBC has been able to reduce execution costs in 2018 by circa $42\%.^{1}$

In conclusion, China's evolution, accompanied by the partial index inclusion of A-shares, has generated positive sentiment. Now that the first phase of the inclusion is complete, investors may wish to seize the opportunity to get ahead of the rebalancing crowd to increase their exposure to this exciting market. An ETF tracking the MSCI inclusion index is the perfect vehicle for achieving this. However, the right ETF provider must also have the capabilities to effectively replicate the index, as well as demonstrable experience and on-the-ground expertise from a regulatory, operational and trading perspective.

1 Source: ITG TCA Cost Model - ACE, as at end December 2018. Execution costs across all HSBC passive funds in 2018 were -0.08%, compared to the estimated model cost of -0.14%. Any performance information shown refers to the past and should not be seen as an indication of future returns.

What could disrupt ETFs?

LYNN STRONGIN DODDS

ver the last two decades, exchange-traded funds (ETFs) have been one of the most disruptive forces in the asset management industry. But could the tables be turned? In an era of excitement over the possibilities of financial technology (fintech), are ETFs vulnerable to being displaced themselves?

Some inefficiencies are glaringly obvious. For example, ETFs still rely on the clunky infrastructure developed for mutual funds, with up to 30 intermediaries standing between investors and the securities their funds own.

However, ETF industry players interviewed by IPE say it's unlikely that the industry will start from scratch with a radically new infrastructure model.

Instead, they say, technology solutions are being developed to address specific issues.

EVOLUTION, NOT REVOLUTION

One issue is the way ETFs are distributed, says Jason Xavier, head of EMEA ETF capital



Bernie Thurston, Ultumus

markets, Franklin Templeton. "ETFs have effectively democratised the investment landscape," he says.

"In certain areas, particularly UK retail platforms, they have straddled the existing technology, but they still require a quantum leap before that infrastructure can catch up. Those platforms are still analogue and are not equipped for straight-through processing. I don't think, though, that it will be a revolution, but more of an

evolution in the way things develop."

As with many facets of financial services, blockchain and distributed ledger technology (DLT) are being explored as a way to modernise the ETF industry. However, market participants are circumspect and believe it could take several years before the technology fulfils its potential.

Bernie Thurston, CEO at Ultumus, an ETF and index data specialist, notes that ETFs have managed to be efficient and accessible by using the existing technology, which is integrated with retail brokers and other financial institutions.

"If you implemented something solely over blockchain it would not be visible on the Hargreaves Lansdown or AJ Bell platforms, where retail investors would access ETFs," Thurston says.

"The use of blockchain will come as it provides an immutable ledger, but it is not something that can exist on a stand-alone basis. The connectivity to all the

trading platforms has to be done at the same time, and for the platforms to invest more standards have to be applied first."

Marcus Miholich, MD and head of capital markets for SPDR in EMEA, echoes these sentiments. "I do not think we are at the stage where you can say with 100% certainty that DLT is ready to address any of the topics in the ETF market at present," he says. But he doesn't write off the technology's potential future applications.

"From my perspective we need to move towards automation in general, particularly in fixed income, and DLT could be a part of that sometime in the future," he says.

VANGUARD'S BLOCKCHAIN PROJECT

However, blockchain initiatives are already getting under way in the funds business, starting with one of the key relationships for an asset manager - that with the provider of index data.

One notable project involves asset manager Vanguard, index provider the Centre of Research in Security Prices (CRSP) and a blockchain start-up called Symbiont.

The aim of using blockchain is to simplify the way Vanguard ingests data from CRSP. These data are used in 17 index funds with \$1.15trn in assets, including Vanguard's largest fund, the \$650bn Total Stock Market index fund. In total, the blockchain project will cover around a quarter of the fund manager's total \$5.2trn in assets under management.

The new technology enables

Vanguard and CRSP to instantly exchange information on any changes to the index. In the past, this was a burdensome, manual task which started with individual files containing point-in-time securities data. The data then had to be cleaned, loaded into a separate database and checked to ensure accuracy.

Henceforth, however, Symbiont's blockchain platform will create a synchronised database that is constantly updated every time CRSP makes a change to the index.

"The way we updated data from CRSP was one of the least efficient parts of running an index," says Warren Pennington, head of Vanguard's fintech strategies team. "We wanted to get a real-time reflection of the indices. The benefit of blockchain is that it allows multiple participants to connect securely. without an intermediary."

Pennington says that in the future he could see the technology being used to improve less efficient areas of the financial markets, such as the over-thecounter markets. Blockchain could also be used in deploying smart contracts to streamline the number of counterparties needed to manage a fund, he says.

THE DAMPENING EFFECT OF REGULATION

For now, though, market participants do not expect to see the number of intermediaries used to support mutual funds and ETFs being whittled down anytime soon.

One of the main reasons, say industry participants, is that regulations such as UCITS and MiFID II. which govern the



Marcus Miholich, SPDR

issuance and trading of ETFs in Europe, have added layers of legal and compliance obligations.

"The concept of smashing through fund structures sounds interesting from a technology perspective but it doesn't address many of the regulations put in place to protect the investor." says Michael John Lytle, chief executive of Tabula Investment Management.

"The trading of ETFs is very different from the management of ETFs and there are now a larger number of service providers due to the regulations. However, the creation and redemption process by authorised participants (APs) is an efficient process," he says.

NEW CLEARING AND SETTLEMENT INITIATIVES

The technology initiatives that have so far gained traction are those geared towards facilitating the clearing and settlement functions in Europe.

The challenge is that, unlike in the US, the region is still disjointed, with most countries having their own issuance

structures and post-trade infrastructures.

There are currently 29 exchanges in 26 countries and each of them has its own central counterparty clearing house and central securities depository, according to Dariush Yazdani, global asset and wealth management research centre leader at PwC.

"This increases transaction costs and inefficiencies compared, for example, to the US, where all ETF transactions are cleared and settled through the Depository Trust & Clearing Corporation," he says.

The fragmentation also has a detrimental impact on liquidity and spreads in the ETF market, according to Allan Stewart, product manager at Clearstream Banking.

"BlackRock and other fund managers started to talk to institutions like Clearstream to simplify the post-trade process of ETFs, to overcome the fragmentation and enable market makers to manage their stock inventory more efficiently," he says.

Clearstream and Euroclear have introduced new structures to centralise trading for ETFs listed on multiple exchanges and to settle them in a single International Central Securities Depository (ICSD), rather than in domestic central securities depositories in the countries where ETF dealing occurs.

The ICSD model is not new, having been introduced in Europe in the 1970s, predominantly to settle eurobonds. ICSDs have now widened their scope to cover all types of internationally traded financial instruments and settlement in multiple currencies.

Clearstream has also extended its ICSD plus issuance model, which was launched in 2007, to cover ETFs. This cuts out the common depository, while the transfer agent or fund promoter can open a fund issuance account (FIA) within Clearstream Banking Luxembourg. Holdings are automatically marked up or down in the FIA without the

need for the creation of a global certificate.

SUPPORTING THE INDUSTRY'S GROWTH

But the opportunities for more efficient fund technologies to take root are likely to increase. As ETFs evolve and mature, the infrastructure will need to develop to support the new types of fund being sold, including more sophisticated smart beta and thematic strategies, as well as active ETFs.

And ETFs are likely to prove a test case for new fund technology: globally, their assets increased at an annualised rate of 19% from 2009 through 2017, easily outpacing the 4.8% growth rate for other open-end funds, according to figures from Investment Company Institute and ETFGI.

Global ETF assets are poised to double to at least \$10trn over the next five years, forecasts suggest. And, if they remain on this trajectory, ETF assets could top \$20trn by the end of 2027.

Bringing ETFs into the digital future

LIZ PFEUTI

ver the past 18 months there has been an explosion in the number of ETFs focusing on new technology. From iShares to Ossiam, DWS to veteran investor Jim Rogers, it seems everyone has launched a fund based on how digitisation will revolutionise our lives.

But aside from bandying around buzzwords such as cloud, robo and natural language processing, do these funds offer investors anything other than exposure to the latest fad? More importantly, do these investment houses know enough about what this technology can be harnessed to achieve, or are we in line for a tech bubble 2.0?

Five years ago, Legal & General Investment Management (LGIM) launched the ROBO Global Robotics and Automation UCITS ETF. The manager followed up three years later with a separate artificial intelligence (AI) fund. Investors, according to LGIM's head of ETFs Howie Li, were demanding more precise exposure to this

area of technology advancement.

If robotics, into which humans still have some input, was the first step on the road to automation, AI is the natural next one.

"As a theme, investors and the general public have become more aware how AI is going to be integrated into our lives and how it will function," says Li. "As investors, we need a vision of the future and the structural change it is going to bring to business and industry. AI will be important to finance, technology, energy and agriculture, and will



Howie Li, LGIM

result in more advanced ways for machines to do the thinking for us. It's the next step on from automation."

This vision is going to be all important for managers looking to take their investors – and their assets – along on the huge growth spurt AI and machine learning (ML) are expected to bring.

"It is hard to look at Bloomberg screens and identify where the growth in AI and ML is going to come from," says Li. "We need to do bottom-up research to find out what's interesting in the space and who is doing it."

As ETFs have advanced from simply tracking an index, the work that goes into creating methodologies has increased remarkably. Nowhere is this more apparent than in the tech sector, where sorting the signal from the noise is increasingly important.

For Carmine de Franco, head of fundamental research at Ossiam, there are three main ways investors can classify the use of AI/ML. With such a new and broad investment spectrum,

categorisation is often arbitrary with very vague boundaries, but it helps to decide on an approach, he says.

FINDING A 'HOW TO'

The first is to invest in companies that provide AI solutions to others: the software provider to Netflix, for example.

Due to the number of companies – and potentially their small size – this approach might need third-party assistance for research. LGIM and WisdomTree both use external research providers.

"There are unexpected breakthroughs in this sector, so we have to find the companies that have the potential to make them," says Chris Gannatti, head of research at WisdomTree. "Based on how things work today, it is hard to imagine where these breakthroughs will come from, but we need to look at things with new standards."

These breakthroughs can lead to companies becoming the next Google or Apple, or even the huge companies that the general public will probably never hear about.

"RoboGlobal helps us identify companies that are dedicated to AI development and integration and how they are investing for the future," said Li. "How much research and development spend is going into AI? Is the company hiring or building market share? Are they integrating tech into businesses?"

This bottom-up research lets LGIM see who is reinvesting capital in their future business to keep in front and may become the pioneer and preferred supplier to household names such as Netflix. Netflix itself is an example of the second way into AI, according to de Franco's distinctions, as it uses digital tools and techniques to suggest the right shows and films to users, thereby beating its competitors.

Several managers also employ this technique as it identifies names investors are likely to know but are also leading their specific pack in using AI and technology more generally.

AI SQUARED

The third, and most exciting way into AI, in de Franco's view, is to use the technology itself as a tool to collect, process and integrate very disparate data sources into the investment process.

"It also means we can access and exploit useful data that would otherwise be difficult to integrate in portfolio construction," he says. "Either because it would be too time-consuming, or because it can be difficult to see how new sources of information can complement the standard financial metrics on which we base our portfolio construction."

Ossiam has used AI to find and filter out companies for the World ESG Machine Learning UCITS ETF it launched last year. ESG filters – which it says contain good information about a company's strengths and weaknesses – thinned out a field, then machine learning identified potential opportunities, the firm says.

This 'AI squared' approach has also been taken up by DWS Xtrackers, which launched its AI and Big Data UCITS ETF in January.

The ETF tracks a specially developed index that uses a



Chris Gannatti, WisdomTree

filtering methodology that was established using AI processing. The methodology also identifies companies with patents in place that are most likely to make them sector winners.

"Thematic ETFs use selection methodologies that aim to position equity investors for the big changes coming to our economies," says Manooj Mistry, head of index investing at DWS. "The key is to have a robust underlying methodology to harness the trend in terms of identifying the likely big revenue generators of tomorrow."

However, for Li at LGIM, caution is needed when leaving investment theory to the robots.

WATCHING THE BOTS

"AI is hugely exciting, but the words can be dropped by a CEO and into financial reports that are published and get picked up by bots and tools that scrape data," he says.

Certainly, investors would have to be sure that something as noncommittal as "We are investing in the future" or "We believe in AI" did not see a company grouped in with sector pioneers.

"This is the danger of data scaping," says Li, "It can acknowledge the hype without noting the lack of purity to the return on investment in technology."

For LGIM, WisdomTree and others, checks and balances will need to be in place, in the short term at least, with people carrying out the research.

"This will ensure the data quality and that someone has looked at the structure of the business and made sure the data is accurate and up to date," says Li.

As for another buzzword - cryptocurrency - regulators in the US remain unconvinced of

the security of the asset class to allow ETFs to track even the most mainstream coins and tokens. Europe, however, has cryptocurrency trackers in Sweden and Switzerland.

Its underlying technology. however, may be of greater interest to some. Invesco is one of the largest managers to launch an ETF based on blockchain technology. Its Invesco Elwood Global Blockchain UCITS ETF was up almost 10% since launch in March by the end of July.

For Li, there is a way to go until cryptocurrency and blockchain become as pivotal for investors as robo and AI.

"Blockchain is going to have a great future, but it is not just something one company can do,"

savs Li. "The business community has to get behind it and change."

With investments that look so far into the future, there are likely to be some bumps along the way, but WisdomTree's Gannatti said investors needed to take a long-term view.

"The sector may not be the most defensive now, but by 2022, with the internet of things all communicating and connecting trillions of machines, to make sense of the data we are going to need AI and ML," he says. "Markets go up and down and recessions are a fact of life, but we are going to need these tools, so eventually the sector is going to become fairly resistant."



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1 All figures and data are provided by Amundi ETF, Indexing & Smart Beta at end June 2019.

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Contact: Pritpal Lotay, 1 London Wall, London EC2Y 5AD, UK +44 (0)20 3702 1075, pritpal.lotay@nikkoam.com

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