SRPInsight

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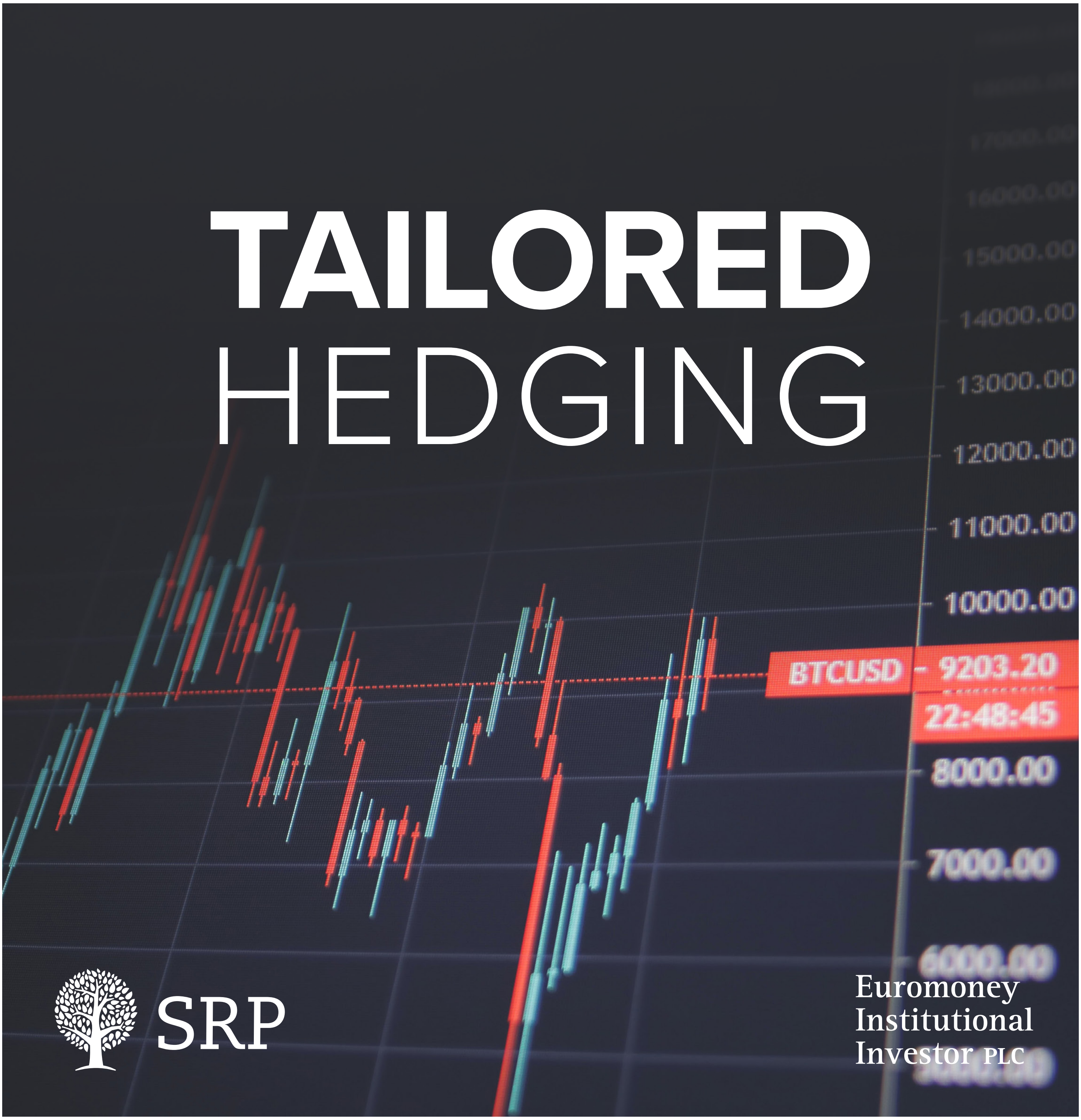

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Editorial:
Amelie Labbé, Pablo Conde, Lavanya Nair, Summer Wang, Marc Wolterink

Production:
Paul Pancham

Marketing:
Daniel Evans

Sales:
Reihaneh Fakhari

If you are interested in having a similar bespoke report produced for your organisation, please contact:

Reihaneh Fakhari
T: +44 (0)20 7779 8220
M: +44 (0)79 8075 6761
E: Reihaneh@structuredretailproducts.com

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NEWS | EUROPE

Amundi blames early redemptions for negative inflows from French networks

Amundi has posted net revenues of €791m for the third quarter of 2021, an increase of 25.7% compared to the equivalent quarter in 2020.

Net asset management fees of €707m were up 17.6% year-on-year (YoY) while there were high inflows of €15 billion in medium/long term assets, driven by the ESG offering, active management and by all client segments.

However, in the French networks, inflows were slightly negative (-€0.7 billion) in view of early redemptions on structured products – in particular autocalls – tied to favourable market conditions.

The effect of redemption of structured products is not expected to have an impact on the retail margin of the asset manager, said Nicolas Calcoen (pictured), deputy CEO, head of finance, strategy and public affairs, Amundi.

"This kind of products have margins that are in line with all the rest of the retail business," he said, speaking during a conference call on 11 November.

Given the strength of the financial markets, Calcoen expects further outflows for the French structured products business in the coming quarters.

"We have a stock of assets that should come to maturity over the next quarters," he said. "Part of these flows are of course replaced by new products, but we expect to see net outflows on structured product over the next quarters, hopefully compensated by good momentum on long-term assets."

Although some of the assets that exited from structured products went into other products such as funds, this is not always the case.

"Sometimes there can be a lag and we are working with the networks to ensure that when some of these products are coming to maturity that we have something meaningful to propose to the clients that were invested in this kind of product," said Calcoen.

Amundi held a 14.6% share of the French structured products market in Q3 2021, according to SRP data.

The French manager issued seven structured products worth an estimated €850m between 1 July and 30 September 2021, compared to 11 products with combined sales of €750m in the prior year quarter.

Six products featured the knockout mechanism and put full capital at risk, while the remaining structure, Chorélia N°11 protects minimum 85% of the nominal invested. It has a 10-year maturity and is linked to a basket comprising the 20 biggest companies from the Eurostoxx 50 index, with the performance of each stock capped at 70%.

Eight products were subject to early redemption in Q3 2021. Of these, Armantis (Avril 2019) achieved the highest return. The Eurostoxx 50-linked fund, which was distributed via Crédit Agricole Banque Privée and sold €67m at inception, returned 114% after two years.

Sonance Vie 8 and Sonance 90 (3), which were distributed via Crédit Agricole Caisses Régionales, both matured organically during the quarter, returning 2.31% pa and 2.56% pa, respectively.

Amundi's AuM totalled €1.8 trillion on 30 September 2021, an increase of 8.9% YoY and up one percent compared to end-June 2021. Of these, €1.1 trillion is for active management with a further €187 billion tied to passive management. Real assets, alternative assets, and structured products represent €95 billion.

> **"We have a stock of assets that should come to maturity over the next quarters**

Structured bonds light up gloomy Belgian market

Overall volumes of structured products in Belgium decreased by almost 50% during the third quarter of 2020.

Structured products collected sales of €387m on the primary market in Belgium during the third quarter of 2021, according to the latest figures released by the Belgian Structured Investment Products Association (Belsipa). Volumes decreased significantly: by 49% compared to Q3 2020 (€765m) and by 30% compared to the prior quarter (€555m).

The volume adjusted share of capital-protected products as part of the primary market turnover fell 16% on an annual basis and 34% on a quarterly basis.

Turnover of structured products sold on the secondary market amounted to €445m, a decline of 14% compared to Q2 2021 but an increase of 15% when measured year-on-year (YoY).

The total amount invested by Belgian retail investors in structured products was €22.7 billion euros at the end of September. Assets held by retail investors in bond products were up 16% from the second quarter and nine percent YoY. The amount invested in structured funds and insurance products, however, continued to decline.

'The market continues to move at a low level,' said Belsipa chair Florence Devleeschauwer (pictured), adding that the recent growth of structured bonds is explained by the lower cost structure of this type of structured product.

'This evolution is probably a bright spot in dark days that gives reason to some optimism, even though it is unlikely that this growth comes from investors who merely shift assets away from funds and insurance products,' Devleeschauwer said.

Filip Gils, vice chair, Belsipa, added that the declining share of products with capital protection in relation to total assets is due to the (zero) market interest.

'However, it can also be seen as confirmation that investors appreciate the asset class of structured products, as they are also adding non-capital protected products to their portfolios,' Gils said.

SRP's own database registered 27 structured products worth €381m (excluding flow and leverage) striking between 1 July and 30 September 2021 (Q3 2020: €689m from 42 products). Of these, 22 were wrapped as securities (€270m); three were structured funds (€100m); and two were life insurance products (€11m).

Four products put full capital at risk; 10 pay a minimum capital return of 100%; and 12 provide at least 90% capital protection. The remaining product, Goldman Sachs International (UK) Callable Global ESG Trend Minimum Redemption AUD 2029, distributed by Crelan, offers a minimum capital return of 112%.

Seventy-eight percent of the products issued during the quarter were linked to an equity underlying; 15% was linked to the interest rate; and the remaining seven percent was tied to the performance of a managed fund.

Belfius' Callable Interest 08/2031 was the best-selling product in the quarter with sales of €46m. The 10-year steepener, which is linked to the constant maturity swap (CMS) rate, offers a fixed coupon of 0.75% for the first five years of investment. The minimum capital return at maturity is 100%.

The best-performing product in Q3 was KBC's E-commerce 90 USD 3, which sold €13.5m at inception. The US dollar denominated product was linked to a weighted basket of 30 shares and paid investors the maximum possible return of 160% after 5.7 years (8.55% pa).

> **“ The market continues to move at a low level**

Leonteq bolsters AMC capabilities in buy-side push

Leonteq has announced the integration of its actively managed certificate (AMC) platform AMC Gateway into its digital structured products platform Lynqs.

The AMC module is targeted at index sponsors to create and manage their own index strategies wrapped as AMCs. With this expansion, Leonteq's completes an initiative to target the buy-side by expanding the capabilities of its structured products platform to provide a 'more comprehensive one-stop-shop for structured products,' as reported by SRP.

The new AMC module provides access to more than 100,000 underlyings across different asset classes throughout global markets, including crypto currencies. All types of Leonteq structured products offered via Lynqs will be also available to be deployed as index components for AMCs as well as any kind of derivative including listed options, forwards, futures, swaps and customised OTCs and FX strategies.

The platform also offers lifecycle management capabilities such as displays overviews and dashboards with information of a client's AMCs, including performance, index components, rebalancing transactions and historical cashflows.

Index sponsors will also be able to work with bulk uploads through standardised files and receive instant feedback when rebalancing AMCs and download customised daily reports or receive them automatically via email with a personalised frequency.

Kevin Dayot, head of digital offering at Leonteq said: 'The uniqueness of Lynqs lies in the inclusiveness and connectivity of the different modules and functionalities as well as the very responsive and intuitive design. By integrating the AMC module into LynQs, the index sponsors will benefit from more automation and one single entry point.'

The addition of the fourth module to Lynqs with a 'redesigned' AMC functionality is part of the firm's planned growth acceleration which includes a partnership with BX exchange to offer its clients in Switzerland another venue to source liquidity, and the expansion of the product offering with fund derivatives and crypto assets, and AMCs.

Alongside Lynqs, AMCs are one of the cornerstones of the firm's strategy, as they enable index sponsors to customise and implement a proprietary technical or fundamental investment strategy, but compared to traditional investment allow for greater adjustability, operational efficiency and transparency with no setup and a predefined administration cost, according to Alessandro Ricci, head investment solutions.

AMC OFFERING

Some of the AMCs offered by Leonteq include first ever inverse AMC - the Swissquote Global Inverse Index, a strategy constructed with derivatives from inverse ETFs to profit from a fall in the value of an underlying benchmark - using the MSCI World as a benchmark - and wrapped in an AMC with Leonteq as the issuer. These are the Swissquote Recovery Index which offers exposure to industries positioned to benefit from the reduction of Covid-19 risk; the Pharma Opportunity AMC focused on companies leading the search for a Covid vaccine; as well as the Swissquote Blockchain Index and the Swissquote Multi Crypto Active 2.0 index, two second generation DeFi and crypto gauges delivered via actively managed strategies.

The launch follows the addition in March 2021 of the Quote module, a fully automated click 'n' trade tool within Lynqs digital platform which was launched in September 2019, as the firm's Constructor platform was phased out – LynQs offers pricing from 10 issuers.

> "
> **Index sponsors will benefit from more automation and one single entry point**

CACIB, Garantum team up for first publicly offered social structured product

Crédit Agricole CIB and Garantum have partnered to launch the first ever structured product under a social bond framework on Nasdaq's Sustainable Debt Market.

The new Garantum Social Fix the Best Note linked to a Basket of Shares has been arranged by Garantum, and issued under Crédit Agricole's social notes issuance programme, the Crédit Agricole Social Bond Framework.

"To my knowledge this was the first structured product with a social impact note to be issued as a public offer in the Nordics," Mats Eriksson, structurer at Garantum, told SRP. "The ability to create an investment with social impact without forfeiting the clients potential return is something unique for structured products."

"With this social offering, we are willing to offer the investors the opportunity to make positive impact on society as the proceeds are used to refinance social loans aiming either at improving healthcare system or contributing to reduce inequalities from an economic and social point of views," said Mahdi Bouayad (pictured), CACIB's head of QIS & ESG solutions structuring, equity solutions.

"During the past years, we have seen a growing client appetite for sustainable products as investors want to give a meaning to their savings. Today, with the unforeseen situation due to the covid-19 pandemic, a solution that provides Social impact with a focus on health care makes even more sense."

The five-year 85% capital-protected top rank call or select fixed best structure offers 163% participation to the upside performance of a basket of six stocks (Koninklijke Philips, Roche Holding, Novartis, Humana, Medtronic, and Abbvie) where the performance of the two best performing have been predetermined to 30%.

> **This is the first social impact note marketed in the Nordics**

STOCK PICKING

The healthcare stocks in the underlying basket are selected by the LifeWatch Medical Council which supports qualified charities that have as their focus scientific research on cancer, autism and similar conditions.

"The healthcare industry's focus is currently shifting from selling a product that can give effect on a certain aspect in to selling end results," said Prof Martin Ingvar.

"The industry is moving into more process-oriented focus with continuous diagnostics and evaluation with focus on the effect of the treatment and the end result. These companies are all working to improve the process for treatment of patients in the long term."

Blake Wright, senior country officer for the Nordic countries at Crédit Agricole CIB, said the first publicly issue equity-linked social notes will provide access to the wider market to a product which was previously only available to institutional investors and allow investors to contribute to the financing of social projects which will make positive impact on society.

In 2018, Garantum and Crédit Agricole CIB together launched the first structured product based on a green note at Nasdaq Stockholm. This was also the first ever publicly distributed structured placement based on a green bond.

The green listing, Autocall Sverige & Europa nr 3385 which matured on December 2019 was a five year autocall structure linked to the performance of an equally weighted basket comprising of OMX Stockholm 30 and Eurostoxx 50. The product which sold a modest SEK7.78m (€0.75m - 2018 average is SEK14.9m) knocked out on the first observation date and delivered a hefty 110% capital return (9.48% annualised).

Instruments listed on the Nasdaq Sustainable Debt Market need to meet the Nasdaq Sustainable Bond listing criteria, based on the International Capital Market Association's (Icma) Green & Social Bond Principles and the Sustainability Bond guidelines.

'Quick fixes' for Priips and Ucits get green light

The European Parliament has adopted formally the European Commission's proposed 'quick fixes' to amend both the Ucits directive and Priips regulation.

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The vote on 24 November gives the green light to the revised Level 2 measures to all Packaged retail investments and insurance-based products key investor document (Priips KIDs) from 1 July 2022.

This will require all in-scope Undertakings for Collective Investment in Transferable Securities (Ucits) management companies to provide EEA retail investors with a Priips KID from the same date onwards, a task which should not be underestimated given the significant differences between the Priips KID and the Ucits KIID which is currently produced by the fund management industry.

The European Structured Investment Products Association (Eusipa) welcomed the move but now expects the EU Commission to apply the same leniency towards the Regulatory Technical Standards (RTS) implementation.

"Given promises made earlier by the EU Commission, Eusipa would expect the RTS implementation date to be shifted to 1 January 2023 to ensure consistent application of all EU rules dealing with the important aspect of consumer information documents on packaged products," Eusipa secretary general Thomas Wulf, told SRP.

In a separate quick-fix amendment proposed to the Ucits Directive, the obligation to produce a Ucits KIID under the Ucits directive will be deemed satisfied where the Ucits provides a Priips KID which complies with the Priips Regulation. This is in order to avoid a scenario where a Ucits is required to produce both a Ucits KIID and a Priips KID.

The European Fund and Asset Management Association (Efama) also welcomed the outcome of the vote as the co-legislators confirmed that funds already producing a Ucits KIID will now have until 31 December 2022 to produce a Priips KID while a Ucits KIID is no longer required as long as a Priips KID is produced.

"It is now necessary for the European Commission to swiftly align the application date of the outstanding Priips Technical Standards (RTS)," said Efama in a statement. "The alignment is necessary to ensure one overall application date for the new measures. Time is of the essence as the RTS must be published in the EU Official Journal together with the 'quick fixes' before year-end, allowing our members sufficient time to prepare the Priips KIDs for end investors."

After a tumultuous process, the finalised draft technical standards amending granular rules currently applicable to the Priips KID regime (Level 2 Measures) were finally adopted by the European Commission last month.

Shortly after, the European Supervisory Authorities (ESAs) opened a call for evidence regarding the Priips Regulation, including the practical application of the existing KID such as its use by financial advisors or the use of digital media, the scope of the Priips Regulation and the degree of complexity and readability of the KID.

The European structured products industry requested a 'sufficient timeline' to implement the RTS as the current timeframe is 'too short, especially for new rules that relate to communication with investors and potential investors'.

Eusipa believes that in order to achieve the desired outcomes of better trust and understanding among investors and potential investors, manufacturers must have adequate time to adapt to these changes.

The UK Financial Conduct Authority published earlier this month a regulatory initiatives grid with its next steps for the Priips Regulation after it decided to delay the publication of its Policy Statement until Q1 2022 to consider the implementation date of the new requirements.

> **Eusipa expects shift of RTS implementation date**

Spotlight on... underlying assets in the UK

Market cap indices were once again the preferred underlying asset for UK investors in 9M2021.

Market cap indices were once again the preferred underlying asset for UK investors in 9M2021.

Some 353 structured products with estimated sales of £630m were issued in the UK during the first nine months of 2021 – slightly up in issuance but down in sales volumes compared to the prior year period (9M2020: £714m from 323 products).

Ninety percent of the products issued in 9M2021 were autocallable plans, and of these 208 were linked to the FTSE 100.

Very few markets are dominated by a single index to the extend the FTSE 100 dominates the UK. All bar two of the 220 products linked to market cap indices that collected combined sales of £460m – the equivalent of 72.6% share of the market – were tied to the UK benchmark. The exception were two structures from Meteor/Natixis on the FTSE Custom 150 Equally Weighted Discounted Return Index.

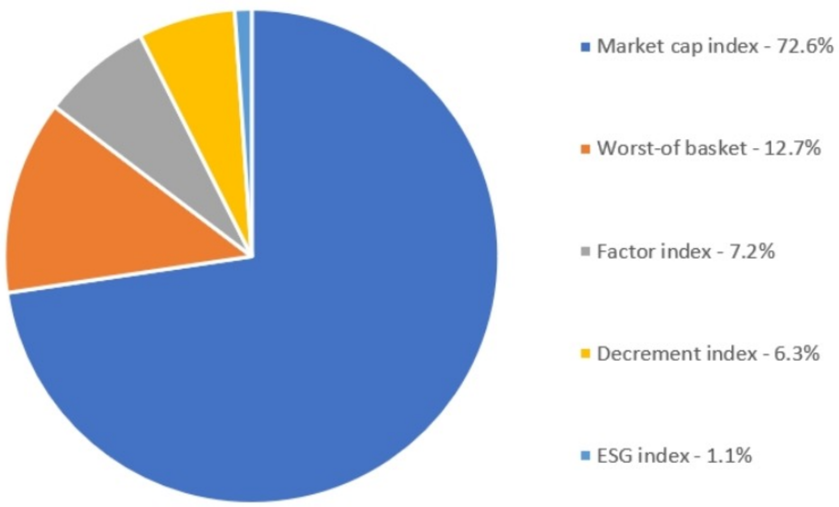
Furthermore, the FTSE 100 was also used in 24 products linked to a worst-of basket, which, with 62 products in total, was the number two underlying asset in the period (12.7% market share).

Other indices seen in worst-of baskets were the S&P 500 and Eurostoxx 50, while the most used shares were those of Nio, Vodafone, and Enphase Energy. In third were factor indices, which in this case were limited the FTSE 100 Equal Weight Fixed Dividend Custom Index. The 36 products linked to this index were exclusively distributed via Tempo Structured Products and issued on the paper of Société Générale. They collected estimated sales of £45m (7.2% market share).

Decrement indices achieved estimated sales of £40m from 31 products (6.3% market share). The FTSE Custom 100 Synthetic 3.5% Fixed Dividend Index was the most frequently used (29 products), while MSCI Europe Select Green 50 3.5% Decrement Index and MSCI United Kingdom Sustainable Select 50 3.5% Decrement Index were used in one product each.

The decrement-linked products, which were all marketed via Mariana Capital, were issued by Morgan Stanley (16), Citi (10), Goldman Sachs (three), and Crédit Agricole (two). Finally, two products, both from Investec, were tied to an ESG index (FTSE4Good UK 50 Index).

UK 9M2021: market share underlying assets by sales volume



Source: StructuredRetailProducts.com

“Ninety percent of the products issued in 9M2021 were autocallable plans

Fiduciary standards for indexed annuity sales raise concerns

The rising demand for retirement products including fixed indexed annuities (FIAs) and Registered Index-Linked Annuities (Rilas) is raising concerns among market players who fear heightened regulatory intervention from lawmakers.

Annuities are catching up with other long-dated investment products, as policy changes will require product issuers and brokers to disclose more about product mechanics and take on a fiduciary duty. These changes should ultimately benefit investors but will demand more investment from the sell-side and likely upend an annuities market landscape that has already been in flux the past few years.

The Insured Retirement Institute (IRI) put forward a bill to the US Senate earlier in the year urging the Securities and Exchange Commission (SEC) to develop a new registration form which would directly target Rilas.

With many more legal corrections anticipated in the indexed annuity industry, market players are growing concerned about the potential strengthening of fiduciary standards and regulation best interest, according to Laurence Black (pictured), founder of The Index Standard, an independent evaluator of indices and indexed annuity products.

Another important and upcoming enforcement is the fiduciary advice regulation Prohibited Transaction Exemption 2020-02 (PTE), which was proposed by the Department of Labour (DoL) to further evaluation sales practices of products such as indexed annuities.

Although many commentators thought that the enforcement of PTE 2020-02 could be delayed, it is now expected to come into effect in the first quarter of 2022.

When selling annuities in which owners can customise account allocations or other features, PTE suggests that it is reasonable to expect that the clients will continue to look to their agents for additional advice after the initial sale.

It may be assumed that recommendations to rollover to these types of annuities are fiduciary advice, in which case complying with the requirements of an applicable PTE will be necessary.

FIDUCIARY RESPONSIBILITY

In order for a rollover transaction to qualify for PTE 2020-02, product sellers have to accept fiduciary responsibility for rollover recommendations, so clients have to consider how to validate that the products they sell are fit for purpose in that context.

“Clients use our ratings when they’re putting together a case for their own customers, as part of a substantive evaluation process to demonstrate that they are acting in a client’s best interest,” said Black.

The annuity space remains one of the most innovative areas in the industry and new ideas will continue to flourish, as key players must solve for good future performance, large capacity, option delivery as well as an easily communicable narrative around the index mechanism, according to Black.

However, providers will need an extra leg up and tools that can help facilitate each of these new mandates, with a primary focus on indexes — especially risk control indexes that are now a regular feature of FIAs and Rilas.

“There are also indications of the progress index designers have made in the past decade in this area,” he said, adding that the Index Standard analysed all the risk control indices that had been live for more than 10 years and five years, and then compared the Sharpe ratio of the risk control indices to the S&P and MSCI indices.

“We think using the Sharpe ratio is the best way to get an apples-to-apples comparison,” he said. “In both cases, the risk control indices as a group had better Sharpe ratios than the benchmarks.

“I think this is a startling finding as it runs contrary to the belief among some in the market that risk control indices are over-engineered.”

Moving forward, Black expects further reevaluation of investors’ fixed income portfolios as inflation, which perhaps has proven less transitory than thought, remains and rates may begin to rise.

“Here, I think that structured products, defined outcome ETFs and annuities will increasingly become a core part of investor portfolios as we move into 2022,” said Black. “Stronger transparency on index design and methodology will be critical to the broader project of making the annuities market more competitive.”

Fidelity opens platform to structured notes

The firm's brokerage arm has teamed up with multi-dealer platform Simon to deliver structured investments to wealth management firms.

Fidelity Institutional, the division of Fidelity Investments dedicated to providing technology, solutions and insights to wealth management firms and institutions, is the first clearing and custody firm to announce an integration with Simon to aid advisers to deliver structured investments to wealth management firms, including registered investment advisors (RIAs), and enable them to construct their investment portfolios through a single sign-on from Wealthscape, Fidelity's adviser technology platform. new offering that

The new digital solution will enable advisers on Fidelity's Wealthscape to filter and analyse current offerings across all of Fidelity's issuers in one location, and access on-demand educational and training material on structured investments to ensure advisors are well-informed prior to trading.

Advisers will also gain access to Fidelity's digital fixed income trading solution Fidelity Bond Beacon, as well as a book of business management and post-trade analysis, including Simon Spectrum, which offers portfolio construction analytics to align performance with a client's investment objectives.

"This is a key differentiator for us, as we're the first clearing and custody firm to offer an integration with Simon," Michael Prucher, vice president of capital markets at Fidelity, told SRP. "Our goal is to help advisors more efficiently construct their clients' portfolios, simplify their workflow, and better manage their book of business."

Simon maintains partnerships with a network of firms, and has expanded its offering in the past two years to cater to indexed annuities and defined outcome exchange-traded funds (ETFs).

Thomas Tesauro (pictured), president of Fidelity Capital Markets, Fidelity Institutional, said the integration with Simon's structured investment management platform through the firm's Wealthscape will be a 'key differentiator for Fidelity' as it will provide its clients with 'a comprehensive solution to simplify their workflow and better manage their book of business'.

ENVESTNET

The firm's most recent partnership involves technology solutions provider Envestnet which will enable advisers to access structured investments as fee-based solutions.

Envestnet's integration plan will ensure that financial advisors utilising Envestnet's financial wellness ecosystem and unified managed account (UMA) platform can seamlessly manage these products across their lifecycle using analytics, education, and portfolio allocation tools from Simon.

Simon's tools and analytics will also be integrated in workflows within Envestnet's Tamarac portal on which registered investment advisers (RIAs) rely for in-class portfolios and client management software.

Another included solution is MoneyGuide which will later incorporate structured investments in financial plans and connect the plans to the Envestnet proposal workflow.

According to SRP data, Fidelity has over 130 indexed annuities in the US market with a value of US$9 billion. There are also momre than 30 Fidelity funds used as underlyings in structured products – the most featured fund is the Fidelity National Information Services fund which appears across 222 products worth US$13m.

Fidelity investments introduced a proprietary index to the US annuity market in 2018 – the Fidelity Multifactor Yield Index 5% ER SM which caters a blend of six equity factor indices, features across 34 indexed annuities worth US$47m.

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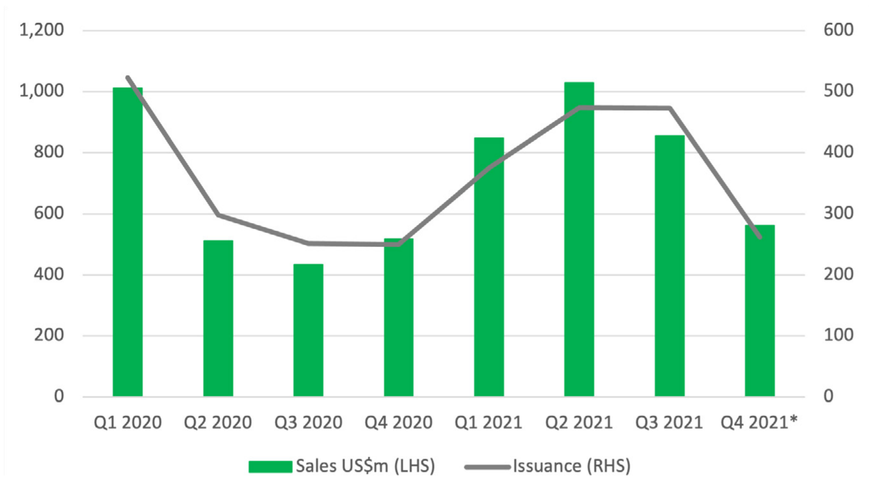
We're the first clearing and custody firm to offer an integration with Simon

US hybrid structures back with a bang

The number of hybrid-linked structured products in the US market has seen a significant uptick in 2021.

US: sales & issuance of hybrid-linked products by quarter



Source: StructuredRetailProducts.com

The SRP database has recorded a spike in the volume of hybrid-linked structured products during 2021 with sales volumes across the US market amounting to US$3.3 billion across roughly 1,322 products to-date. This is a 33% increase from US$2.5 billion (1584 products) in sales during 2020.

In the first quarter of 2021, a total of 375 structured products falling under the hybrid asset class were issued, valued at US$848m. This was a 28% decrease from the 523 products issued in the same quarter of 2020 where sales stood at US$1 billion.

Issuance then shot up to 474 products in the second quarter of 2021 while sales amounted to US$1 billion, a record figure for the year, compared with 298 products issued in the same period a year prior in which sales totalled US$511m.

Activity stagnated in the third quarter of 2021 where sales dropped to US$855m extending across 473 structured products. As of 22 November 2021, fourth quarter sales currently stand at US$562m for 262 products.

Over the past five years, sales and issuance of hybrid-linked structured products in the US market have fluctuated with 2016 recording US$1.5 billion in sales for 572 products. This then increased to US$2.3 billion across 1,142 products in 2017, and subsequently US$3.5 billion for 1,844 products in 2018. By the end of 2019, sales fell to around US$2.7 billion extending across 1,703 products.

The best-selling hybrid structure during 2021 to-date was the Uncapped Return Enhanced Notes - Worst of Option (48132RJW1). Selling for US$35.5m, the growth note was issued by J.P. Morgan Chase Financial and features a digital payoff type. The product will reach maturity in five years and tracks the iShares PHLX Semiconductor ETF, Nasdaq 100, Nasdaq100 Technology Sector Index. If the final level of the worst performing underlying is at or above its initial level at maturity, the product will offer a capital return of 100% plus the greater of 25% and 149.5% of the rise in the worst performing underlying.

The top three US providers of hybrid structured products in 2021 are J.P. Morgan Chase Financial with 449 products worth US$855m, Citigroup Global Markets with a total of 380 products valued at US$701m, and GS Finance with 275 products with a sales volume of US$421m.

From a distribution standpoint, J.P. Morgan Chase Financial leads with 302 structured products valued at US$602m, followed by GS Finance with 159 products worth US$231m, Morgan Stanley Finance with 81 products worth US$327m, and Incapital with 158 products, selling for US$217m.

During 2021, the volume of hybrid-linked structured products tied to the emerging markets sector has increased by 88% from the previous year with sales standing at US$627m (300 products) from US$334m (149 products). For instance, 289 structured products were tied to iShares MSCI Emerging Markets ETF in 2021 to-date with sales reaching US$590m, compared with 143 products tied to the same underlying in the prior year in which sales stood at US$329m.

Another popular sector among hybrid-linked products in 2021 was commodities with US$295m (137 products) worth of structured products being issued throughout the year. The best-selling structure under this category was the Callable Contingent Coupon Notes - Worst of Option (06748EX65).

Issued by Barclays Bank, the income note has a short tenor of just over a year and callable, reverse convertible, and worst of option payoff types. The product which sold US$12.5m tracks the VanEck Vectors Gold Miners ETF, Russell 2000, and S&P 500 underlyings.

The note offers a monthly coupon of 11.55% pa, if each underlying is greater than or equal to 65% of its respective initial level on the observation date.

Simon bolsters US footprint with record growth

The US multi-dealer platform has announced record increases in its structured investment broker-dealer volumes.

Simon Markets has expanded its digital presence over the past year by entering the annuities, defined outcome and cryptocurrency industries and onboarding several partners that include Fidelity Investments, AIG Life & Retirement and NYDIG.

The platform has reported a 130% year-over-year in broker dealer volumes and a 400% increase in annuities volumes in its third quarter earnings of 2021.

According to Joseph Giordano (pictured), chief business development officer at Simon, the overall market for structured products is up considerably year-over-year fuelled by the general market sentiment.

"I think our clients have performed incredibly well and all the tools that we bring to our broker-dealer clients is one of the reasons why we have seen a year-over-year increase in broker-dealer volume. We attribute this to our existing client set and our ability to bring on new distributors has also helped that," he said.

SRP data shows that as a third-party distributor, Simon distributed just over 3100 structured products across the US market in 2021 to-date worth US$11 billion. Popular issuers of these products are GS Finance (2,416 products/US$5.7 billion), J.P. Morgan Chase Financial (131 products/US$891m), Morgan Stanley Finance (117 products/US$825m), and TD Securities (108 products/US$808m).

The database also records high volumes of products tied to ARK Innovation ETF (91 products/US$144m), Apple (66 products/US$237m), Amazon (60 products/US$191m), and Netflix (37 products/US$113m) underlyings. Most of the products fall under single index and index basket equities while other dominant asset classes include exchange-traded funds (ETFs) and hybrids.

"If we're looking at the overall structured products market in the US, volume has increased approximately 30% over the last year," said Giordano, adding that this is an indication of how these investments are being perceived as they become more understood and accessible.

Since widening its offering into annuities in 2020, the platform has tapped into a market which would go on to dominate the spotlight as an attractive option for clients nearing retirement.

Scott Stolz (right), head of insurance solutions at Simon noted that both indexed and structured annuities (Rilas), have multiple investment strategy allocation options within the same product.

"An indexed annuity is an index wrapper that has about 15 to 20 different index options and strategies within it. So, the advisors' challenge is to try and determine how to best efficiently and effectively figure out how allocate for each client," said Stolz.

The platform is supporting advisors by providing the data to explore other options that may be better and for each individual client depending on each client's risk profile.

"Anytime a company is looking to enter the annuity space for the first time or trying to enhance their product and differentiate themselves, they must bring out something that no one else has," said Stolz. "Therefore, we will continue to see more indices, more options. At some point, when companies feel as though they can get it approved, we're probably going to see cryptocurrency options within annuities as well."

The firm recently introduced the lifecycle portion of annuities, which allows advisers to look at their entire annuity book and anticipate various events. This is also helping advisers to make the process more efficient as the amount of work that is required by an adviser to support an existing annuity policy is extraordinary, particularly if it is one that has a lot of benefits and riders on it.

"It's one of the things that causes advisors to shy away from annuities because they know how much work it is, so the next step for the lifecycle is to begin to integrate with the carriers so that you can do transactions on a policy within Simon," said Stoltz. "The goal ultimately is to ensure that advisors almost never have to contact an insurance company, which is a task they do not enjoy."

One of the newest additions to the Simon platform comes in the form of digital assets like Bitcoin, which is one investment that fits the firm's playbook.

"We're starting with educational training to make sure that home offices and advisors feel comfortable with the investment that is available on a platform. It's nearly a brand-new asset class. Even though it has been around since probably the last 10 to 12 years, it has become mainstream in the last two or three years," he said.

As wealth management firms start offering these products, the importance of education will become critical to supplement marketing activities.

"We are aiming to launch new educational materials around digital assets by the end of this year," said Giordano.

Libor: regulators putting pressure on banks to transition 'immediately'

As the London Interbank Offered Rate (Libor) ceased to be available as an interest rate index after 31 December 2021, SRP caught up with Chris Schell (pictured), partner at law firm Davis Polk and Wardwell to discuss the ongoing transition within the structured products industry.

Schell notes that several Libors have been phased out such as euro, Japanese yen, Swiss franc, and pound stirling Libors as well as one week and two-month USD Libors. However, others are still in use until June 2023 like the one-month, three-month, six-month, and 12-month USD Libors.

"Another aspect of this is that the bank regulators have been putting a lot of pressure on the main banks to transition immediately, notwithstanding the fact that are Libors which are going to keep going. Major banks are under a lot of pressure to get out of Libor, and they're taking that very seriously," he said.

Schell points out that there are several proprietary indices that are also used as underlying reference assets for structured products, and they have returns based on Libor or contain embedded costs or fees calculated by reference to Libor.

In terms of legacy structured products, any contractual fallback language was initially intended to address a temporary unavailability of Libor and not its permanent suspension.

"When it concerns interest-bearing products where Libor is not available, the rate will be determined by reference to quotations by reference banks," said Schell. "If the reference banks were not quoting, Libor for the relevant interest determination date would then remain Libor for the preceding interest reset period."

The effect of this fallback language is that those products that were intended to be floating rate instruments will subsequently become fixed rate instruments, with the interest rate being fixed at Libor prior to its discontinuation, and no longer fluctuating based on interest rate variations.

Schell also highlight the significant shift towards secured overnight financing rates (SOFR) from Libor CMS swap rates which are widely implemented in the US structured products market. In terms of alternative rates including Ameribor and Bloomberg's BSBY, there was no significant activity in relation to structured products.

"It's possible that the structured products market is really just looking to the rate with the most liquidity and the one that with the most name recognition" he said. "There just isn't a need for alternative rates as of now while US regulators have been vocal in their dislike of these alternatives."

There are 556 live structured products linked to Libors listed on the SRP US database. The products, which are worth a combined US$3.9 billion, were issued via 25 different manufacturers of which J.P. Morgan (207 products), Citi (83), and Goldman Sachs (72) were the most prolific.

BNP Paribas sells Bank of the West to BMO

BNP Paribas has reached an agreement with BMO Financial Group for the sale of 100% of its retail & commercial banking activities in the US conducted through its subsidiary Bank of the West, for US$16.3 billion in cash. The agreement is pending approval of the relevant antitrust and regulatory authorities.

Bank of the West was BNP Paribas' main outlet for retail structured products in the US. The French bank marketed 100 market-linked certificates of deposits (MLCDs) with an estimated value of US$605 billion. There are currently eight live structures mostly linked to equity shares although the French bank also deployed a number of structures linked to proprietary and custom indexes.

Barclays, Goldman Sachs prop plays set to underlie FIAs

The new proprietary underlyings will be offered as index options for fixed indexed annuities (FIAs) sold by life insurance firms DPL Financial and American Life, respectively.

Barclays has rolled out the Avantis Barclays Volatility Control (VC) Index in collaboration with Avantis Investors. The index was created specifically for the RIA market and the fixed index annuity (FIA) structure by the firm's chief investment officer Eduardo Repetto and chief operating officer Pat Keating.

The index uses an excess return option strategy rather than a price return, which offers the benefit of dividends.

"Avantis has been managing real people's savings for decades and they looked for a similar bench with longevity on the desk," said Marie-Laure Chandumont (pictured), head of US annuities solutions at Barclays. "The index is at 10% vol control while the majority of indices are limited at 5% vol, so the equity allocation on average has been 80%, which is probably twice a 5% vol control index."

Chandumont added that ultimately, the index is about accessing Avantis' research around financial science, and how to identify profitable stocks and reasonable price.

An index account option based on the new index is now available exclusively in Security Benefit Life's ClearLine Annuity on DPL's platform for registered investment advisors.

This is the latest addition to the Barclays range of indexes featured in the US structured annuities market across which includes six indices across 40 live indexed annuities worth an estimated US$95m, including the Barclays All Caps Trailblazer 5 Index; Barclays ARMOUR II Gross USD 7% ER Index; Barclays Low Volatility 5 Index; Barclays Trailblazer Sectors 5 Index;

Shiller Barclays CAPE Allocator 6 Index; and Shiller Barclays CAPE US Sector Risk Controlled 10% USD TR Index, according to SRP data.

The Goldman Sachs Xenith Index is set to be exclusively offered to American Life's FIA clients. The multi-asset strategy uses an 'anticipated macro regime,' as identified by a leading economic indicator, to make asset allocations.

In doing so, the Xenith Index differs from indices relying on a backward-looking methodology alone. Instead of relying solely on the S&P 500 Index for exposure to US equities, the index uses an intraday overlay that can reduce equity exposure based on intra-day trading 'signals'.

As a result, the strategy incorporates real-time market movements as well as other factors in its rules-based methodology. The Xenith Index also provides commodity exposure by switching between copper and gold based on anticipated economic growth.

'This is our first index licensing engagement with American Life ,' said Pratik Pareek, head of insurance equity derivative sales at Goldman Sachs.

Goldman has two in-house designed indexes used across 14 US indexed annuities including the Goldman Sachs Voyager Index and Goldman Sachs Dynamo Strategy Index.

> **The index is at 10% vol control while the majority of indices are limited at 5% vol**

OCBC eyes more SP structures amid ESG push

Having issued over SG$20m (US$14.7m) of its maiden sustainability-linked deposit, the Singaporean bank is now considering widening the range of its ESG-linked structured products.

The issuance amount has been ‘very encouraging’ with the second tranche offering the same return available for subscription until 2 January 2022.

“[We] have plans to launch more sustainability linked structured deposit next year,” New Say Ping (pictured), regional head of investment & structured products at OCBC Bank, told SRP.

The proceeds of the callable deposits will be invested in notes, bonds or other fixed income securities issued by companies that meet the OCBC Group’s ESG criteria, as SRP reported.

“For fixed income, our approach is to build an ESG scoring framework that will complement our current credit analysis process,” said New. “This is done by identifying material industry specific ESG risks and understanding the issuer’s level of preparedness for these risks-based on the issuer’s disclosures and thus derive an overall assessment of an issuer’s exposure to material ESG risk.”

For equity, MSCI’s company-level ESG data and ratings are used as building blocks and integrated into OCBC Group’s fair value estimates. These in turn incorporate key environmental risk metrics into the bank’s research and investment analysis, according to New.

As equity-linked structured investments are a key revenue driver of the treasury business at OCBC Bank this year, New and his team are also pitching thematic equity baskets with favourable ESG risk ratings. The volume will be actively tracked from next year, said New without elaborating on the ESG criteria for the baskets.

In addition, the second largest Singaporean bank by assets plans to offer ESG index-linked structured notes as a start to gauge market demand for such an underlying asset.

> “ **Sustainability is becoming increasingly relevant**

“We are still at the initial exploratory phase when it comes to identifying the most suitable ESG-linked indices for our clients,” he said.

New noted that a main challenge in developing ESG-linked structured products is to come up with the methodology for the selection of ESG indices.

“The number of ESG indices in the market is increasing at a rapid pace, [but] there is a lack of commonly-used ESG indices that are widely priced among the issuers,” he said. “In terms of marketing ESG-linked structured products, we have not encountered many issues as sustainability theme is becoming increasingly relevant today.”

In terms of ESG-linked fund underlyings, OCBC offers an outperformance note on-the-shelf with the AB Sustainable Global Thematic Portfolio as one of the reference assets, although the demand has not stood out.

The distributor is also working on the infrastructure construction to support the trading and pricing of both voluntary carbon credits and compliance carbon credits futures, which will be tracked by structured notes catering to Premier and Premier Private Clients.

SRP registers 1,970 live certificates or warrants linked to carbon dioxide or carbon emission futures across Germany, Austria, Belgium, the Netherlands, France and Switzerland.

Like other distributors in Singapore, zero capital protection accounts for the vast majority of the structured notes at OCBC Bank as the investors have higher risk tolerance, and place more emphasis on yield or return potential.

“While we receive customer enquiries on capital-protected type of structure from time to time, pricing such structures is not an easy task due to the current low interest rate environment,” said New.

In Singapore, the most popular payoff is fixed coupon with stepdown knock-out and European knock-in. “Investors are still predominately seeking yields and the European knock-in is an attractive form of soft protection,” he added.

Thailand lists first foreign stock DW after rules relaxed

In a first for Thailand, Macquarie Securities launched derivative warrants (DWs) over six Hong Kong-listed stocks today. This comes shortly after regulators gave the green light to foreign underlying stocks.

The stocks are Alibaba, Tencent, Meituan, Xiaomi, JD.com and Great Wall Motor, all of which are Chinese companies. Each of them is accessible through a call warrant that will expire on 4 April 2022.

'Our Hong Kong single stock warrants listed in Singapore and Malaysia have been welcomed in both markets and are in popular demand,' said Dean Herbert, head of listed product distribution, Asia at Macquarie commodities and global markets. 'This launch provides an opportunity for Thai investors to trade technology and electric vehicle stocks which are in fast-growing sectors with high volatility.

'We expect a high level of interest from retail investors in trading Hong Kong single stock DWs in Thailand.'

As the only non-tech stock, Baoding-based Great Wall Motor is for the first time tracked by DWs listed on exchanges outside Hong Kong SAR.

"Great Wall Motor has operations in Thailand that make it a well-known company for investors in Thailand," a source at Macquarie Securities told SRP.

Further warrants will be issued over more major companies soon, stated the Australian issuer without further elaborating.

'Investors can gain leveraged exposure to the Hong Kong stocks and some of the largest companies in the world with lower investment capital through their existing trading accounts with their brokers,' added Noppadon Duangthipnest, head of derivative products, Thailand at Macquarie commodities and global markets.

The latest offering is 'another cross-border product development that the Stock Exchange of Thailand (SET) and securities companies have initiated to facilitate overseas investment via the Thai capital market,' according to SET president Pakorn Peetathawatchai (pictured).

AMENDED RULES

Effective from 13 December, the SET has extended the types of underlying assets for DWs to cover foreign stocks - four months after its proposal was filed to the Securities and Exchange Commission in Thailand.

The bourse amended DW regulations by adding foreign stocks to the underlying assets on top of local stocks, indices and foreign indices.

To keep pace with the move, the ceiling and floor limits for DWs on foreign underlying assets have been set at not over 20 times the DW closing prices on the previous day.

'In addition, SET has stepped up regulatory oversight of DWs with irregular trading in the similar practice to SET's supervision on stock trading in order to mitigate risks for investors,' said Peetathawatchai.

"[We] have been working closely with the SET and the SEC for the required rule changes and technical support to accommodate the listing and are grateful for their efforts that have facilitated today's launch," said the source at Macquarie.

"

We expect a high level of interest in trading Hong Kong single stock DWs in Thailand

Kenanga eyes foreign equity as warrants market hindered

The Malaysian investment bank is seeking alternatives to revive its structured warrant activity.

In the past 10 months, the turnover of Bursa Malaysia-listed structured warrants has reached MYR71.3 billion (US$16.9 billion), accounting for half of the turnover in 2020, and 76% down compared to 2019.

In an interview with SRP, Philip Lim (pictured), head of equity derivatives at Kenanga Investment Bank, reflects on the slow growth of structured warrant market in Malaysia and how the second largest issuer by turnover has adapted to it.

"Since the beginning of 2021, foreign fund outflow and lack of growth catalysts were clearly portrayed in the Malaysian equity space," said Lim.

As of 19 November, retailers were the only net buyers of Malaysia-listed equities to the tune of MYR11.6 billion while local institutions and foreign investors were net sellers amounting to MYR9.9 billion and MYR1.68 billion, respectively, according to MIDF Research, the research arm of MIDF Amanah Investment Bank.

The hard brakes were directly related to 2020 being 'an unusual year' for the Malaysian equity market.

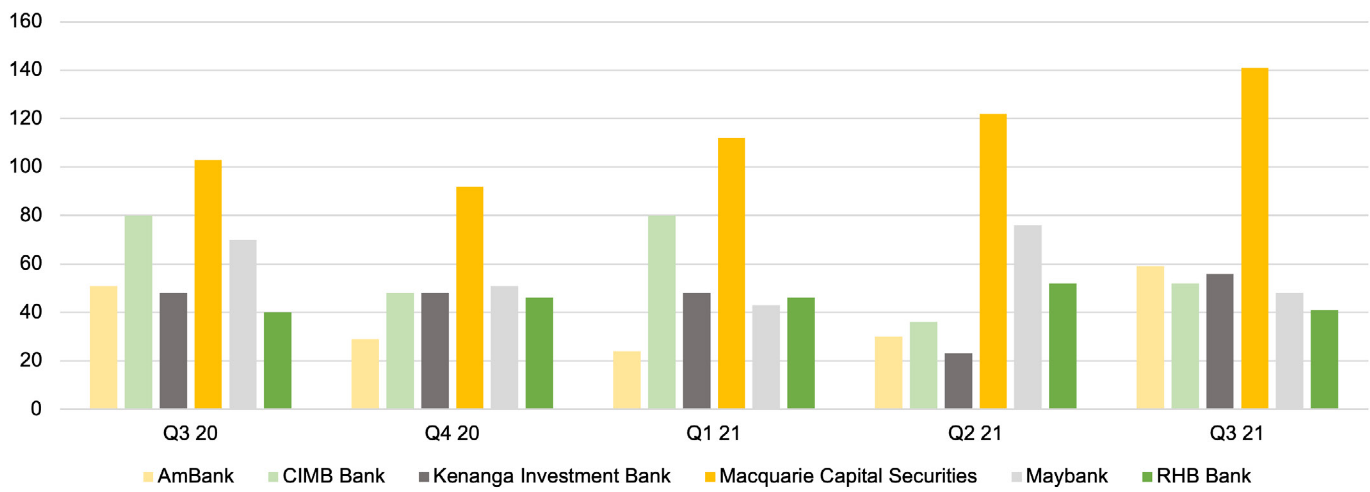
"Pandemic counters like stocks on Malaysian rubber glove makers were the outliers that lifted the FBM KLCI (FTSE Bursa Malaysia KLCI Index) upwards as they became the second largest in weighting after the banking sector," said Lim, citing the soaring turnover of Supermax-linked warrants in 2020.

In addition, the social lockdown enabled stay-at-home day trading to boom, according to Lim.

Structured warrant investors were also attracted the 0.1% stamp duty exemption from Bursa Malaysia - the promotion was valid for three years until the end of 2020.

Kananga is the second largest issuer of Malaysian structured warrants with a 20.6% market share based on the turnover from January to October, following Macquarie Securities' 40.3% market share.

Malaysia: listed structured warrant issuance



Source: StructuredRetailProducts.com

Since its first foray into the Malaysian market in 2014, the Australian house has been a dominant player as the main provider of structured warrants linked to Hong Kong equities, particularly the Hang Seng Index (HSI), which formed three quarters of its 10-month turnover, or MYR21.1 billion.

Meanwhile, Kenanga took the lion's share of Malaysian equity-linked warrant issuance with a 30% market share by turnover, or MYR14.3 billion.

To cope with the sluggish domestic equity market, the investment bank debuted in July his-linked warrants.

"The timing of our launch was to appeal to sophisticated traders with higher risk appetites as volatile macro-economic conditions in July 2021 created great trading opportunities on the HSI," said Lim.

The issuer expects to 'aggressively grow' its HSI warrant business and introduce new warrants on single foreign stocks with big market capitalisation in the first half of 2022. However, the bank will continue to focus on its core Malaysian equity warrants.

Besides HSI, foreign underlyings available in the market include the Hang Seng Tech Index, S&P 500, Tencent Holdings, Meituan Dianping, Geely Auto, BYD, Alibaba Xiaomi, SRP data shows.

CHALLENGES

Lim's outlook for 2022 remains cautious as it will not be an easy year for the structured warrant market in Malaysia considering the dim economic outlook, stagnant GDP growth post-pandemic and political uncertainties.

"A significant challenge has arisen in the form of Malaysia's Budget 2022 proposal of stamp duty on contract notes to be increased from 0.1% to 0.15%," Lim added.

"This an enormous deterrent as traders are well aware that this will make it harder to break-even on a position, let alone profit."

What's more, the budget has sought to remove the MYR200 stamp duty cap on contract notes for trading of listed shares, which was announced on 29 October.

"These proposed changes will have a negative impact on trading on Bursa Malaysia," said Lim. "Warrants are a derivative of the underlying share with the lowest cost to entry for the Malaysian Rakyat [ordinary people]."

At Bursa Malaysia, the incentive scheme for structured warrants was also tightened this year. The bourse is offering an initial listing fee rebate of 40% for each of the first 100 structured warrant issuance in 2021 – the rate will drop to 20% for the onward issuance.

To be eligible for the scheme, issuers must conduct no less than 15 retail seminars or roadshows per year, and at least 30% of their new issuances must be in any two combinations of single stock put warrant, warrants on local index/ETF or warrants on foreign stock/index/ETF.

Back in 2020, the rebate on the initial listing fee was 25% for the first 67 issuance, 35% for the 68 to 167 issuance, and 50% for the 168th issuance and above, subject to slightly different eligibility criteria compared with this year.

However, the expanded market marking frame updated by Bursa Malaysia in December 2020 is expected to have a positive impact. To improve market efficiency and promote liquidity, a new category has been introduced called 'derivatives specialists' who are allowed to utilise the Permitted Short Selling (PSS) framework for the purpose of market making.

"The PSS was introduced so that market makers like us are not subjected to previous rulings required under the old Regulated Short Selling [RSS] regime," said Lim. "The at-tick rule hindered dynamic hedging and as a result, filled the market with call warrants."

Before the new rule was introduced, Kenanga could only issue put warrants very selectively as it managed the hedge on an aggregate level.

During the past two years, the bank has not witnessed significant issuance of put warrants because the securities-based lending market has not provided deep enough buckets of securities to borrow from.

Additionally, the requirement of PSS trades to be conducted in a designated PSS account may create inefficiencies in trading and nullify some of the benefits touted under the new framework, said Lim.

"

The timing of our launch was to appeal to sophisticated traders with higher risk appetites

China's SPD Bank capitalises on prop QIS ESG index via deposit

The Shanghai Pudong Development Bank (SPDB) has rolled out its first multi-asset quantitative investment strategies (QIS) index with ESG elements, in a response to China's carbon neutrality commitment.

Launched on 12 October, the SPDB Global ESG Index (浦银北极星ESG指数) is currently tracked by two tranches of structured deposits with a bull call spread for retail customers. Their issuance amount reached nearly CNY50m (US$7.8m), a spokesperson told SRP.

With a 12-month tenor, both tranches have an expected annualised return of 0.3% to 5.38% and a participation rate of 63.51% with the upper and lower barrier set as 106% and 98% of the strike price, respectively. The minimum ticket was CNY10,000.

"The payoff can provide additional downside protection while ensuring investors to enjoy upside benefits," said the spokesperson.

Under Chinese regulations, all structured deposits issued by Chinese banks offer full principal protection, as opposed to wealth management products.

The onshore and offshore assets of the products are hedged by a Chinese securities house and a European investment bank, respectively. The bank also acts as the index administrator while SRP has learnt that the calculation agent is a US index provider.

'The launch of the index is our effective implementation of the national strategy of 'carbon neutrality and carbon peak' and also shows SPDB's exploration for innovation in the areas of 'green investment' and 'green wealth management products',' stated the bank.

China has pledged to become carbon-neutral by 2060. Last month, the government laid out key targets and measures for the upcoming decades, including the lifted share of non-fossil energy consumption to around 20% by 2025.

In September, another Chinese joint-stock commercial bank, China Minsheng Bank, began to issue structured deposits linked to the Minsheng ESG Overseas Allocation Index (民生银行海外ESG资产轮动指数), which is administered and hedged by Société Générale. This was the first QIS index incorporated with ESG criteria in China, as SRP reported.

"[We've] seen positive customer feedback and fairly active subscription," said the

SPDB Global ESG Index performance

Source: Shanghai Pudong Development Bank

SPDB's spokesperson about the new launch. "However, compared with traditional underlyings, the multi-asset ones require further publicity and investor education."

The eighth largest Chinese bank by assets has also issued structured deposits on four multi-asset indices for retail and corporate clients: SPDB Global Cycle Strategy Index I (浦银周期1号), SPDB Global Cycle Strategy Index II (浦银周期2号), SPDB Worldwide Asset Parity Index (浦银全球视野指数) and SPDB Multi-Strategy 1 (浦银多策略1号).

In May, SPDB launched a structured deposit on the ChinaBond Carbon-Neutral Green Bond Index (中债-碳中和绿色债券指数) developed by China Pricing Center, a subsidiary of state-owned China Central Depository & Clearing (CCDC). The index was also for the first time used in structured products.

UNDERLYING

"The SPDB Global ESG Index features stability and deploys a quantitative model based on Bridgewater's risk parity investing with overlays of momentum strategy and volatility control," the spokesperson at SPDB told SRP. "The model adjusts the value of eight major assets every month with an objective to deliver steady gains from the global economy in the long term".

The index has a five percent target volatility with a daily volatility observation. It comprises the Eurostoxx ESG Leaders 50 Index, MSCI China Hong Kong Listed Large Cap ESG Leaders Index, S&P 500 ESG Index, S&P Japan 500 ESG Index, 10Y Euro Composite Bond Index (UK, Germany, France equally weighted), 10Y China Bond Index, 10Y US Bond Index and 10Y Japan Bond Index.

The weight of each constituent is adjusted based on their scores generated from the past performance. The respective capped weights for bonds and stocks are 250% and 125%.

"[The index's] sustainable rise is mainly due to the investment asset diversification," said the spokesperson. "It is balanced between stock and bond markets and is capable of withstanding large fluctuations in a single market. In addition, it strives to achieve sustainable growth by effectively diversifies country risks and avoiding significant drawdown."

As of 16 November, the allocation index posted a year-to-date return of 6.83%, volatility of 4.98%, Sharp ratio of 1.37% and maximum drawdown of 4.94%. Since inception, these metrics are 6.73%, 5.27%, 1.21% and 8.17%, respectively.

BNK Securities enters Korean SP market

The subsidiary of Busan Bank has issued eight principal-protected structured products since August as its net income in Q3 21 doubled year-on-year (YoY).

BNK Securities has made its first foray into the South Korean structured products retail market with a new range of products delivered through different local wrappers.

The products comprise seven derivative-linked bonds (DLBs) linked to the 91-day certificate of deposit rate (CD91) and an equity-linked bond (ELB) linked to the Kospi 200 index, according to SRP data. The products which have a tenor of three months, include seven public offerings and one private placement.

The first product launched, the BNK 투자증권 1호기타파생결합사채 (DLB), which featured a digital option, matured on 11 November paying out 1.04% pa. as the final spot rate of CD91 did not reach six percent, which could have led to a return of 1.05% pa. The product raised KRW20m (US$16,792).

With a strike date on 2 September, the second DLB was a private offering and the best-selling product so far – it had an issuance amount of KRW50 billion with an undisclosed payoff, making up 64.7% of the entire volume.

The rest of the DLBs generated an issuance amount of KRW3 billion to KRW9 billion. They share similar structures offering a return of 1.42% to 1.55% pa, if the CD91 is at six percent in the final valuation date.

The only ELB issued at KRW20m matured on 11 November paying out 1.04% pa as the Kospi 200 index was not above 200% of its strike level at maturity, which could have led to a 1.05% pa coupon, according to SRP data.

BNK Securities was founded by Busan Bank in 2007 as PB Futures. The local derivatives house was renamed as BS Securities in 2009 with KRW55 billion in equity and 5,500 brokerage accounts before becoming a fully-owned subsidiary of BNK Financial Group.

The Busan-based issuer has been growing rapidly since 2019 despite its small market share in South Korea. Its assets climbed 63.9% to KRW4.5 billion as of 30 September YoY, a 82.1% hike compared with two years ago, according to the parent's earnings results. Up until now the securities house offered futures and options on indices, currencies, commodities and FX rate.

BNK Securities reported a net income of KRW33.1 billion in Q3 21 which represents 41.8% of the non-bank net income following BNK Capital, or 10.8% of the total groupwide.

In the first nine months of 2021, the firm's net income increased 171.7% to KRW98.1 billion YoY which represents a four-fold increase compared with the same period in 2019. The growth was driven by fee income, which rose 115.6% to KRW146.8 billion from January to September YoY on the back of strong advisory revenue.

Hedging bespoke indices: No options, no problem

The increasing use of bespoke indices, also known as custom or proprietary, in structured products across markets is forcing issuers to make assumptions with the use of proxys to hedge their exposures.

Bespoke indices have been around for many years but the persistent low interest rates environment, low credit spreads as well as recent events like the dividend crisis of 2020 have forced issuers of structured products to look at new alternatives.

Our contributor, Eric Barthe, continues this week's expert analysis on the relationship between decrement underlyings and autocallable, and notes that decrement indices are effective underlyings for banks to remove most of the dividend risk and for investors to generate high coupons.

Barthe described several other benefits but also pointed that there is still some risk for issuers such as dividend risk due to the volatility skew of the liquid index and spread in volatilities (due the difference of composition) between the decrement index and the liquid index.

However, this is not exclusive to bespoke indices with little or no liquidity as any structured product despite how complex its option structure is will still present significant trading or hedging challenges to the issuer – hard to hedge illiquid stocks or very long dated products would cause challenges even to the most traded and liquid underlyings such as mainstream benchmark indices.

"This also applies to long-dated products," says Patrick Kondarjian, global co-head of ESG sales, HSBC. "The longer they are, the more those challenges are likely to be compounded, because there is less liquidity on those maturities -- even when hedged against standard indices."

Our recent index report – the SRP Index Report 2021 - shows that the number of bespoke indices including custom, ESG and decrement underlying retail structured products has increased by 474% while the sales volume has grown by +130%, with a value of US$11.8 billion, as of the end of June 2021.

SRP data shows there are more than 10 decrement bespoke indices with assets worth between US$1bn and US$6bn with decrement becoming the second most active sector in terms of underlyings in the global structured products market. Some claim this is bringing additional risk to trading books as there are no liquid indices to hedge the exposures and issuers are forced to use proxys, but this kind of challenge is not foreign to the structured products industry.

Index sectors - Issuance*

Sector	2016	2017	2018	2019	2020	1H 2021
Market Cap	13,061	14,254	17,922	14,356	13,796	5,816
Strategy & factor	343	360	808	1,525	1,675	1,525
Decrement	163	312	674	603	792	1,359
ESG	82	101	195	436	792	890
Industry	308	491	730	665	780	409
Proprietary & custom	157	348	645	795	382	73
Thematic	104	53	99	248	149	102
Total	14,343	15,909	21,010	18,512	18,115	10,174

*Based on the biggest sectors in 2020, as of 30 June 2021

Index sectors - Sales US$m*

Sector	2016	2017	2018	2019	2020	1H 2021
Market Cap	88,472.62	73,633.27	96,697.69	89,693.98	77,186.29	29,649.17
Decrement	3,549.24	6,602.32	8,366.34	8,038.22	8,668.74	7,225.38
Strategy & factor	3,372.10	4,224.42	5,344.06	6,937.90	7,439.59	4,056.08
ESG	1,424.63	1,394.37	1,275.50	6,564.72	6,606.17	4,588.61
Industry	1,963.29	2,275.62	3,018.06	3,318.68	4,476.53	1,832.24
Thematic	876.41	512.98	1,339.57	1,396.75	1,161.25	530.00
Proprietary & custom	283.49	943.52	1,024.02	1,525.73	631.07	150.94
Total	100,536.93	89,871.10	116,752.21	116,745.75	102,343.17	48,032.42

*Based on the biggest sectors in 2020, as of 30 June 2021

"There is now a strong flow on ESG, which applies for all the bespoke indices we have seen in the past 10 years. Some of them have been very successful and have billions in notional," says Gael Reboulet, global head of structuring and sales, at CACIB.

"These indices were not only designed to bring value to the end investor but also offer the sell side an opportunity to diversify or even significantly reduce their risk."

HOW IT WORKS

With bespoke indices, there is not an active derivatives ecosystem, so it is not simply a case of trading futures or options to hedge this type of index, especially around parameters like volatility and dividends, says Kondarjian.

"It's a bit more challenging to find proxy hedges, which means that there might be higher friction costs on some occasions. Risk management and risk recycling is therefore very important," he says.

Like with any other structure, the issuer first hedges the delta and then the volatility of the index underlying the product. When hedging liquidity and volatility the issuer bears a basis risk between the two. The residual risk for the bank is not specific to bespoke indices, autocallables or more complex structures as a simple call would be bearing the same residual risk.

The delta is not a big challenge because with an index of 40 to 50 stocks with ESG filters and usually large capitalisations, you end up with a basket of liquid stocks so you can hedge the first order risk of the product - the delta on the underlying basket of stocks, says Pierre Gimenes, head of equities & equity derivatives pricing, Europe, at Société Générale.

"There is now a strong flow on ESG, which applies for all the bespoke indices we have seen in the past 10 years. Some of them have been very successful and have billions in notional

Gael Reboulet, global head of structuring and sales, **CACIB**

"Of course, on the volatility side there is no options futures market on those indices, so the banks have to hedge volatility with liquid benchmarks. The residual risk is non-zero but is generally framed insofar as the ESG index does not deviate drastically from the benchmark from a volatility point of view," he notes.

From that perspective, it can be assumed that a European stock with an ESG filter is as liquid as the Eurostoxx50.

With proxy hedges, the issuer is effectively assuming that something that has high correlation in current market conditions will continue to have this high correlation in stressed market conditions.

"This proxy may be enough to hedge your position but it's an additional risk that an issuer would be taking – what we call basis risk," says Kondarjian.

This can be problematic as we have seen in the past and it often happens mostly when there are sharp downside moves in the market, second order greeks start to kick in, and things become difficult generally, because every issuer wants to hedge the same type of risks in big quantities and in the same direction at the same time - like the cyclical hedging problems and potential losses investment banks face with autocallables, worst-of and long dated structures.

"It is a trade-off that needs to be carefully analysed because you are trading off two types of risks and trying to find the best combination," says Kondarjian.

One is a liquidity risk - if you try to hedge directly, there will be the accompanying cost attached to doing so, and liquidity can dry up even further in stressed market conditions. The other is what basis risk the issuer would be comfortable with. This is a multi-dimensional challenge and the optimum result can vary depending on the bank's own models.

"There are further considerations too for basis risk, such as internal stress testing for risk management and potential internal model charges as well," says Kondarjian.

"You also have to take into account the liquidity and the volatility of the benchmark of the proxy," says Mahdi Bouayad, CACIB's head of QIS & ESG solutions structuring, equity solutions. "At the end of the day, you basically need to reduce the basis risk between the bespoke underlying and the benchmark, and look at the correlation between the index and the proxy."

There are different ways to tackle this including risk management and risk recycling activities – issuers hedge some of this risk with other players like hedge funds and other institutional investors who don't necessarily have this exposure and are willing to take some of the risk.

The second is to size the exposure the issuer can take on a given bespoke index.

Decrement indices: top 10 by market share 2016-2021*

Index	Issuance	Sales US$m	Market share (%)
CAC Large 60 EWER Index	341	6,090.74	21.96
Euro iStoxx Equal Weight Constant 50	594	5,317.83	19.17
SBF Top 80 EW Decrement 50 Points	232	3,754.11	13.54
Euro iStoxx 70 Equal Weight Decrement 5%	78	2,844.57	10.26
Euronext France Germany Leaders 50 EW Decrement 5% Index	124	1,280.04	4.62
Solactive France 40 Equal Weight NTR 5% AR Index	148	1,165.24	4.20
Euro iStoxx 50 Equal Weight Decrement 5%	25	1,145.69	4.13
Euronext Eurozone 70 EW Decrement 5% Index	13	697.30	2.51
S&P Euro 50 Equal Weight Synthetic 5% Price Index	95	672.84	2.43
iStoxx Transatlantic 100 Equal Weight Decrement EUR	40	403.28	1.45
Others	747	4,363.06	15.73
Total	**2,437**	**27,734.73**	**100.00**

*As of 30 June 2021

Hedging bespoke indices: risk management by diversification

In the second part of this feature, we look at ESG underlyings and how the use of proxies will continue to be the reference to hedge exposures from structured products as no viable alternative is on the books... yet.

The trading losses triggered at the beginning of the pandemic mostly came from the Eurostoxx50 book because the dividends were cut, and every issuer suffered from the dividend dynamics of the index. This was reflected in a move away from the most widely used underlying assets in the structured products market globally, as product issuers moved to de-risk their trading books.

"Some of the trading losses at the beginning of the pandemic came from the dividends being cut at the same time as banks' exposure on dividends was increasing because of the risk dynamics coming from their autocall positions on standard price return indices," says Crédit Agricole CIB's (CACIB) global head of solution sales, global markets division Gael Riboulet.

With bespoke indices there is more diversification, so issuers don't have big exposures to each of them. They have a proper assessment of how much risk they can take on that specific index on the spot basis, but also on a dynamic basis because of the dynamic nature of structured products.

"That means thoroughly assessing how much risk to take on each specific index on a spot basis, but also on a dynamic basis, because a lot of those risks on structured products are dynamic risks – taking into consideration different market scenarios, including worst-case ones," says HSBC's Kondarjian. "This is why it is important to know how much capacity issuers have, how much is the cap on the risk they can take on those indices.

"Potentially, when that cap is reached, they could create variations of those indices or strategies, allowing them to diversify some of their risk."

Issuing banks have all the necessary tools and an appropriate setup to manage the risks linked to these positions, according to CACIB's Bouayad.

"These new indices bring diversification both on the buy- and sell-sides," he says. "For the buy-side instead of having another Eurostoxx-based based product, you have something that may give you some alpha and is not exposed to the same risk factor. On the sell side, this helps to spread the risk and make it easier to manage and recycle rather than having all your risks on a single underlying."

It is really up to each issuer to define what is the most relevant risk methodology

Mahdi Bouayad, head of QIS & ESG solutions structuring, equity solutions, **CACIB**

A source at an international investment bank noted that bespoke indices do not have any listed market for futures and/or options, so the trading bears more risk in replicating those indices. The delta is replicated via buying the basket of stocks, the volatility and dividend risk are hedged on proxies using liquid benchmarks.

NO BENCHMARKS

There are a few indices that have strong liquidity which are the benchmarks the market is using as proxies to manage the risk coming from the issuance of products linked to bespoke indices.

If you're looking at a global bespoke index you will use the S&P500 or the Stoxx as the proxy but if you're looking at a more local bespoke index on at France stocks, then you would take the CAC 40 as the proxy.

"But it is really up to each issuer to define what is the most relevant risk methodology to estimate and assess the link between the proxy and the index," says Bouayad.

The source at the investment bank notes that the ESG theme doesn't inflate other risks for issuer: from a trading perspective ESG is not any different from any other custom theme. The same goes for the decrement feature, as it is the removal of part of the dividend risk for the issuer it is even less risky.

Isabelle Millat, head of sustainable investment solutions for global markets at Société Générale, notes that the development of ESG globally is driven by client demand rather than a requirement from a risk management perspective. However, like with decrement gauges, the significant increase in activity around ESG indices sometimes in combination with decrement features brings new challenges to the sell-side.

"This thematic has become more significant in terms of risk management for everybody trading these indices," says Reboulet.

There is a growing market on the Eurostoxx50 ESG benchmark, but not enough liquidity to sustain the hedging requirements of banks. As SRP data shows, there are several ESG and decrement indices with sizeable volumes, but the market is far from having access to an ESG benchmark to hedge the risk of products linked to ESG underlyings.

This means that when an issuer goes live with a bespoke index, by definition, there is no market liquidity on that underlying.

From a risk management perspective there is no liquid option market for ESG indices and there is no new benchmark emerging as a real reference. There is no equivalent in terms of a broad, liquid futures and options market to the Eurostoxx 50, says Millat.

"It is difficult to see one index emerging as a benchmark for bespoke ESG indices as issuers have their own environmental and social policies client demand is also moving towards customisation, and ESG has many different angles.

ESG indices: top 10 by market share 2016-2021*

Index	Issuance	Sales US$m	Market share (%)
Euronext Climate Objective 50 Euro EW Decrement 5% Index	29	2,206.86	10.10
Stoxx Global ESG Leaders Select 50 EUR Index	165	2,091.78	9.57
Stoxx Europe ESG Leaders Select 30 EUR Index	295	1,589.59	7.27
Euronext Euro 50 ESG EW Decrement 50 Points Index	119	1,284.70	5.88
Euronext Climate Orientation Priority 50 EWER	20	1,073.94	4.91
SBF Top 50 ESG EW Decrement 50 Points	61	1,056.52	4.83
Euronext Eurozone ESG Leaders 40 EW Decrement 5% Index	30	864.91	3.96
iStoxx Transatlantic ESG 100 EW Decrement Index	14	845.12	3.87
MSCI Europe Select Green 50 5% Decrement Index	20	692.72	3.17
Refinitiv Eurozone ESG Select Index	6	604.88	2.77
Others	1,737	9,542.97	43.67
Total	**2,496**	**21,853.99**	**100.00**

*As of 30 June 2021

Passing that risk to the end investor to stabilise profitability is inappropriate – banks earn profits because of the risk they take on

Clive Moore, managing director, **Idad**

There is clear demand for ESG indices - some more focused on climate, and some with a wider focus, and this gives you a natural diversity of exposures," she says.

"In any case, there is no evidence that an ESG benchmark with a liquid options market would be better than a proxy like the EuroStoxx50, considering the very bespoke nature of these underlyings".

ESG TYPES

Kondarjian differentiates between two types of products: the ones that are benchmark like with ESG screenings such as the S&P 500 ESG Index, and the ones that are by definition niche and require a bespoke approach.

"Some of these now have listed derivatives like futures for delta hedging, but it means that an ecosystem is building around it, and that they are trading," he says.

"Those indices can become more liquid and trade in different forms, and they could potentially have associated volatility products or dividend futures. That's how they build a track record and establish themselves as becoming a benchmark on their own right."

The more bespoke underlyings, on the other hand, have very specific requirements and very specific filters built into them, and it is unlikely they will become a market standard or benchmark.

"They are more a subset, more a niche product built for a specific client or a specific set of clients in a certain context," said Kondarjian. "For those, it's really about very thorough risk management, very thorough risk recycling, and very thorough sizing of the positions.

"Issuers should therefore be mindful of how much exposure they have to one type of index over another, by diversifying their risk and not concentrating their positions on one version of an index that has very high risk on certain fixings and certain specific names. This is particularly pertinent during times of market stress."

With the current zero interest rates environment as well as the pricing and hedging considerations issuers can only offer good return profiles in products either by increasing the risk of the product via the underlying, the barriers or the duration.

For banks, aside of having to meet new regulatory requirements to assess potential future exposures it is a question of risk management (and reputation) but there is also a question of suitability (and trust) for end investors.

"If issuers need/want to use proxy hedges to match the risks they take on that's absolutely fine – that's why they earn the money," says Clive Moore, managing director at UK specialist structured products provider Idad.

"But passing that risk to the end investor to stabilise profitability is inappropriate – banks earn profits because of the risk they take on – if the risks increase then increase the margin to take account of it, but if this results in reduced business volumes then make a decision to get out of the market and into different ones or live with lower profitability/increased volatility in profits. That's called managing a business.

"If, however, the decision is taken to ignore regulatory obligations and pass risk onto clients, then the banks have just transferred their risk to a regulatory one, where profits can be hit by fines and compensation payments – and interestingly with the threat of sanctions against individual managers."

Hedging bespoke indices: using a proxy is really a cost/benefit analysis

As we look at the issues of hedging and managing the risk around new bespoke underlyings, several bankers provide further insight into what to look for.

What are the main considerations when choosing proxy hedges?

Patrick Kondarjian, global co-head of ESG sales, **HSBC**

It really depends on the nature of the underlyings. If you take ESG, for example, the way some of these indices are built is to minimise the tracking error. There are two things to look for.

One is the impact metrics, or how much you improve your ESG metrics (such as carbon footprint or ESG score). At the same time, if the tracking error is minimised or kept within certain boundaries, the risk-return profile is aligned to the parent index. This helps, because if you have a very limited tracking error, you can trade some of your hedge on proxy indices – essentially, the parent index, which would have similar characteristics and high correlation of return and moves.

The primary approach is to use a proxy for part of your hedge or sometimes, if appropriate, all your hedge. It's really a cost/benefit analysis and it mainly depends on the tracking error, and how much the tracking error is can also vary depending on market conditions.

Mahdi Bouayad, CACIB's head of QIS & ESG solutions structuring, equity solutions

If you go back 10 years when we initially started promoting ESG and the like, we had been doing risk control indices for some time. When you do vol control indices, you basically reduce all the risks. You don't have the vol sensitivity therefore you don't need to hedge it and they fit very well in participation notes.

After that, we saw low vol indices, which are very similar to vol control indices because you basically have a volatility that is reviewed, and fits well with long and participation notes.

What has really changed in the market is the fact that our clients are now willing to see ESG embedded in autocallable structures, and we need to have the ability to hedge these underlyings using other liquid underlyings as proxies because there is a real drive to increase the ESG footprint in the universe of structured products.

You need a reference point that is available in the market, and there are a few indices that have strong liquidity and those are the eligible underlyings the market is using as proxies.

> **"The primary approach is to use a proxy for part of your hedge or sometimes, if appropriate, all your hedge**
>
> **Patrick Kondarjian,** global co-head of ESG sales, **HSBC**

> **The longer the product maturity, the higher the sensitivity of the product to risk parameters, and the more likely some harsh market movements may require rehedging of positions.**

Gael Reboulet, global head of structuring and sales, **CACIB**

Pierre Gimenes, head of equities & equity derivatives pricing, Europe, **Société Générale**

The criteria to choose a proxy depends on the starting universe:if you start with a eurozone index you will probably hedge some volatility with the Eurostoxx 50 options. Of course, if the index at stake is built from a German or UK universe then the DAX or FTSE 100 could be suitable benchmarks for volatility hedging as well.

Do ESG/decrement aggravate or increase risks?

Patrick Kondarjian

An ESG index is more like a bespoke index, and ESG is just a thematic. When it comes to decrement indices, these have been introduced with the intention of reducing some of the risks around dividend payments - especially for longer-dated products (three- to five-year, and over) where dividends are generally very illiquid.

We've seen the kind of Black Swan risk at the start of the pandemic in 2020 when companies started cutting their dividends and spreads widened. The cost of hedging and conditional downside risk can therefore be relatively high without decrement.

The introduction of decrement helps remove dividend risk and dividend hedging costs for issuing banks, which in turn can lead to an overall reduced cost for investors, everything else being equal.

Gael Riboulet, global head of structuring and sales, **CACIB**

We can see a much larger volume linked to ESG underlyings than we observed in the past.

Actually, only a few benchmark indices offer enough liquidity on both the delta and the implied parameters that you need to consider when you issue a structured product - not only you have to buy the index underlying the product, but you also need to risk manage the dividends and volatility of the underlying.

Decrement indices are a good example that allow the sell-side to be a bit more aggressive in terms of pricing, and be able to offer better conditions and more meaningful upside because to some extent it doesn't have to manage the dividend risk.

Is hedging bespoke indices like the challenges of risk managing long-term products?

Gael Riboulet

The longer the product maturity is, the higher the sensitivity of the product to risk parameters, and the more likely some harsh market movements may require rehedging of positions.

On the ESG side, the trend started when institutional investors started to buy call option for which we could have a static hedge in front. With a traditional autocall this is not possible as you must manage and hedge on a daily basis during the life of the product.

This is where it gets a bit more complicated and why you need a strong risk framework to manage these exposures. In our view, splitting the market exposure to traditional underlyings and ESG underlyings somehow helps to reduce concentration risk for the whole industry. If you look at the main European benchmark indices, when the market goes down significantly, implied dividends and long-term volatility markets get strong one-way flows coming from banks that need to rehedge their autocall positions. To that extent, ESG or thematic underlyings help bringing diversification and mitigating those very adverse situations.

FEATURE

Hedging bespoke underlyings: governance and buy-side considerations

In the second part of our vox pop about the challenges of hedging bespoke indices we look at ESG diversification, the challenges around customisation as well las how regulation is helping with governance and a view from the buy-side.

Are ESG indices bringing new risk to the market?

Gael Riboulet, global head of solution sales, global markets division, **Crédit Agricole CIB's (CACIB)**

For us it is about diversifying risk and addressing some of the issues the industry faces and offer new products.

Each bank has its own risk policy to assess their risk appetite and risk limits. If there's less risk appetite on the sell-side the pricing will get less competitive and the product will be less appealing.

Pierre Gimenes, head of equities & equity derivatives pricing, Europe, **Société Générale**

As long as the underlying is sufficiently diversified, ie there are enough stocks and not tremendous sector or country biases, then that's usually satisfactory from a volatility point of view. Usually you have less pronounced divergences between the volatilities than between the performances - the second one is not an issue because we delta hedge with the actual basket or the index, this risk is deemed acceptable. Usually the volatility of the ESG index does not deviate too much from the volatility of the benchmark.

Being able to hedge the delta exactly is an absolute pre-requisite: that is the first-order risk, that a bank cannot accept to hedge with proxies. Otherwise, we would just not trade it. On the volatility side there is no option market on those indices, which will necessarily lead banks to hedge this second-order risk on liquid benchmarks volatility rather.

What are in your view challenges to hedging bespoke indices?

Stéphane Mattatia, MD, global head of derivatives licensing and thematic indexes, **MSCI**

In the conversations that we have with banks when we work

All things being equal, this shift from market cap to ESG would rather be good for market stability

Stéphane Mattatia, MD, global head of derivatives licensing and thematic indexes, **MSCI**

on bespoke indexes with them, almost every time there is a concern about how they would actually hedge indexes and that's part of the discussion.

There are three dimensions around the challenges of hedging new indices with little liquidity. The first is that there is a real shift in client demand. This shift is from market cap indexes towards thematic or ESG indexes. And this is true and – your data shows that and also shows that MSCI has the lion's share in thematic indexes for structured products.

To respond to this demand and as we develop new indices, we are developing some instruments to hedge our most popular ESG indexes like futures on the MSCI ESG leader series. We have also launched futures on the MSCI China A 50 Connect in response to demand and we will continue to develop the derivatives ecosystem around some of the indices. The other aspect is that banks agree that they will have some basis risk between the most liquid edge and the ESG exposure. From a market stability standpoint, this evolution towards bespoke indexes is a good thing because most of the research shows that historically ESG indexes are slightly less volatile and had smaller drawdown. All things being equal, this shift from market cap to ESG would rather be good for market stability.

DECREMENT AND RISK CONTROL

A second dimension is the fact that banks are developing and asking for new features that allow them to eliminate some of the hedging risk, typically decrement and risk control.

When we create an index, we deliver four versions – gross, total return, net total return and price return alongside the decrement. The decrement feature is very appealing for banks but as an index provider we are completely agnostic. When we design an index, our job is to make sure the decrements make sense in the context of the index. If someone was asking for 12% decrement, we would kindly decline, but this feature answers a lot of the concerns of the bank. What we have seen since the historical dividend events of 2020, is an acceleration in the switch from price return indexes to decrement indexes.

However, we also see more interest is risk control indexes because as decrement indexes this kind of index protects the issuer against a volatility shift. We are working very hard on risk control, and will bring to the market in January a new range of risk control indexes with a new risk control algorithm that actually will allow issuers to keep volatility under control, but improve the sharpe ratio and their performance. We expect risk control indexes will gain visibility and presence in the market in the coming months.

ESG PRICING FRIENDLY FEATURES

The third dimension is to do with providing ESG pricing friendly features - at the end of the day, when you discuss with structuring desk, what they want is to be able to simulate different scenarios. An exotic trader ultimately looks you know at the risk of the index, the volatility, the dividends and they compare them with the instruments that they intend to use to hedge their positions and make the decision about how much basis risk is they are willing to take.

We want to promote and expand our index builder tool which is a simulation tool that allows clients to make their own simulations. We think this will change things because quite often when you are a trader you want to be able to explore dozens of variations on your idea or concept and you cannot do that going back and forth to our research team.

Are ESG underlyings being used to diversify trading book?

Pierre Gimenes

ESG underlyings are not necessarily diversifying the risks on the trading books per se. Of course, shifting away from an excessive concentration on a limited number of traditional underlyings can be beneficial to some extent. Nevertheless, proper risk management of a trading book still requires being able to hedge every underlying taken independently in a satisfactory manner. Ultimately, there is a balance between the quality of hedging at an individual underlying level, and diversification from an aggregated book standpoint.

What are the challenges to respond to demand for customization and new bespoke indices?

Isabelle Millat, head of sustainable investment solutions for global markets, **SG**

Investors are increasingly looking at adding ESG filters to the traditional benchmarks, including climate and other categories. More than two-thirds of our activity with large retail distribution networks in France is now ESG. The numbers suggest there is a huge trend and we want to contribute to building common standards as the market makes this shift towards ESG.

We are offering products with the right financial features independent of the ESG filters, and we have the right risk management processes in place to deal with them. Education continues to be the number one priority for our ESG products and investors have access to the documentation, with the ESG filters. We spend a lot of time producing educational material and marketing brochures and we also must comply with certain rules regarding the complexity of products or the underlyings embedded in the products.

> "Investors are increasingly looking at adding ESG filters to the traditional benchmarks, including climate and other categories

Isabelle Millat, head of sustainable investment solutions for global markets, **SG**

Is regulation helping to address any concerns around mis-selling bespoke indices?

Pierre Gimenes

Mifid is helping from a manufacturer product governance point of view - we have to define our target market and make sure the products are suitable. It's about getting the mix of complexity and risk right. Our duty as a manufacturer is to make sure that we deliver quality products for each client. Distributors also must ensure that the proper level of information is disclosed as they are the ones closer to the end investor.

Clive Moore, managing director, **Idad**

As the managing director of an FCA authorised firm I, and the company, have an obligation to follow the Principles for Business laid out by the FCA – in particular Principles 6 ('A firm must pay due regard to the interests of its customers and treat them fairly') and 7 ('A firm must pay due regard to the information needs of its clients, and communicate information to them in a way which is clear, fair and not misleading.')

I would happily buy investments with links to synthetic indices – there can be some great value. But I'm a pretty experienced professional investor able to make a reasonable assessment of likely investment outcomes (or at least happy to blame myself for missing something). The vast majority of investors and indeed financial advisers don't fall into this category, and can't reasonably be expected to understand the mechanics of the indices or even be able to make a reasonable comparison with an index with which they are familiar and, importantly, one they have easy access to data on – e.g. the FTSE 100.

Are there any concerns with bespoke underlyings from an end-investors perspective?

Clive Moore, managing director, **Idad**

I struggle with the concept of clients thinking they have an investment linked to the FTSE 100 Index (or at worst, something very similar) when in fact they could have something quite different – it doesn't seem like treating them fairly. I also have an issue with clients having a link to an index on which it is exceptionally difficult to find any meaningful information, or to understand how the index will behave in different market scenarios.

The rationale behind the use of synthetic indices within structured products is clear: traders and structures are able to predict behaviours more accurately and deliver more efficient pricing for investors (and themselves). As is often the case though, risks of lower than expected returns (including capital losses) are being passed to the individual in order to enhance the appearance of investment products (in the expectation this will lead to greater sales and profits) and insulate institutions from some of the risks they are paid to take.

When disappointed investors complain that their FTSE 100 synthetic fixed div index performed nothing like the actual FTSE 100 (and they had no idea because where where they supposed to find prices), their first recourse will be to the relevant investment adviser.

MerQube: market is moving away from one-size-fits-all

The specialist index provider looks to capitalise on customisation as sales linked to its flagship strategy have exceeded US$125m since mid-July.

Following MerQube's recent completion of a US$5m Series A funding round led by J.P. Morgan to drive its international expansion and accelerate platform development, SRP spoke to CEO Vinit Srivastava (pictured) about being backed by market players, the importance of technology to respond to market needs and deliver a differentiated value.

The index provider licensed its MerQube US Tech+ Vol Advantage Index to the US investment bank in mid-July which has since then been deployed across 79 structures worth US$129.15m.

"Getting the support of J.P. Morgan in this equity round is a validation of the fact that we are on the right track, and that some of the trends we identified are playing out," says Srivastava.

"The backing from one of the biggest banks in the world and a key player in the structured products market will help us execute our mission and expand our reach."

As it builds its platform, the startup independent index provider has started to get traction from clients that believe in the firm's vision. This includes J.P. Morgan, and several other financial market professionals and prominent investors such as venture investing firm ThirdStream Partners, and Benjamin Smith and Sheehan Maduraperuma, the co-founders of hedge fund Laurion Capital Management.

The recent investment round will help accelerate the growth of the business both in terms of size and scale with the support of the market.

"It is a broad spectrum of investors and we want to bring others as we grow and become a utility for the industry," says Srivastava. "There are certain gaps that index providers traditionally have not addressed. And a lot of them has to do with the technology, but also with respect to product development.

There is prospect for growth in the indexing space as it transitions from the market cap one-size-fits-all approach to a more customised set up."

Technology has become a 'must have' for every player in the industry. Is this the case in the indexing space?

This was part of our vision when we started the company. Indexing is evolving, there was indexing 1.0 and we are moving to the 2.0 era which we have moved in over the last five years. This is what is consequential about this era is that it involves increased customisation.

Investing is getting more complex and platforms/systems along everything that went with indexing must adapt to that new world to build these strategies and deploy them quickly at scale. This can only be achieved with tech and so that is where our biggest talent lies. We understand the indexing business and we have been in this business for a long time.

How is MerQube leveraging technology to have an edge in a market dominated by traditional index providers?

We are bringing Silicon Valley to the indexing space, which is mainly still using platforms and technology that were pretty much designed back in the early 2000s. We see a clear need for an offering that marries the broad technology of today to the world of indexing. We can also talk to clients in their language and the back end is being designed by people who really understand tech and indices. So, the platform that we have today is completely cloud native and we are doing real time intraday customised strategies.

That cloud-based infrastructure means we can build solutions that are easily scalable and adaptable because they are created with an approach that can be thought of as building blocks rather than the monolithic legacy systems. We are using an innovative blockchain based approach to maintain audit trail which gives us a robust way to track all the data, methodologies etc that went to a specific index value.

If index levels get restated, we can easily pinpoint the cause. It is a big leap from where traditional providers are today and disruption is what the industry really needed because strategies have moved from active to passive, whether it was risk premia, whether it was vol etc. Banks have typically built them out for these strategies, but the institutional clients were having trouble because now they could not do any third-party indices, where they can use third-party index providers. So that is what we are bringing to the market and now we have clients like J.P. Morgan, Citi and Barclays, and that is a testament to the fact that we have a good product.

One of the things that we have done as part of MerQube is focus on compliance because we built the platform from the ground up and we were able to take care of compliance and auditing needs within the platform. That is one of the big advantages of building something today versus something that you built 10 years ago, and you are trying to basically build on top of it.

What would you say are the main challenges that you face as a new entrant to the market? Do you think that eventually there will be consolidation?

The challenges for the sector include the topic of data, which is a challenge for everybody when you consider the costs of data and other things. The second one is that people usually gravitate towards the bigger players because there is a brand name associated with it.

The question which always comes to mind: is can you sustain yourself and can this business get to the point where it is self-sustaining? Once big players are working with you then the others will begin to follow suit.

Anytime you build something interesting, there is always interests from the big players because everybody is more open to acquisitions now than they were before. In terms of what we want to do and how we want to do it, the structure where you have investment coming in from the market participants works very well.

Almost no index provider can do what we are able to do, and we provide a differentiated value. So, it is nice to have the strategic options that success creates but we see ourselves fully exploring our opportunity and growing as an independent entity.

How would you describe MerQube's business model? Are you looking to provide calculating services to investment banks and asset managers developing new indices?

We own the IP, and we licence it to clients. Anything we build always is done in collaboration with the market because we want to see the end product of an operational index, not just create a theoretical index, so that model is there. However, we also recognise the fact that there is a lot of IP out there and black and white solutions do not work. We have a full-fledged platform where you can design and run indices.

There has been a trend in the last five to 10 years, and it started both with banks and asset managers having a big mutual fund franchise and they all had a lot of proprietary IP. None of them wanted to seek another provider and just give their IP up but they wanted a structure where somebody could offer those products to clients and keep a distant relationship. This is because the regulators come in and they must ensure that enough controls are in place between the indexing group and the investment group.

From a product development perspective, in what areas do you think you can differentiate and add value to the market?

Our areas where we really excel are multi asset options-based strategies, derivative based strategies, things that are extremely complex, things that require intraday assessments, intraday assessments of intraday trading. That is where we really shine and where our products and services are maybe a few notches above competition. But at the same time, we do the full suite of global equities, baskets, stock baskets, thematic strategies etc.

We now run a managed futures strategy across all commodities with very complex rules and we calculate that per client. Futures based strategies are one of our biggest trends which include commodities rates, FX, any FX forwards etc. We do those very well, largely because of our ability to use the platform to code very quickly.

Traditional index providers are already developing new cryptocurrency and digital assets indices. Is this an area of interest for MerQube?

I think there are some challenges concerning this and crypto is a unique concept, so when you look at the space and what is going on, there is infrastructure, the whole De-Fi space etc. Then there is the actual cryptocurrency, and people want exposure to that. The difference is that among the 10 exchanges that trade the same contract, there is no interoperability between them. So that is what the futures come in where you can basically settle on that number, and it becomes very easy for people to get exposure. Otherwise, what you're doing is getting access through a Bitcoin trust, for example, where the asset manager is giving exposure through their trading on different exchanges or they work with market makers, and there is always a disparity with the spot price.

Yewno: we want to change how thematic strategies are created

The firm leverages its Yewno Edge platform not only to offer the numbers behind a 'wise investment,' but to provide the context behind those numbers, which is critical when tracking investment themes.

> **The engine ingests millions of sources of verified information**

US data provider Yewno is promoting its artificial intelligence (AI)-driven investment research platform Yewno Edge among sell- and buy-side providers, on the basis that big data can help to find better solutions and create thematic investment strategies designed to capitalise on broad economic and social trends.

SRP spoke to chief executive Roberto Lazzarotto (pictured) to discuss the benefits of AI to create new strategies and power existing thematic investments, which can expand the scope and leverage the role of structured products in investment portfolios.

The essence of Yewno Edge is the firm's proprietary data framework known as the Knowledge Graph – a technology that crunches millions of verified data sources to identify trends and provide actionable insights.

The engine ingests millions of sources of verified information - patterns, filing court rulings, millions of data points from all sorts of sources and applies computational linguistics, deep neutral network graph theories - which weights all the information and induces a knowledge graph. This is a sort of magma of results where every node in the graph is effectively a concept, according to Lazzarotto.

Yewno Edge is a solution that will change the way thematic strategies are created but also and probably more importantly it is a solution that will change the interaction that banks can have with their clients.

"It is used by product developers and sales. It shortens the sales cycle and increases the likelihood of business win," says Lazzarotto.

At heart the engine is a thematic engine because every search is contextualised and the connections that are made, the inferences that are created are relevant to each specific concept – the inference engine analyses all those nodes, all those objects and concepts in the graph and determines the relation that exists among them.

"Thanks to this entire process, you can create an (investment) investable strategy with securities that you would not have imagined are connected to a specific concept," says Lazzarotto.

"That not only broadens the market view and the investment universe, but it also gives you a lead head towards the market cycle and allows you to identify trends and themes that are not as obvious if you go via the traditional standard process of looking at the revenues of the company, and all the variables traditional financial analysts look for."

According to Lazzarotto, five years ago, when cryptocurrency discussions were emerging, all we knew about Bitcoin was that it was a type of cryptocurrency but not much about what goes along with it.

"If you enquire our knowledge graph the engine will look at it as a concept and will deliver 'semantic analysis' of the entire value or value chain, the process of creation, etc," he says.

"This is very important because that semantic connection will allow you to identify Nvidia as a security within the Bitcoin universe – which will benefit from the growth of the crypto market because coins and tokens require graphics processing units [GPU] to operate. The knowledge graph would have highlighted the connection between Bitcoin and Nvidia and help you to determine if a Nvidia or a security connected to it would fit within your investment strategy."

Lazzarotto notes that proxies are not an alternative but a viable way to maximise exposure and capture a theme for investors.

"You don't need to be investing in BTC to have exposure to cryptos, but you could be invested in Nvidia and therefore, somehow you are invested in BTC," he says. "Inferred connections are the way to optimize your exposure to a particular theme or concept and capture the essence of it at an early stage of the investment cycle."

The Knowledge Graph continuously updates itself in terms of the information it uses to run and evolves in real time providing granularity and expanding the scope and the ecosystem of the investment strategy.

"The applications in the structured products market are multiple," he says. "When you deploy Yewno Edge you can then analyse effectively the amount of exposure to a specific concept that you search – this analysis is enhanced by proprietary artificial intelligence and machine learning algorithms that can read fragmented data and in a matter of seconds it opens up an entire investment universe for you to customise your exposure."

Lazzarotto points at a recent conversation with an ETF issuer seeking to provide a solution for a client interested in uranium.

"When we enquired the Knowledge Graph for Uranium, we got a list of 1000 securities that would fit in many investor portfolios and would certainly be suitable to be delivered via structured products," he says.

"You can add a layer of active management with the click of a button, rebalancing your strategy as often as wished and broaden an investment universe that is no longer constrained by standard data based on traditional sector classification which at the very least would result in an extremely concentrated portfolio."

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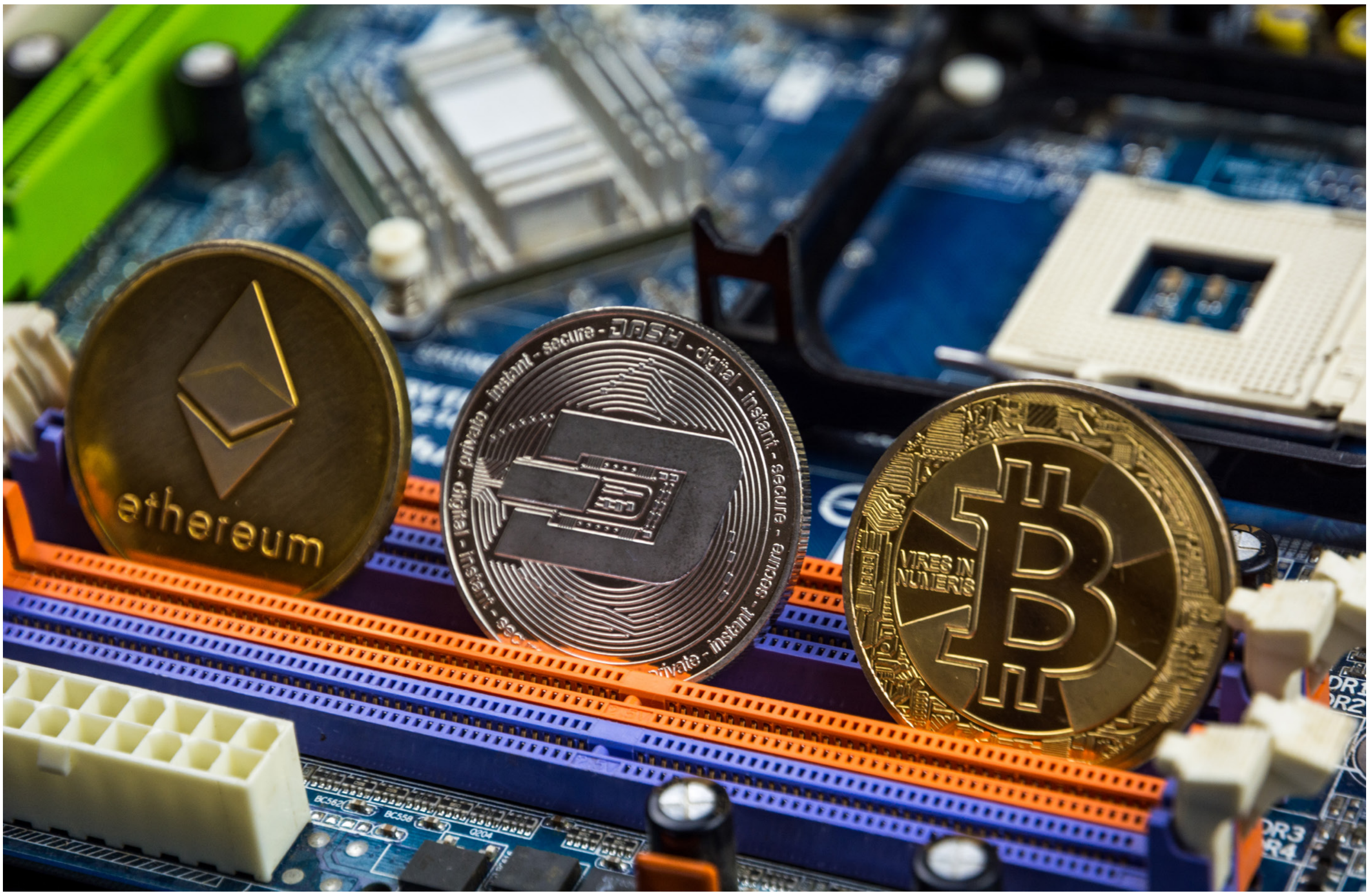
The applications in the structured products market are multiple

Crypto News

Leonteq launches tracker on Cosmos; new crypto ETNs from Van Eck, Bitpanda; and more



Leonteq trackers on Cosmos - tradable on SIX Swiss Exchange

Cosmos is a decentralised network of independent blockchains which instead of connecting each blockchain with others individually (connections would grow exponentially with an increasing number of blockchains), runs a modular architecture with two classes of blockchain, known as 'Hubs' and 'Zones'.

Zones are regular blockchains built by users for specific use cases and Hubs are designed to connect Zones together. When a Zone creates a connection with a Hub, it can automatically access (ie. send to and receive from) every other Zone that is connected to it. Therefore, each Zone only needs to establish a limited number of connections with a restricted set of Hubs.

The first Hub launched in the Cosmos network is the Cosmos Hub. The Cosmos network is underpinned by the Atom token and is used to both secure the network through staking and vote on governance decisions. Cosmos advertises itself as the internet of blockchains, a network of blockchains able to communicate with each other in a decentralised way.

Leonteq added last week three new crypto assets to its tracker offering including Avalanche, Dogecoin and Polygon which are ranked among the top-15 crypto assets in terms of market capitalisation. The Swiss firm has one of the largest ranges of crypto products with a total of 25 crypto assets, including Bitcoin, Cardano, Ethereum, Cosmos and Solana.

TP ICAP, Goldman partner to trade first crypto asset equity instruments

Market infrastructure provider TP ICAP has announced 'a major milestone' in its digital assets business with the first trades completed on crypto asset equity instruments with Goldman Sachs. The company's digital assets business traded the ETC Group Physical Bitcoin (Bloomberg Ticker BTCE GY) on an outright basis and against the CME Bitcoin Future in the form of an exchange for physical exchange for physical. Crypto exchange-trade product (ETP) market makers DRW, Flow Traders and Jane Street provided liquidity.

TP ICAP is actively providing liquidity to its clients across the CME Bitcoin and Ether Futures and Bitcoin Options and is expanding its product offering alongside partners such as Goldman Sachs.

The approval of the first US Bitcoin futures-based exchange-traded funds (ETF) last year has triggered a significant increase in CME Bitcoin Futures volumes. TP ICAP expects to see continued interest across crypto asset- based futures and options products and an interbank non-deliverable forward (NDF) market develop on Bitcoin, and potentially Ether, throughout the course of 2022.

TP ICAP's Digital Assets business was launched in 2019 and is led by Duncan Trenholme and Simon Forster.

Worlds' first Terra crypto ETP launches on SIX

Cryptocurrency ETP issuer 21Shares has listed the world's first crypto ETP on the Terra blockchain in CHF, EUR, and USD on SIX Swiss Exchange.

Terra (ISIN: CH1145931015, Ticker: LUNA) is the second-largest blockchain ecosystem after Ethereum, with US$18.8bn in total value locked (TVL), a key metric to describe the number of assets being staked in a blockchain protocol.

The new Terra ETP is targeted at investors looking to gain access to an alternative ecosystem that is not based on the Ethereum Virtual Machine (EVM). The Terra ecosystem includes Decentralized Finance (DeFi) infrastructure, financial tools applications and NFT solutions. The most important innovation in the ecosystem is its DeFi solution Anchor – this protocol is expected to generate attractive yields for investors with borrowing and lending solutions.

The underlying Terra blockchain technology allows up to 10,000 transactions per second (TPS) and with a transaction time of two seconds at a very low cost. In contrast, Ethereum processes 15-30 transactions with a transaction time of over one minute.

21Shares manages more than US$2 billion in 22 cryptocurrency ETPs and 83 listings, including several exclusive ETPs tracking Binance, four crypto index baskets and two ETPs with investor staking rewards (Tezos and Solana). Its products are listed on ten regulated European and Swiss trading exchanges.

Crypto certificates most traded products in 2021 on Frankfurt Exchange

Certificates on cryptocurrencies were once again the most popular products in 2021 with a trading volume of more than €1 billion on the Frankfurt Certificate Exchange. Overall, the trading volume last year was €18.4 billion which is down by 12% compared to 2020.

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> **The new Terra ETP is targeted at investors looking to gain access to an alternative ecosystem**

While the total number of trading orders in structured products decreased slightly from 3.9 million to 3.4 million compared to the previous year, the average order size remained at a stable level of €5,438 (2020: €5,450).

With over 900 products on a total of 29 crypto underlyings, the German exchange offers the largest range of crypto products in the certificate sector in Germany enabling investors to trade cryptocurrencies 'quickly and easily via their own securities account,' said Florian Claus, board member of Börse Frankfurt Zertifikate.

Since 1 July 2021, the exchange has waived the calculation of value-added tax on the transaction fees paid by trading participants at the Frankfurt warrants-exchange which equates to 19% saving on the trading of around 1.4 million investment and leverage products in Frankfurt compared to other trading venues.

Cryptos: Structured products are coming to Solana, Exotic Market raises US$5m

DeFi protocol Exotic Markets has raised US$5 million in funding from several top crypto venture capital (VC) firms and investors in its latest funding round.

The DeFi protocol aimed at bringing wealth management products and services into the DeFi space also announced that its private token sale round continued to draw attraction from the wider crypto industry as the 'demand for structured products swells'.

Lead investors in Exotic Markets' US$5m private token sale include Multicoin and Ascensive Assets - the round also included investments from Alameda Research, Animoca Brands, Morningstar Ventures, Solana Capital TPS, and others.

'Solana's rapidly rising adoption on the back of its high scalability, efficiency, and low fees make it the ideal blockchain for DeFi products, products, and services,' said Oliver Blakey, managing partner at Ascensive Assets. 'Structured products will open up opportunities for investors to generate yield denominated in stablecoin rather than governance tokens. We view this as a very healthy evolution of the DeFi space.'

Exotic Markets is seeking to introduce a wider range of 'sophisticated, and innovative' structured products in the Solana DeFi ecosystem including single product offerings, including digitals, path-dependent products, and other instruments based on the performance of baskets of tokens.

DeFi Technologies partners with SEBA Bank

DeFi Technologies, a technology company bridging the gap between traditional capital markets and decentralised finance, has entered into a commercial agreement to establish a preferred partnership relationship with Switzerland's SEBA Bank.

The agreement will give DeFi Technologies, along with its 100% owned subsidiary Valour Inc., another competitive edge in this nascent space, and outlines a framework for DeFi Technologies to become a preferred provider of staking services, client referrals, market making and liquidity to SEBA, and SEBA to become a preferred provider of custody services to DeFi Technologies.

Under the preferred partnership agreement both firm's will

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Structured products will open opportunities to generate yield denominated in stablecoin rather than governance tokens

cooperate with respect to asset and investment management including exchange traded products (ETP) issuance, mining services, tokenization, digital capital markets and institutional research.

SEBA Bank rolled out a cross asset platform for crypto AMCs in early December 2021. Seba bank was launched as a fully licensed Swiss digital bank in 2019 to bridge the traditional banking world and the new crypto/digital world, offering a wide range of services in the areas of asset management, trading, custody and financing. The bank has brought to market several indices and structured certificates including certificate linked to the SEBA Crypto Asset Select Index and the first dual currency certificate on BTC/USD that sells put options on BTC/USD.

Van Eck launches two new crypto ETNs

Van Eck has expanded its crypto offering with two new exchange-traded notes (ETNs) on crypto platforms Avalanche and Polygon.

The Van Eck Vectors Avalanche ETN is a fully collateralized ETN that invests in Avax. The note seeks to replicate the value and yield performance of the MVIS Crypto Compare Avalanche VWAP Close Index. It offers direct exposure to the tokens underpinning the smart contract Avalanche platform.

The VanEck Vectors Polygon ETN, which is also fully collateralized, invests in Matic. It seeks to replicate the value and yield performance of the MVIS Crypto Compare Polygon VWAP Close Index. The note offers exposure to Polygon, a ‘layer 2’ blockchain, which uses software development kit to attract developers looking to build Ethereum-compatible decentralised applications more cost efficiently.

Bot ETNs are tradeable like exchange-traded funds on regular exchanges.

Bitpanda debuts Bitcoin ETN on German exchanges

Austrian trading platform Bitpanda has rolled out its first exchange-traded cryptocurrency note (ETN) tracking the price of bitcoin.

The Bitpanda Bitcoin ETC (YBTC) is listed on Deutsche Boerse and Frankfurt Boerse with a total expense ratio (TER) of two percent. YBTC is fully collateralised and midway cleared.

Dispatched in 2014 as a bitcoin trade, it is the first crypto ETC presented from Bitpanda as it hopes to

Bitpanda, which has a valuation of $4.1 billion, said the Bitpanda Bitcoin ETN is the first of many more as it intends to add more crypto ETNs in 2022 and expand its business beyond retail exchanging.

‘Giving a totally EU-based bitcoin ETC with euro as the base cash, we can offer openness to an elective resource class that we feel is ready for a promising circumstance in the current market climate,’ said Eric Demuth, CEO of Bitpanda.

The product is targeted at investors seeking to enhance their portfolios and gain exposure to new crypto assets.

With the launch of the Bitpanda Bitcoin ETC, Deutsche Boerse now has 36 crypto ETNs available for trading with a month to month request book turnover of around €1bn. Bitpanda’s platform also offers trading in commodities, securities, and ETFs using a mobile app.

Sygnum rolls out DeFi investment strategy via AMC

Switzerland’s Sygnum Bank has launched a decentralised finance (DeFi) structured investment product called DeFi+ Core which provides diversified exposure to the DeFi space.

The new product was issued through Sygnum’s structured product issuance solution and provides exposure to the most established DeFi protocols using a rules-based approach.

The DeFi+ core strategy has been deployed via an actively managed certificate (AMC), investing in up to ten of the most established DeFi protocols, across a range of use cases such as lending and decentralised exchanges. Tokens are selected and weighted according to a set of quantitative investment criteria such as market capitalisation, traded volumes, ecosystem growth, and risk scores of the smart contract codes. Actively managed certificates (AMCs) are one of the most innovative, flexible, and cost-efficient investment vehicles available.

Sygnum plans to launch other DeFi related strategies, including one focused on yield generation. This will provide clients with more options to easily invest and participate in the growth of the DeFi space megatrend, which already has more than USD 250 billion total value locked (TVL) within its ecosystem.

The product is available to professional and institutional investors through Sygnum or other banks, with minimum investment size of US$10,000.

Hedging structured products: the role of equity pricing models

Equity linked products remain dominant in most structured products markets around the world. *By Tim Mortimer*

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This is because equities are considered to be the natural long-term asset class for growth. Equity markets, through indices and headline stocks are well known to all investors. In some markets, credit, FX and fixed income have a strong niche following due to market conditions or local preferences, but equities are in general the asset class of choice.

Equity derivatives (calls, puts, complex or exotic options and their combinations) are the building blocks that investment banks use to create an equity-linked structured product.

The simplest products will only need one derivative component. Examples include participation products which consists of a zero coupon bond (capital payment) and a long position in a call option on the underlying to provide growth. A reverse convertible is made up of a zero-coupon bond, an income stream of coupons plus a short position of a put option on the underlying. For the investor this put option translates to capital at risk.

More complex products can combine several options. For example, a dual directional has multiple call and put options. Another common mechanism is to add a barrier or averaging feature.

Further up the complexity scale from a pricing perspective are products such as autocalls because they cannot be easily decomposed into simpler options and those involving multiple underlyings such as a worst-of.

A product may be simple in terms of option construction but still present significant trading or hedging problems. The most common example of this is a hard to hedge underlying such as a custom index or illiquid stock or a very long dated product which would cause challenges for even the most widely traded underlyings such as mainstream benchmark indices.

A reliable suite of equity pricing models is necessary for any trading desk, valuation provider or end user of structured products such as an asset manager or hedge fund. These models are most important to help price complex options which will include elements of path dependency, multiple assets and complex payoff formulae.

Building pricing curves is a crucial first step to choosing and using a pricing model. The main elements of equity pricing curves are interest rates, dividend yields, volatility curves and correlations.

Interest rates and dividend yields present the fewest challenges although marking dividend yields will often be at levels different to economic forecasts because of demand for long delta (bullish) products.

Curves can be created from analysing option prices. This will be from a combination of exchange traded options for the most

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A reliable suite of equity pricing models is necessary for any trading desk

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> # A constant volatility model is useful for testing purposes

common underlyings such as indices and stocks augmented by broker markets and direct inter-bank trading. These options and the pricing information from them form the foundation of derivatives and structured product markets.

MODEL IMPLEMENTATION

Any choice of model needs to be calibrated back to these prices so that if they were used to price these options, they would get the same answer. If not, arbitrage violations would occur which would lead to mispricing or potential hedging losses.

An equity model implementation requires two choices to be made. Firstly, a volatility treatment must be selected. The three most common modelling approaches are constant volatility, local volatility and stochastic volatility. The second choice governs modelling the underlying and performing the payoff calculation. The two main candidates here are tree methods (also known as lattices) and Monte Carlo simulations.

Constant volatility models are very simple to set up and work well with both trees and Monte Carlo. This model is equivalent extending the Black Scholes method to cover a wider set of payoffs. The approach has seen a growth in usage in recent years outside market pricing to satisfy regulatory testing such as FCA stress testing, Priips and economic scenario generation.

A constant volatility model is useful for testing purposes or to provide approximate values but is almost useless for pricing and risk management. The main reason for this is the presence of volatility skew and smile in equities markets. Skew is caused by the presence of relatively higher prices (and therefore volatilities) at lower strikes compared to at the money. It exists because of the demand for lower strike options to buy crash protection. Smile refers to higher volatilities on the upside too, it is less common and tends to only be seen for higher volatility stocks. Smile is also common in FX markets because of the natural symmetry of the two ways of defining a currency pair.

Since these low-strike options form an important part of the hedging strategy a credible model framework needs to match their pricing and a constant volatility model will not be able to do that.

The importance of capturing skew effects has stimulated much academic debate over the years, and it has given rise to more sophisticated models.

Local volatility was the first of these and its core purpose is to replicate any volatility by strike and maturity. The local volatility approach requires a mathematically complex methodology to calculate the entire volatility surface. It takes what can be thought of as a look up approach at a given time point and underlying level and fits immediately into a Monte Carlo or tree calculation. Of the two approaches, the binomial (or trinomial) tree is the simpler method but is somewhat limited in its application. It is best suited for single asset European, callable and auto-allable products and it can also deal with American barriers. The Monte Carlo method is more flexible and is also much better suited to multi asset products. Monte Carlo has long become the more popular choice especially since increased computing power has long eliminated disadvantages of speed of calculation.

Our survey of equity models is completed by considering the stochastic volatility model. The local volatility model is popular because it does not require any further parameters other than the volatility surface. However, it is a static model and has serious limitations when calculating hedge ratios and dealing with products dependent on forward volatilities such as cliquets.

The stochastic volatility model introduces an extra degree of freedom to model the volatility process directly and this gives a better treatment in the areas in which the local volatility model suffers. It comes at a cost of extra parameters that need to be fitted and a certain extra complexity in modelling.

Both local and stochastic volatility models try to replicate the volatilities observed at different strikes and maturities by adjusting the volatility dynamic within the model itself. This is logical and generally successful however for some underlying assets such as mainstream indices the skew effect can be very pronounced, and it is necessary to fix parameters at unrealistic levels to fit to the volatility surface. Volatility skew comes about primarily because of supply and demand and not future volatility expectations but as a practical approach nothing better has been proposed.

Equity products remain popular and therefore their pricing and risk management is very important. In order to price, hedge and analyse them accurate data and a flexible modelling approach is required using a combination of models to cope with the challenges this asset class presents.

Expert view:
Citi on managing autocall risk

The risk on autocallables may change very differently than the risk on hedges as the market moves.

As we continue our coverage of the push towards custom underlyings, such as decrement, to manage the autocallable risk on issuers' trading books, SRP spoke to Francesco Taglietti, head of equity derivatives data & risk analytics at Citi, who has worked on the development of decrement indices since the very start of this index methodology.

Autocallable notes have become increasingly popular with retail investors to generate yield by taking the view that the equity underlier will not decrease by more than a set percentage buffer. These products are even more relevant in an environment of persistently low interest rates.

The global market for autocallables has grown from US$102 billion in 2015 to US$307 billion in 2021 year-to-date, with growth across all the regions covered by SRP's database.

"While the payoff of these products is simple for investors to understand, they embed exotic derivatives that pose non-trivial risk management challenges to the banks that sell them," says Tagilatti.

In order to address these risk management concerns, banks have developed the decrement index technology which has seen explosive growth over the past few years.

Taking the French market as an example, while in 2015 only 15% of autocallables were linked to decrement indices (13% of the sales volumes), in 2021 year-to-date around 45% of autocallables are now linked to these.

How do decrement indices help with autocallable issuance from a risk management point of view?

Autocallables are path-dependent derivatives that cannot be perfectly replicated in the market. Vanilla options can provide first-order hedges, however banks may have similar exposures (i.e. in the same direction) to the more exotic dynamics coming from those products, making it difficult to find hedges for those exposures. Addressing those challenges is one of the reasons the industry is continually pushing for innovation.

Let's take a hypothetical example that is relevant to the topic of decrement indices: a bank would typically get long dividend risk from selling autocallables, and a first-order hedge could be to trade linear instruments providing the opposite exposure. However, the risk on the autocallables may change very differently than the risk on those hedges, as the market moves.

What are the scenarios an issuer of autocallables should be concerned about? Can you explain what happened in 2020 to the live autocallable structures on the books of product manufacturers?

Autocallables present the peculiar feature that as the market drops, their dividend sensitivity increases. That's due to the trade becoming less likely to get autocalled: it becomes more similar to a put option, and both its delta and its expected maturity increase.

Say an autocallable portfolio has a current exposure of US$+10m per 10% change in the Eurostoxx50 dividends, and this is hedged with US$-10m from dividend futures. In this hypothetical example, the dividend risk appears to be zero.

Let's analyse what would happen in the hypothetical scenario where the market moves like it did in March 2020: at the time, the Eurostoxx50 dropped by 37% over a month. As a result, the dividend risk of the autocallables might triple to US$+30m, with the risk on the hedge unchanged. Such a portfolio might then have a net dividend exposure of US$+20m per 10% move. On top of that, this increased exposure will be materially concentrated on longer-dated (and less liquid) tenors, because of the expected maturity extension of the autocallables.

The dividends also dropped over the same period: eg December 22 dividends by -43%. These moves could theoretically result in losses of over US$80m, despite an initial headline exposure of zero risk. In practice, dynamic hedging and a more realistic dividend risk model could mitigate some of that impact.

Risk per 10% Dividend Move		
	Initial	EuroStoxx50 moves by -37%
AUTOCALL	+10,000,000	+30,000,000
DIV FUTURES	-10,000,000	-10,000,000
TOTAL	0	+20,000,000

How have banks traditionally managed this risk, and why is the decrement technology making such a difference?

One way to mitigate this risk is to model dividends as dependent on the level of the underlying index or stock. For example, one could estimate the beta of the EuroStoxx50 dividend futures to the EuroStoxx50 index spot, and run Greeks and scenarios assuming that dividends move according to that beta. While that's a reasonable approach, that historical relationship broke down in 2020 (see chart below), as several companies cut dividends for the year - including pre-announced dividends - in response to the pandemic and to central banks requests.

The other approach to this problem is building new classes of indices, the decrement indices, where this risk is removed by construction: they are effectively total return indices, where the pricing benefit of the dividends is replaced by an overlay that marks down the index based on a predefined set of rules.

Can you explain more in detail how that works?

Technically, a decrement index is calculated from the total return of the underlying minus a fixed fee representing the synthetic, fixed dividend yield.

$$Decrement\ Index(t) = Decrement\ Index(t-1) \cdot \left(\frac{EuroStoxx\ TR(t)}{EuroStoxxTR(t-1)} - d * DCF(t-1,t)\right)$$

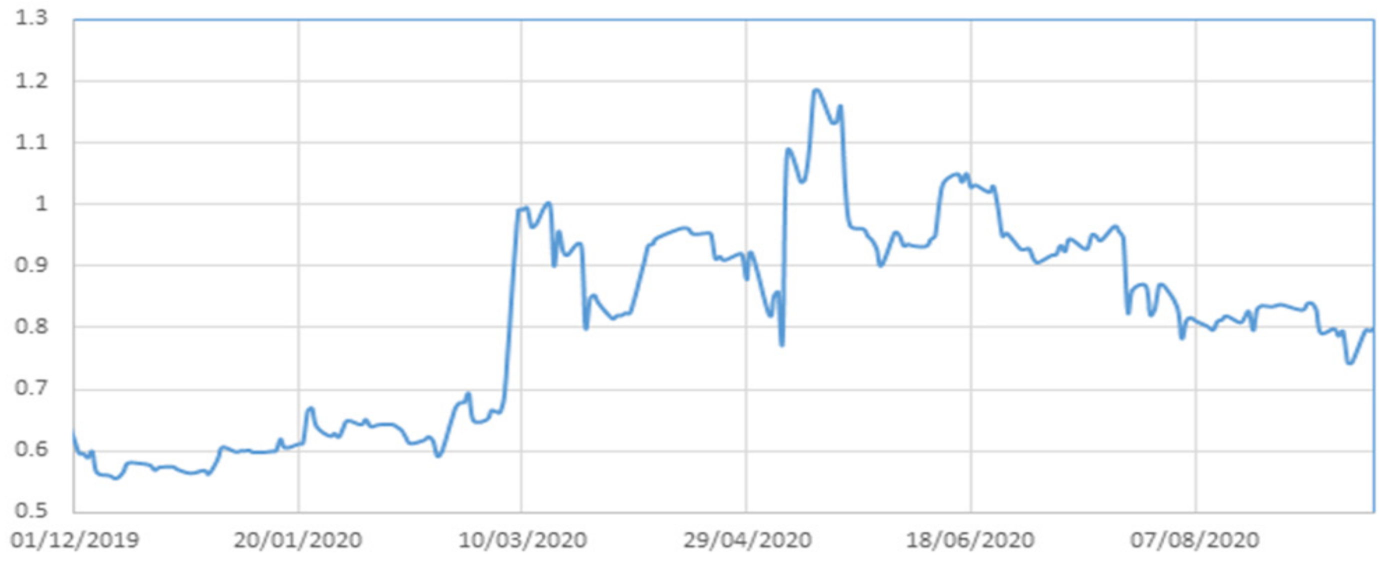
In its simplest form, a Eurostoxx50 decrement index with an annual dividend yield d could be constructed as:

Decrement Index(t)=Decrement Index(t-1)·((EuroStoxx TR(t))/(EuroStoxxTR(t-1))-d*DCF(t-1,t))

EuroStoxx TR is the level of a total return EuroStoxx50 index and DCF is the day count fraction between two index calculation days.

Essentially, decrement indices replace the dividends with a fixed value (in points or in percentage) that is set in advance.

Rolling beta of Eurostoxx 50 dividends to spot



Source: Citi

Expert view (Part 2): Rolling futures rather than spot prices to address repo risk

Decrement indices have helped mitigate the exposure to dividend risks, while providing competitive terms and potentially lower replication costs.

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In the second part of the interview with Francesco Taglietti head of equity derivatives data & risk analytics at Citi, we looked at the benefits of removing any direct exposure to the dividends, and reducing the risks that banks need to manage. In the second part, we analyse how investors can benefit from synthetic dividend underlyings and what comes after decrement.

“When buying autocallables, investors are implicitly selling future dividends at the current market levels,” says Taglietti. “Historically, these have under-estimated the actual dividends paid out by companies in the Eurostoxx50 most of the time - 2020 was the most notable exception.”

Removing the exposure to dividends means investors do not suffer from this dislocation, potentially leading to more favourable returns, for example in the former of higher coupons.

“Additionally, since banks do not get any material market exposure to dividends from these products, their hedging costs are lower than for traditional autocallables. This is a win-win, as the decrease in costs can be passed on to investors as a pricing benefit,” says Taglietti.

Finally, this framework allows investors to customise the level of synthetic dividend yield they are comfortable with: a greater yield implies higher potential returns, and higher risks.

What new developments do you expect around decrement underlyings?

Decrement indices have helped mitigate the exposure to dividend risks, while providing competitive terms and potentially lower replication costs. Citi has extended this concept and applied a similar mechanism to single stocks, resulting in the single stock decrement indices, which provide similar benefits to dealers and investors.

The other risk exposure, equivalent in nature, is the equity repo or borrow. This represents the cost (or benefit) of getting synthetic forward exposure to a stock or index. Although it might be a less visible parameter, its risk dynamics are equivalent to what dealers experience on dividends. One way this risk could be removed is by using indices linked to rolling futures rather than spot prices. These could provide material price efficiency gains - similarly to what decrement indices do for dividends. They have yet to gain popularity in the structured products market: that may change, as these indices evolve and investors become more sophisticated.

Another broad area is the mitigation of volatility and correlation risks. New products and solutions are being explored in the street, but no real trend has emerged yet.

Earlier in 2021, Qontigo, in collaboration with Citi, launched the iStoxx Single Stock Decrement Indices. Are there any considerations around the use of decrement structures for single-stock products as some have pointed out that the use of decrement products on single-stocks can inflate other risks for banks such as on equity repo and volatility. What is your view on this?

I see this as a natural evolution of the decrement index mechanism that is already used for benchmark indices, requiring the additional step of first constructing total return single stocks indices.

It is worth that extra effort, as the benefits can be even more significant than for standard indices: single stocks dividends tend to be less liquid than index dividends, and the reduction in hedging costs can have a larger pricing impact. Similarly, the dislocations between implied and realised dividends may be material on stocks that are popular autocallable underliers, and using decrement indices removes the potentially negative impact of this effect.

Finally, and related to the points above, it is more difficult to dynamically hedge the dividend risk on single stocks, especially during periods of market stress. This should result in an additional reduction of expected hedging costs, which could be passed on to investors.

I touched upon the equity repo earlier, but to answer the question on the other risks, it is true that using decrement indices poses some additional challenges: there is no liquid market for total return options on single stocks, and so to some extent the uncertainty around dividend modelling is transferred to the calibration of implied volatilities. The use of fixed points decrement mechanisms also has other volatility risk implications. This is something that the main market participants are well aware of, and on balance I believe using single stock decrement indices can reduce the risks of autocallable portfolios.

Product wrap: German bank's embrace MSCI SRI indices

In this month's wrap, we look at a selection of structured products with strike dates between 12 September and 16 October 2021.

EUROPE

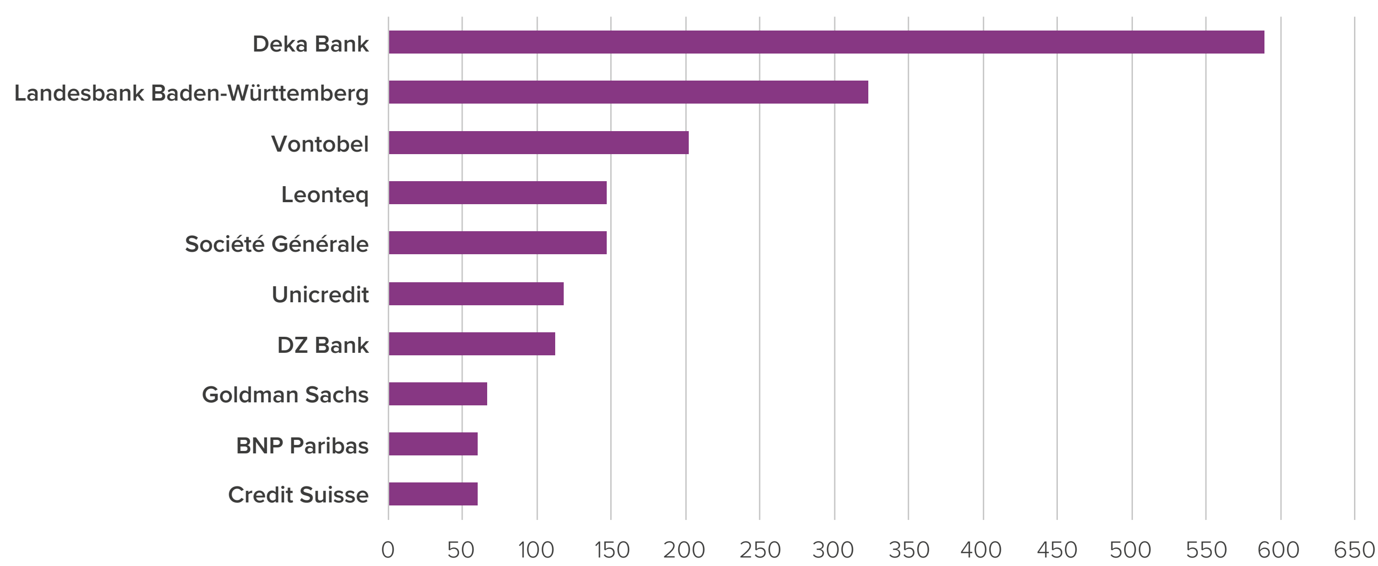
Citigroup Global Markets issued Engie Degressif 2021 in France. The autocall has a tenor of maximum 12 years and is accessible via a life-insurance contract. It is linked to the iStoxx Engi GR Decrement 0.71 Price EUR Index, which replicates the performance of the Engi FP Single Stock Gross Return Index assuming a constant dividend markdown of 0.71 index points subtracted on an accrued basis. The product is subject to quarterly early redemption. At maturity, if the index has not fallen below 78% of its starting level, the capital return is equal to 256%. Capital is preserved providing the index has not fallen below 40% of its starting level on 22 December 2033. The product is listed in Luxembourg. Priips Summary Risk Indicator (SRI): seven out of seven

Danske Bank launched Indeksiobligaatio Puhtaampi Eurooppa 3 in Finland. The five-year, capital protected note offers 120% participation in the rise of the Eurostoxx 50 Low Carbon EUR Price Index, capped at 40%. The final index level is calculated as the average of monthly readings during the last year of the investment. The product is issued at 113% of the nominal value. It is listed at Euronext Dublin. Priips SRI: two out of seven.

Deutsche Bank collected NOK35.5m (US$3.9m) with Digital Coupon Autocallable NOK 2028 in Belgium. The seven-year MTN is 100% capital protected and linked to the Eurostoxx 50. It offers a fixed annual coupon of 3.30% if the index is at or above its initial level on the valuation date. From the third year onwards, the product will be redeemed early, if, on any of the annual observation dates, the sum of the coupons is equal to the 9.90% target. The product is issued via Société Générale and listed on the Luxembourg Stock Exchange. The issue price of 102% includes a structuring fee and distribution fee of up to 2.25% and 3.75%, respectively. Priips SRI: two out of seven.

Sparkasse Darmstadt distributed Express-Zertifikat Relax 03/2028 in Germany. The 6.2-year investment is issued on the paper of Dekabank and linked to the MSCI World Climate Change ESG Select 4.5% Decrement Index. It has a step-

Europe: top 10 issuer group by issuance - 14 Nov 2021 to 15 Jan 2022*



*Excluding flow- and leverage products

Source: StructuredRetailProducts.com

down autocall barrier that starts at 100% for the first year and subsequently decreases by five percent per year. The barrier for capital protection is set at 65%. The product is not listed. A one-off entrance fee of 5.12% applies. Priips SRI: four out of seven.

BCP introduced the BNP Paribas World Climate Care RC8 AR EUR Index in Ireland. The index is composed of a global equity index and euro bond futures. It is seen for the first time on the SRP database and is used as the underlying for the asset manager's Enhanced Equity Bond 5, which is available in two options: Growth (90% capital protection and 100% capped participation) and Growth Plus (85% capital protection and 200% capped participation). Both options are subject to six months averaging. Capital protection at maturity is provided via BNP Paribas Issuance BV and guaranteed by BNP Paribas. The product sold a combined €3.4m and is listed on the Luxembourg Stock Exchange. Priips SRI: two out of seven.

NORTH AMERICA

National Bank of Canada issued Autocallable Note Global Gold Mining Sector Class F in Canada. The product, which has a maturity of up to five-years, is linked to the Van Eck Vectors Gold Miners ETF. The product is subject to annual early redemption if the fund closes at or above its initial level on any of the observation dates. In that case, it returns full capital, a fixed coupon of 9.50% pa, and five percent participation in any growth of the fund in excess the amount of the fixed coupon. The barrier for capital protection is set at 70%. CIBC World Markets will receive up to 0.15% of the principal amount for each note sold for acting as independent dealer.

Barclays Bank targeted its Barrier Supertrack Notes on a worst-of basket comprising S&P 500, Russell 2000, and DJ Industrial Average Index at retail investors in the US. The five-year registered note participates 100% in the performance (positive or negative) of the worst performing index over the investment period. Capital is protected if none of the indices has fallen below 53.5% of its initial on 22 December 2026. The note accumulated sales of US$1.6m. Agent's commission is 4.125% and the estimated value of the notes is US$920.90 per note.

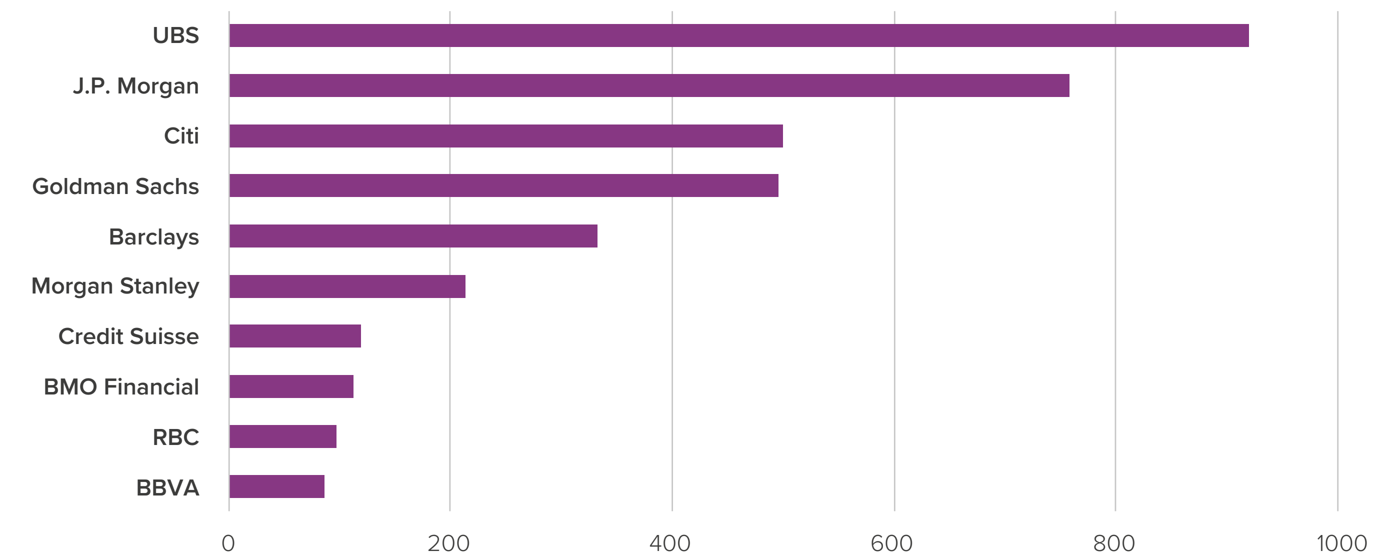
Also in the US, **UBS Financial Services** sold US$43m worth of Capped Buffer In-Gears Securities on the DJ Industrial Average Index. The return of the 5.2-year product is capped at 79.1%. There is a buffer of 10%. The estimated initial value of the securities as of the trade date is US$9.86.

LATIN AMERICA

XP Investimentos introduced a five-year deposit linked to Brazil Consumer Price Index (IPCA) and Solactive XP Indice de Acoes Globais Baixa Volatilidade VT 7% in Brazil. At maturity, the product offers minimum 100% capital return, plus 110% participation in the performance of the underlyings.

BBVA collected MXN103m (US$5.1m) with an autocallable barrier exotic note on the iShares PHLX Semiconductor ETF in Mexico. The product has a six month maturity and is targeted at retail investors.

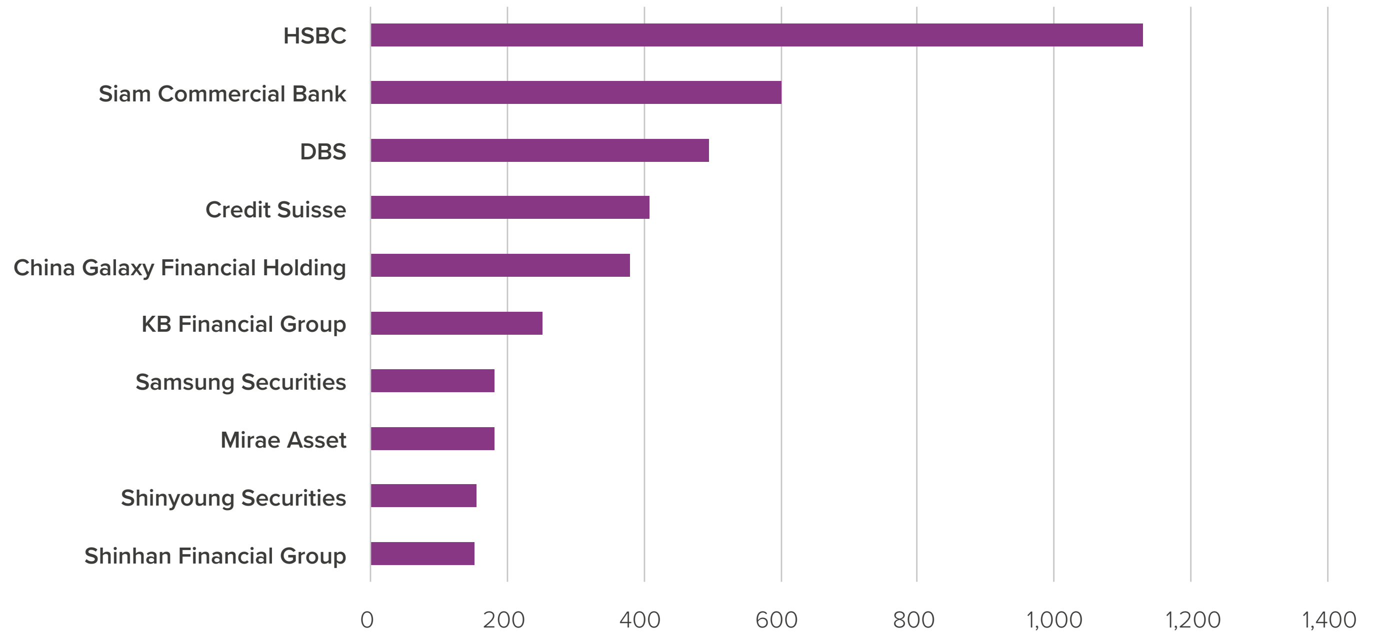
Americas: top 10 issuer group by issuance - 14 Nov 2021 to 15 Jan 2022*



*Excluding flow- and leverage products

Source: StructuredRetailProducts.com

Asia Pacific: top 10 issuer group by issuance - 14 Nov 2021 to 15 Jan 2022*



*Excluding flow- and leverage products

Source: StructuredRetailProducts.com

MIDDLE EAST & AFRICA

Absa launched issue eight of its Equity Linked Accumulator in South Africa. The five-year product is tied to the performance of the MSCI EMU Select Profitability Leaders Index. If, on any of the annual observation dates, the index is at or above 90% of its initial level, a coupon of 14.25% will be locked-in for that year. If the index is at or above 110% of its initial level, all coupons will be locked in for the rest of the investment term and 100% of the investment amount will be repaid at maturity, irrespective of the performance of the index. The product can only be used within an Absa Life linked endowment policy.

ASIA-PACIFIC

DBS Bank targeted its 12-month CNY Note 3020 (ESAT) at retail investors in China. The capital protected product features the digital payoff and is linked to the CSI Smallcap 500. At maturity, if the closing price of the index is at or above its initial price, the product offers a coupon of four percent. Otherwise, the product offers a coupon of 0.1%.

Akatsuki Securities collected JPY370m (US$3.3m) with EB M20230615 in Japan. The 1.5-year registered note offers a fixed coupon of five percent pa. It will redeem early (quarterly) if the shares of Z Holdings Corp and Taiyo Yuden close at or above a predetermined step-down barrier. At maturity, if the final levels of both shares are at or above their initial levels, or all shares have never dropped below 54.9% of their initial levels on any date during the observation period, it will return 100% of initial capital. Otherwise, it will be redeemed by physical delivery of the worst performing share with cash adjustment, if any. The product is issued by Svensk Exportkredit while J.P. Morgan acts as the derivatives manufacturer.

Mirae Asset Securities distributed DLS 5746 in South Korea. The product has a one-year maturity and is linked to the Kospi 200 and the appreciation of the US dollar relative to the Korean won. It will be redeemed early at the end of each quarter if the price of the worst performing underlying is at or above 101%. At maturity, the product offers 100% of capital return, plus a fixed coupon of four percent if the level of the worst performing underlying is at or above 101% of its initial level. Otherwise, the product offers 99% capital return.

HSBC Bank issued Target Rate Investment FK2363 in Hong Kong SAR. The three-month deposit is denominated in New Zealand dollars and linked to the appreciation of the NZD relative to the US dollar. It returns 100.33% of the principal amount if on 24 February 2022 the currency pair is at or below the trigger rate (NZD/USD spot -0.0200). In all other cases it returns 100.04%.

People Moves

SG promotes new ESG head in Apac

Bharat Sachanandani (left) has been promoted as director, Apac head of ESG, solutions & product strategy, global markets at Société Générale (SG) in Hong Kong SAR.

Effective from November, Sachanandani is responsible for the French bank's ESG and marketing initiatives in addition to his existing role as Apac head of flow strategy & solutions (FSS). He reports to Olivier Daguet, Apac head of structured products and solutions, global markets at SG.

"In his role as head of FSS in Asia Pacific, Bharat has demonstrated a keen ability to generate trade ideas by leveraging cross asset research [GRS] house views and our trading axes, contextualise our quantitative investment strategies [QIS] push locally and promote it," a spokesperson told SRP.

Starting in equity derivatives sales at Société Générale in 2005, Sachanandani left the French bank in 2007, after which he had a stint as a trader at HBK Capital Management in Hong Kong SAR and as a portfolio analyst at CastleBay Capital Management in Singapore. He was also a fixed income trader at Kotak Mahindra (UK), which manages Indian investment funds as an international arm of Kotak Group, from 2011 to 2015 in Singapore.

Sachanandani re-joined Société Générale in August 2015 before becoming the Apac head of FSS in June 2017. He was tasked with hedge fund sales at SG from 2005 to 2007 based in Hong Kong SAR.

Barclays' new head of EQD sales moves to Dubai

Stephane Goursat (left) has relocated to Dubai following his appointment by Barclays as head of equity derivatives (EQD) institutional sales for the Middle East and Asia ex-Japan.

Goursat joined Barclays after five years at Credit Suisse where he was the head of investment solution sales for Asia based in Singapore. His last day at the Swiss bank was 8 October, according to the Monetary Authority of Singapore (MAS) register.

Goursat takes on a newly-created role at Barclays focused on institutional clients in Asia ex-Japan and the Middle East. He reports to Nicolas Reille, head of EQD structuring for & sales for Asia ex-Japan (right) in Hong Kong SAR, and locally to Walid Mezher, country head of markets and head of sales & origination for the Middle East and Africa, according to two senior sources.

Prior to Credit Suisse, Goursat spent three years at Société Générale as managing director, head of financial engineering for Apac prime services based in Singapore. He moved to the city-state from London in 2010 to join Royal Bank of Scotland (RBS) as head of solutions group for Apac equity and derivatives.

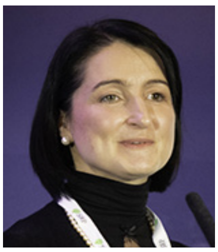
Credit Suisse promotes private banking head

Credit Suisse has appointed three senior roles in Apac wealth management as Francois Monnet, head of private banking (PB) North Asia and chief executive for Hong Kong, retired at the end of December after a 14-year career at the Swiss bank.

Effective from 1 January 2022, **Benjamin Cavalli** (above) was promoted to head of wealth management Apac from head of PB South Asia and Singapore CEO. Cavalli has given up his responsibilities as Singapore CEO and taken on the chief executive responsibilities for Hong Kong SAR.

Jinyee Young has been appointed deputy head of wealth management Apac based in Singapore, reporting to Cavalli. She is currently market group head for PB Singapore, Malaysia and South Asia Switzerland – a Zurich-based team serving clients in South Asia. In addition, Chien Chien Wong will be tasked as Singapore CEO, marking the bank's first female CEO in this market – in addition to her current role as the chief operating officer, Apac.

RFQ platform appoints global head of structured products



Géraldine Laussat (left) has joined OTCx Trading as global head of structured products.

Based in Paris, Laussat will report to Nicolas Koechlin, founder and CEO of the multi-dealer request for quote (RFQ) platform.

Laussat has spent the last nine months in a tech derivatives expert consulting role covering market structure, workflows, products, regulation, business development, derivatives and structured products for multi-issuer platform FinIQ.

Prior to that she spent a year as head of structured products, RFQ-hub, at Virtu following the acquisition of ITG where she spent almost five years in the same role. She had responsibility for developing the structured products offering on the ITG RFQ-hub platform globally.

Laussat joined ITG RFQ-hub in 2013 from Barclays in London where she was selling alternative solutions to asset managers. She started her career as a prop trader at BNP Paribas Arbitrage in 2002 prior to joining their UK equity derivatives sales team.

BMO GAM grows EU responsible investment team

BMO Global Asset Management has appointed **Karlijn Van Lierop** (left)as a responsible investment product specialist for the Netherlands. She joins from MN, where she has served as director of responsible investment since 2012. Isabelle Meyer joined the business in October as a responsible investment product specialist for the German market, and most recently was ESG fixed income investment specialist for Insight Investment.

Both Van Lierop and Meyer will report to Claudia Wearmouth, co-head of BMO GAM's responsible investment team. They will be working as part of BMO GAM's responsible engagement overlay, which was launched in 2000 and manages £356 billion in assets.

Cboe markets hires from index specialist MerQube

Jean Park (left) has joined Cboe global markets as a senior director, data and access solutions in New York.

Park joins from index specialist firm MerQube where he was head of business development since the Summer of 2020, and reunited with former colleagues Vinit Srivastava, co-founder and chief executive officer of the index firm, and former global head of strategy and volatility at S&P Dow Jones Indices, and Keith Loggie, co-founder and chief operating officer and previously chair of the S&P 500 Index committee and global head of index research and design at S&P Dow Jones Indices.

Previously, Park was head of client coverage, North America at S&P Dow Jones Indices. He parted ways with the index provider in the summer of 2019 after more than 17 years of service. In his latest role, he was responsible for supervising client coverage group in North America related to sales/licensing activities of indices and related data to client base, including investment banks, commercial banks, asset managers and insurance companies.

Futora

Multi-issuer structured investment products platform Futora, formerly Modelity Technologies, has hired **Vangelis Sakelliou** (left) as director, leading business development and marketing growth.

Based in London, Sakelliou is responsible for establishing and growing Futora's footprint in the Emea region. He reports to CEO Asaf Seri. The Israeli fintech startup launched by the founders of Modelity Technologies completed a US$6m fundraising round in Q4 2021.

The funds raised will support ongoing product development and in building the sales processes in Europe and the US. Futora was founded in 2020 by Seri and Ayal Leibowitz, who set up the company after selling Modelity Technologies, to German company LPA. The platform has 10 global investment banks connected to the system supplying derivatives to retail banks.

Sakelliou joined Futora from FinIQ where he spent the last three years in a similar position. He was responsible for FinIQ's EMEA expansion and strategy with go to market actions and a multi facet sales collateral and branding initiatives. Prior to joining FinIQ, Sakelliou was a business developer at Sungard where he supported clients on their pricing and OTC derivatives operations. He also held sales positions at Superderivatives, now part of ICE, as well as Eurobank EFG and Bloomberg.

Investment Design & Distribution (Idad)

Ryan Sydow (left) has joined UK structured investment specialist firm Investment Design & Distribution (Idad) as regional head of structured solutions covering Sub Saharan Africa, after a nine-month stint as head of retail, RMB Invest at South Africa's Rand Merchant Bank (RMB).

"We're thrilled to have Ryan onboard at Idad – he's a fantastic addition to the existing African team and will support our continued growth in, and commitment to the region," Clive Moore, managing director at Idad, told SRP. "It has always been important for me that we work to understand and meet the requirements of our partners in different regions around the world."

Sydow will work alongside Ben Board, global head of strategic partnerships, focusing on the firm's work with larger organisations and institutional clients.

Prior to joining RMB, Sydow was head of retail distribution at Absa Capital, the investment banking arm of Absa Bank Limited, in South Africa, for eight years. He was responsible for the bank's product proposition and distribution footprint for structured products including exchange-traded funds and exchange-traded notes (ETN) into retail distribution channels including Absa Wealth, Absa Private Bank, third-party broker networks and investment platforms.

Sydow joined Absa Capital from Barclays in 2012, having spent six years in the UK investor solution team as vice president of investor solutions. Prior to this, Sydow was an associate director at Barclays Wealth, where he was involved in the management and rollout of the firm's onshore and offshore funds proposition. He also spent part of his career with Alexander Forbes and Standard Bank in South Africa.

Structured products veteran joins crypto exchange

Crypto exchange Bitmex has hired **Rupertus Rothenhaeuser** (left) as its chief commercial officer (CCO), with responsibility for spearheading the crypto exchange's 'Beyond Derivatives' plan to expand into spot, brokerage, custody, information products, and establish Bitmex Academy.

Rothenhaeuser has been charged with developing the exchange's global client relationships, overseeing the commercial success of its range of products, and growing Bitmex's market share in the crypto space. He reports directly to the firm's CEO, Alexander Höptner, and will be based in Asia.

Rothenhaeuser joins from Crypto Finance (Brokerage) where he spent the last year as chief executive in charge of the Swiss company's digital asset services for banking clients. He joined Crypto Finance from Six Digital Exchange (SDX) where he was head business & ecosystem development and a member of the executive board since the end of 2018.

Prior to SDX, Rothenhaeuser had a short stint in 2018 at Wikifolio Financial Technologies, an Austrian financial services company with an online platform for alternative investing in Austria and Germany. Previously, he spent six years at Boerse Stuttgart where he was a managing director and head of global sales & marketing, and led the setup of Boerse Stuttgart cats, the exchange's OTC platform for retail structured products.

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