

# Industry trends in derivatives

Key takeaways from the Derivatives Forum  
Frankfurt 2024

Trading and Clearing

Fixed Income | FX | Equities | Digital Assets

Prime Sponsors



Sponsors



Contributing Sponsors



Exhibitors



Supporting Associations



Media Partner



# Content

- 05 Introduction**  
By Michael Peters, CEO, Eurex Frankfurt AG
- 06 Markets and regulation**
- 07** Europe's place in an uncertain world
- 12** Index providers keep pace with rapidly evolving market
- 14** Risk management takes on new tones in the cyber era
- 16** AI – Transforming capital markets
- 18 Derivatives and portfolio management**
- 19** Trading volatility in 2024
- 22** Deepening futurization opens opportunity for buy-side
- 26** Buy-side navigates its burdens
- 29** Futures slot into credit ecosystem as adoption gathers pace
- 31 Liquidity and collateral management**
- 32** European rates ecosystem pulls together, as the market seeks co-efficiency
- 36** With the end in sight to regulatory grapples, euro clearing looks ahead to competition
- 38** Europe considers buy-side pivot as cleared repo beckons
- 40** Refit preparations hit the final stretch of the regulatory reporting marathon
- 42 Technology and digital assets**
- 43** AI and Tokenization: the coming wave of change
- 46** Putting choice at the heart of FX markets
- 48** Buyside automation Algos and automated trading
- 50** Crypto regulation and the changing European landscape
- 52 Sustainability and carbon**
- 53** Adapting to climate change in central clearing
- 56** Energy markets and the transition
- 57** The fightback against the doubters



# Introduction

Welcome to Eurex's 2024 Derivatives Forum Frankfurt whitepaper, an annual publication resuming the themes and speakers of the conference while outlining the key challenges for the derivatives markets in the future.

Every year, Eurex invites senior representatives from the world's leading sell and buy-side firms, market infrastructure providers and regulators of the derivatives industry to Frankfurt for a two-day conference about the most pressing issues global markets are facing.

This year's forum was held from February 28 to 29 and saw the biggest attendance to date, with over 1,170 on-site attendees and 500 online viewers interacting with each other, listening to opinions, and getting insights from more than 110 speakers. We are particularly thankful to our sponsors, supporters and all attendees that contributed to the success of the Derivatives Forum Frankfurt and made it "the central derivatives meeting platform to be" in Europe.

Financial markets will play a key role in any change with an investment impact to enable growth in new key areas of economic activity such as artificial intelligence. How they will adapt was a key topic of discussion at the Derivatives Forum Frankfurt and is a central theme of this whitepaper.

Apart from the macro-level, we also covered the micro-side, with deep dives into established and emerging listed markets. These cover dividend and total return futures, as well as the growth of new futures markets in FX and credit. Innovations in fixed income futures, OTC Swap Clearing and cleared repo markets were also presented and vitally discussed.

Discussions about technology, always a central focus of the event and whitepaper, took a new turn this year with artificial intelligence and how it will be applied to financial markets generating significant interest and enthusiasm among event participants.

In line with the Derivatives Forum's key themes, this report features five streams: Markets & Regulation, Derivatives & Portfolio Management, Liquidity & Collateral Management, Technology & Digital Assets, and Sustainability & Carbon.

All five themes represent the challenges that the industry is facing but simultaneously solutions and opportunities on how we can foster and build more sustainable, liquid, regulated and trusted markets for the future. Serving a global community, we are equally committed to Frankfurt as an important financial hub – we thus look forward to welcoming you back to Frankfurt for the 7th edition of the Derivatives Forum on February 26 and 27, 2025.

Enjoy discovering!

Michael Peters, CEO, Eurex Frankfurt AG



# Markets and regulation

Europe finds itself approaching an era-defining shift in geopolitics and economic conditions. Globalization and international cooperation are being challenged with a force unseen for decades as war and trade tensions increasingly dominate corporate decision-making.

How to adapt to this new world is a source of considerable debate. While regions and their corporates face unprecedented challenges, new and potentially revolutionary opportunities also emerge. Technological developments such as artificial intelligence hold transformational potential for many industries, with finance no exception.

This section explores Europe's challenges and how the financial industry, a key pillar of any response, can support the continent's path ahead. This includes the policy and structural changes needed to encourage greater investment, including growing continental retail participation, as well as efforts to make the clearing industry more robust in the face of new and sophisticated cyber threats.

We also examine AI and its application to financial market practice. Index creation technology is also covered, as this growing trend sets new directions of customization, already bringing significant change to the investment industry.

# Europe's place in an uncertain world

In an increasingly complex and fractured world, Europe faces a paradigm shift that requires new and inventive ways of supporting economic activity and prosperity.

Economic and financial infrastructure built to leverage globalization is increasingly challenged by geopolitical and trade trends, pushing the world towards greater regional fragmentation and regional autonomy.

In this environment, different regions have to assess how to create greater linkages between economic sectors within their jurisdictions and promote resilience.

Financing and technology will be key elements in Europe's success as it navigates this new world. It is important to note that while great challenges lie ahead, the continent has already built up significant strengths, putting it in a good position to support its corporates and people in the coming years.

"Very clearly, we have a lot of catch-up potential in Europe," says Thomas Book, Executive Board Member at Deutsche Börse.

"Everyone feels that a new chapter in history has started and our economy is being challenged. We urgently need to utilize the full potential of our capital markets, where we have fallen behind the US and Asia. Equity investment quotas in Europe are far too low, both for retail and institutional investors. In Germany, equity investment in the pension system is 10-15% – or less – of the total, while equities have been the best-performing asset class in recent decades."

"However, on the positive side, there is huge potential in the European equity market. Politicians have started to realize the relevance of capital markets for the real economy, not just for financing the required transformation but also for financing pensions with adequate returns. The potential is there, and the sense of urgency is building."

This urgency applies across the continent. More and more economic actors are preparing for a future where the rules that previously determined success and prosperity are no longer as certain as during the era of globalization. Reacting to this reversal takes more than strengthening resilience; it also requires positioning to take advantage of new technologies and trends as rapidly as possible.

"Uncertainty is one of the dominant topics in my conversations with clients and internal board conversations," says Bernd Leukert, Board Member, Chief Technology, Data and Innovation Officer at Deutsche Bank.

“Uncertainty is one of the dominant topics in my conversations with clients and internal board conversations.”

Bernd Leukert  
Board Member, Chief Technology, Data and Innovation Officer,  
Deutsche Bank

“Clients are looking for faster and better insights into how they can turn their businesses around. They want flexibility, including in financing, so that they can adapt to the unexpected events that will happen on an ongoing basis. Above all, they want to understand the risks better to protect themselves better accordingly.”

“Emerging technologies, especially cloud computing, data analytics and AI are at the heart of our responses to these challenges.”

#### Ensuring the infrastructure for a new age

For financial market infrastructure providers, such as exchanges and clearing houses, matching the needs of corporates and investors to benefit the European economy will be a driving motivation in the years ahead. This will involve creating products that allow for effective exposure- and risk management of new investment and economic trends. It will also mean building marketplaces that maximize liquidity to execute this financing efficiently.

“We are facing mega trends like investment in security and defense spending, as well as a reduction in labor availability due to the retirement of baby boomers that will increase labor costs or the need to strengthen qualified immigration,” says Michael Peters, CEO of Eurex Frankfurt AG.

“We also have to consider ESG investment, not just in active strategies such as renewable construction, but protecting for passive damages to infrastructure and health.”

“Capital will be a scarce resource in the future. When I look at the challenges to investments that need to be taken, we must provide the respective risk management instruments and framework for our global customers so that, in the end, they have an efficient liquidity and risk management tool. That is the task and responsibility we must take as regulated and reliable market operators.”

Of course, while listed environments provide a key facet of the financing kit, they are far from the only tool Europe must use. Should current trends of deglobalization accelerate, the continent will need to ensure that it creates the factors to drive greater competition within its borders. This will require efficient financing, not just for the continent’s blue chips but also for its smaller companies, enabling as vibrant and diverse an economic ecosystem as possible.

“As of today, the EU has weathered major shocks – namely Covid and the energy crisis – fairly well,” says Fritzi Köhler-Geib, Chief Economist at KfW.

**“The jury is still out on how Europe will fare in the changed geostrategic environment. Clearly, the focus needs to be on the EU’s economic competitiveness. Mobilizing private capital is key to securing this competitiveness.”**

Fritzi Köhler-Geib  
Chief Economist, KfW

**“China and the US respect us because of the European single market, without seeing us as a collection of nice museums with entertaining people. We have to behave accordingly and make sure we can adjust a certain set of policies to build the European strategic autonomy together.”**

Stéphane Boujnah  
CEO, Euronext

“The jury is still out on how Europe will fare in the changed geostrategic environment. Clearly, the focus needs to be on the EU’s economic competitiveness. Mobilizing private capital is key to securing this competitiveness.”

#### Capturing advantages and positioning for the future

Long-standing geopolitical paradigms that have mostly been stable for the last three decades are shifting worldwide. War in Europe, trade tension between the US and China and the outbreak of inflationary pressure affected all corners of the globe. While this created challenges, there are also signs of positive shifts, with some countries pivoting to improve their business conditions.

“The economic situation in Japan is very different from the past,” says Ryusuke Yokoyama, Senior Executive Officer at Japan Exchange Group Nikkei.

“We are recovering from a long period of disinflationary pressure, with inflation ratio recently hitting a 30-year record high. On the corporate front, companies focus on enhancing shareholder value, while on the retail side, investment is being encouraged with the new NISA program. Those three aspects are making a real difference in the Japanese market.”

In Europe, policy change will also be needed if the continent is to harness considerable inbuilt strengths in both capital and human capital. As Köhler-Geib says, innovation is a key European

strength and one that the continent will need to throw its support behind going forward.

This will require new measures and structures that unlock investment in future economic opportunities, as well as maximizing current strengths.

“Europeans, provided they work together, have a huge opportunity in this reset/reboot moment,” says Stéphane Boujnah, CEO at Euronext. “We are the third largest population group in the world, after China and India, and before the US. We have the highest level of savings concentration in the world. And we have built together one of the highest platforms for generating talent in the world.”

“China and the US respect us because of the European single market, without seeing us as a collection of nice museums with entertaining people. We have to behave accordingly and make sure we can adjust a certain set of policies to build the European strategic autonomy together.”

While this will entail policies that unlock both institutional and retail investment (see box out on page 11), it will also require targeting the right sectors for future growth that Leukert highlights, such as artificial intelligence and powerful cloud computing capabilities.

“There is a changing risk profile, with more frequent shocks and dislocations in the system, whether it is Covid-19 or politics,” says Roland Chai, President of European Markets at Nasdaq.

“The rate of technological change is very, very rapid now. Electronification, which started 30 years ago, is accelerating, and we are seeing the introduction of AI. Being able to respond is crucial to financial markets’ survival. Covid was an example where technology allowed us, as an industry, to keep going.”

Roland Chai  
President of European Markets, Nasdaq

“There is also a widespread focus on resilience, with efforts going into cyber and the ability to protect, manage and run large markets that are critical to our domestic economies. The ability to harness technology and innovation to keep our exchanges running day-to-day and to protect them is a key success story. It should be a sign of great resilience.”

“Resilience means that we are strong in key industrial sectors, including AI and other recent trends,” Florian Toncar, Parliamentary State Secretary at the Federal Ministry of Finance Germany.

“We must be strong on our own and compete here, but also not deglobalize. We should be integrated and aim at further integration into the global economy.”

The renewed focus on resilience does not have to mean greater isolation and retreat from the global economy. While a challenging task, it is still possible to chart a balance between greater self-sufficiency and intelligent integration with trading partners outside of the EU.

Reversing this situation and attracting greater retail flow to Europe will be a long-term project, with educational efforts promoting awareness and understanding of the product. Eurex already cooperates with retail brokers to provide information and educational resources, such as webinars for retail traders.



## Coaxing retail flow to listed markets

“Of course, information and education cannot stand alone,” says Dorte Carlsen, Equity & Index Sales EMEA at Eurex. We have the right set of well-established products, such as VSTOXX®,

as well as mini and micro-equity index derivatives and Daily Options commonly known as ODTE Options.

Catching up to the US presents a significant challenge, with high volumes and competitive pricing already a consistent feature of that market. However, European venues are already taking steps in the right direction, selecting the correct products, as Carlsen highlights, and setting the right parameters to encourage growth in those products.

This was on show with the roll-out of Eurex’s short-dated options, products that have been a key part of the US options success story.

While Eurex’s hosting of daily options is still in its early stages, the new contracts have enjoyed success. Measures such as tighter market-making requirements than regular EURO STOXX 50® options have driven tighter daily pricing compared to weekly options for 40% of trading hours.

“Daily options have been quite a success so far,” says Carl-Johan Munch-Jensen, Head of Trading at Swissquote Bank. “We saw quite an immediate pick-up in activity. That was partly due to the fact that the screen was consistently tight the majority of the time. From our side, that is so important. Many of the clients we trade with will just not trade if they see wide pricing on the screen.”

“Bringing more retail into the listed space puts rocket fuel into overall market volume growth.”

“Europe has become a bit of a shark tank. There is a lot of one-way volatility flow, which means less profitable market-making compared to other regions. That can create a negative spiral where flow migrates to the US. Still, it can also be flipped into a virtuous cycle of more retail, real money and benign flow – meaning greater liquidity provider competition to interact with this flow, creating deeper and tighter liquidity.”

Reversing this situation and attracting greater retail flow to Europe will be a long-term project, with educational efforts promoting awareness and understanding of the product. Eurex already cooperates with retail brokers to provide information and educational resources, such as webinars for retail traders.

Cathal Hardiman  
Head of Direct Counterparty Trading Europe, IMC

# Index providers keep pace with rapidly evolving market

Indexes have never been more important to financial markets. However, the fast pace at which new trends emerge and develop drives intense competition and demands hyper-focus on the market's changing needs.

What once started as a performance measurement tool has become a central part of the capital markets ecosystem. This has been primarily driven by the extraordinary rise of passive investment but has also since evolved to take on a more bespoke tone. Institutional investors are increasingly demanding tailored index products for their own investment strategies.

“The world has moved to a hyper-customized interaction with clients,” says Axel Lomholt, Head of Index Business, Senior Managing Director, and General Manager at STOXX. “You now need to build an ecosystem within the index provider’s offering that can cope with the customization that clients demand.”

The field’s development pace is so fast that conversations have moved beyond index customization, such as customized overlays in investment areas such as ESG.

“We have moved from a framework where clients predominantly focused on risk and return to risk, return and the real-world impact of their portfolio,” adds Lomholt.

## Many moving parts

The task of index provision is not just keeping pace with one trend. Within ESG alone – still the biggest theme around which indexes are constructed – client demands are already creating significant variations in how index providers build a methodology. Among these, geography has emerged as a key differentiator.

In jurisdictions like Canada and the US, where energy plays a central role in the economy compared to Europe, index providers have had to evolve beyond exclusion methodologies, which have more traction in Europe.

“The differences between geographies couldn’t be more significant,” says Maya Beyhan, Senior Director, Global Head of Sustainability, Index Investment Strategy at S&P Dow Jones Indices.

“For example, New York, Toronto and Montreal are home to many sustainability-minded investors. However, there are unique considerations for each market. For instance, it is difficult to completely exclude the energy sector in a market like Canada, given the country’s sizable presence of energy companies. This unique dynamic makes it challenging to implement certain types of indexes, such as EU Paris-Aligned benchmarks that exclude the energy sector.”

“Therefore, it is important that sustainability indexes and index methodologies reflect the differentiated requirements and dynamics of the local market and economy.”

## Towards flexibility

This ties into new ways of thinking about indexes involving a more collaborative construction approach, with clients much more involved and no longer prepared to simply purchase an off-the-shelf product.

This development requires greater dialogue between companies and index providers about how their sustainability objectives can best be measured. It can also entail a more holistic understanding of how firms make the transition to greater sustainability.

“We started with ESG 1.0, now we are moving to ESG 2.0, which has more of a climate tilt to it,” says Tom Jenkins, Head of Strategy, Index Investments Group at FTSE Russell.

“The way that you can approach that is by looking at all companies. However, you can’t just disregard energy; the market cap is too significant to penalize that sector and say it is no longer relevant because it still is. We are responding to client demand and providing them with the tools they require. That means we must analyze attributes like management quality, green revenues, and the underlying data they report yearly to assess how green these companies are compared to their peers.”

“It means maybe creating an index that rewards the behaviors that our clients value and monitoring how they perform relative to a benchmark like the 1.5-degree target – a carbon performance.”

“When you combine those components, you have a really solid recipe.”

## Future challenges

Index providers are increasingly having to face scrutiny as well as apply it. Institutional investors demand not only greater customization but also details on how a methodology is constructed and applied, with access to quantifiable metrics.

“Market participants would like to understand the E, S, and the G factors and a breakdown of what goes into each of these factors,” says Beyhan. “Clients are interested in granular details. That’s the direction of travel we have been observing.”

While ESG has been a dominant part of the index story, it is far from being the only strand. Demand for indexation is coming from all corners of finance. Fixed income is playing a rapid catch-up to the equity market. Alternative assets such as cryptocurrency and private equity are becoming an increasingly fundamental part of the investment portfolio, shaking up the 60/40 stocks/bond formula to a 40/40/20 variation.

These are significant changes. Combined with more demand for forward-looking index features, the fight to stay in line with market demand is a significant one for index providers. A future of greater customization is one in which investors will arrive closer to their strategic ambitions. Combining that with mass participation and liquidity through futurization is perhaps the next great challenge for the index and listed marketplace sectors.

“You now need to build an ecosystem within the index provider’s offering that can cope with the customization that clients demand.”

Axel Lomholt  
Head of Index Business, Senior Managing Director, and General Manager, STOXX

# Risk management takes on new tones in the cyber era

The challenge of managing a clearing house is becoming more complex by the year. Today, chief risk officers not only navigate the daily vagaries of market movements but also new and multilayered risks such as cyber security.

The magnitude of these new risks has been on full show in recent years, with some high-profile attacks on significant parts of the clearing eco-system. With the number of bad actors in cyberspace multiplying, the job of a CRO – previously dominated by issues such as margin methodology – has gained new facets.

This does not just entail understanding and reacting to new risks but also reconsidering the whole balance of what makes an effective clearing infrastructure.

“There will be a need to balance the trade-offs between, on the one hand, efficiency, automation and technology, and, on the other hand, resilience, stability and safety,” says Dmitrij Senko, Chief Risk Officer at Eurex.

“It doesn’t help having a fine-tuned front-to-back process if that can be easily broken if one piece doesn’t work. It is better to have resiliency based on fallbacks and redundancies. This is all on the table nowadays for risk managers, not just for CCPs, but also for banks and many other institutions.”

A further complication of the emerging cyber threat is the multitude of attackers that financial market infrastructure providers have to deal with.

“Despite continued investment, attacks are still prevalent,” says Teo Floor, CEO at CCP Global.

“The rise of state actors, or at least state toleration of certain groups, is novel. Compared to previous attacks that would happen in our sector, where attackers were either trying to take money or gain information that would allow them to do that, sometimes destruction alone is the purpose.”

One consequence of the rising cyber threat is that it highlighted the complexity built up in interdependencies between market infrastructure, sell- and buy-side firms and vendors. However, while this has created a new layer of complications that are inflamed when one part of the ecosystem is forced offline, it has also spurred greater cooperation across the industry.

This has seen the creation of FIA-led discussion groups and improved bilateral communications between players in clearing. These developments will need to be maintained and built upon as scrutiny increases over firms’ management of their third-party arrangements and how these affect cyber and operational resilience.

“You absolutely have to take responsibility for your entire end-to-end supply chain, as far as that goes and do whatever due diligence is needed on the participants in the chain,” says David Horner, Chief Risk Officer at LCH.

“It doesn’t help having a fine-tuned front-to-back process if that can be easily broken if one piece doesn’t work. It is better to have resiliency based on fallbacks and redundancies. This is all on the table nowadays for risk managers, not just for CCPs, but also for banks and many other institutions.”

Dmitrij Senko  
Chief Risk Officer, Eurex

“This space is particularly difficult as people are reticent to let their secrets go out the door in terms of how they defend themselves against these risks. However, there are tools like ISO certifications and SOC2 that can help to bridge that gap.”

## New focus on margin

The increasing relevance of cyber risk has done nothing to diminish the importance of more traditional clearinghouse risks, though. BCBS-CPMI-IOSCO’s recent focus on the transparency and responsiveness of initial margin in centrally cleared markets is set to open a new policy front in the clearing industry. This could potentially lead to new requirements for daily dissemination of margin information.

That could mark a significant change in the CCPs operational burden and cost base. This is a corner of the derivatives industry where great efforts have already been made to increase transparency and promote understanding of models between firms to the greatest extent possible.

“Much has been done on transparency in the cleared derivatives world already,” says Lee Betsill, Chief Risk Officer at CME Clearing.

“Margining is really important, and we are here to support the stability of financial markets. We are careful about how we set margins. We provide transparency and publish whitepapers on our margin models, parameter changes to those models and do so with advanced notice so the market can anticipate such changes.”

“We provide margin simulators for clearing firms and participants. Generally, we are in favor of margin transparency, although data protection and the anonymity of our members’ clearing positions are important too.”



# AI – Transforming capital markets

Artificial intelligence enthusiasm has sent stock markets to record highs. However, its application to the day-to-day coalface of financial markets is still in its infancy.

While industry figures and politicians still debate whether AI will be a revolutionary or evolutionary trend, there is little doubt that it will represent a transformational moment in many industries.

Finance will be no exception. However, the way in which AI integrates and changes functions, such as trading and fund management, is far from certain.

The initial focus of the AI discussion was on language models such as Chat GPT and Google's Gemini. This application of the technology is set to bring immense efficiencies to functions such as analyst reports. Market participants foresee AI allowing firms to gauge the market or geopolitical sentiment rapidly through news articles, including foreign languages. Its ability to condense complex market information and announcements will also be a significant new source of efficiency for firms.

"Generative AI is going to impact the way we live, the way we work and the way we study," says Hamidou Dia, VP Applied AI Engineering at Google Cloud. "It is also going to impact every industry."

**“Generative AI is going to impact the way we live, the way we work and the way we study. It is also going to impact every industry.**

Hamidou Dia  
VP Applied AI Engineering, Google Cloud

"In financial services, AI has been used for a long time; however, advances in computing and research have enabled recent breakthroughs. Large language models (LLMs) are the foundational models that power AI technology. LLMs are extremely good at processing large amounts of information and helping organizations make sense of it. Capital markets firms use a lot of research. Generative AI can help them significantly improve and accelerate that research."

"It will help firms explore new strategies and create new content rapidly. These organizations are also software programming-intensive businesses. Generative AI helps create and improve software code rapidly. We are also seeing significant improvements in AI-led customer interactions, with a lot of new use cases."

However, AI may take more time to assert itself in other aspects of the financial industry. The complexity and interdependencies of the modern trading markets will require new models and versions of the technology that could take time to develop.

"Finance is very different from the areas where ChatGPT has made a difference so far," says Christopher Krauss, Co-founder at Artellium.

"ChatGPT is trained on data with a good signal-to-noise ratio, whereas financial time series are quite the opposite, with a lot of randomness and noise involved. You need different systems to discern the signal from the noise and make sense of it."

The development of such systems is already in motion, with some funds already operating under the guidance of AI. However, as with the stock market exuberance around the technology, it can often be difficult to discern how AI is being used and to what extent it is proving effective at executing trading strategies or running risk management.

"The term AI Fund often refers to a thematic fund that invests in stocks related to AI," says Andreas Vogel, senior analyst at PLEXUS Investments. "In contrast, our focus is on funds that use AI as part of their investment process. To identify a true AI fund, we consider three dimensions."

"First, to what extent does the fund use machine learning? AI often relies heavily on ML. There is no one-size-fits-all answer. The extent depends on the manager's strategy. For example, hedge funds often have very complicated quantitative models. Discretionary stock pickers typically don't have that level of complexity in their models. So, it depends on the strategy how high the bar is."

"Second, can the AI system come up with its own strategy? And not just replicate what humans have done before, but automate it? If AI is running a fund, we expect data-driven development and discovery of the strategy."

"Finally, AI must be involved in the entire investment process, not just in isolated steps such as generating a short list of possible investments from which a human PM then selects what to buy, or intelligent execution once a discretionary trade decision has been made."

For those funds where AI is truly being used, the technology is too early in its development to truly discern an advantage over human decision-makers. However, progress is rapidly being made, with models being built to absorb ever more inputs.

**“Finance is very different from the areas where ChatGPT has made a difference so far.**

Christopher Krauss  
Co-founder, Artellium

"On short time horizons, prices, volumes, and volatilities drive most of the action," says Krauss. "Nonetheless, fundamentals - which are much more static - are still highly valuable. Our AI engine also incorporates fundamentals when capturing the DNA of each stock, e.g., to assess whether it is a value stock or a growth stock. Besides, we use fundamentals for building our in-house risk models."

Much of the current focus for AI application has been on cash equities and the large-cap US market. When AI can manage more of the complexities of trading, it will expand across asset classes and products. Going by the current pace of progress, options and futures inclusion in the AI ecosystem will not be far away.

# Derivatives and portfolio management

After a post-pandemic period of heightened hedging and rising derivatives trading, financial market participants are considering a more stable medium-term future. Stock markets have boomed in 2024, and while vulnerable to sudden reversal, the consensus that central banks will start to cut rates this year is getting stronger.

Yet the need and use cases for derivatives are only growing stronger. Many investors are cautious about recent enthusiasm and look to hedge for a sudden reversal of market conditions. In this section, we look at the products investors are considering to protect themselves against such a situation.

Further to that, regulatory pressures such as UMR push banks and other market participants from OTC to listed derivatives markets. This trend is already mature in the dividend and total return markets, where the ecosystem of products is growing to include an increasingly sophisticated array of futures and options. What began life as a predominantly sell-side market is now evolving to take on a greater buy-side presence.

To a different extent, this trend is also playing out in credit, long known as an OTC market. Here, futures adoption is rapidly growing, although not at the expense of OTC products. Instead, listed derivatives have inserted themselves into an existing ecosystem to expand market access to a broader array of participants.

Elsewhere, we look at the buy side and how it reacts to an intensely competitive and regulatory environment. This has given rise to multi-asset trading desks among larger firms, while mid-sized and smaller firms are finding other ways of competing.

# Trading volatility in 2024

With the post-pandemic rate rise cycle seemingly nearing its end, investor sentiment for 2024 has swung towards optimism. Risk assets have rallied, while market participants have largely shrugged off the multitude of geopolitical concerns that have erupted since Russia's 2022 invasion of Ukraine.

This continues a dance between enthusiasm and despair that has defined market movements since 2023. Then, traders and investors moved from expecting a recession to pricing in rate cuts and then pulling back before taking renewed positioning for rate cuts.

Current market conditions are firmly bullish. US equity indices have boomed on the back of artificial intelligence enthusiasm, while the Granola stocks have driven European indices up sharply. Record highs have also been reached in the Nikkei 225.

However, given the pace at which sentiment has turned in recent years, some are still urging caution. Despite market expectations that began last year, the Fed, ECB and Bank of England have not cut rates. The Bank of Japan has even hiked rates for the first time in 17 years. While concerns are being set aside for now, geopolitics still has the potential to spark disruption.

"Interest rates went from 0bp to 550bp in a very short period of time and the yield curve inverted. Historically, that has always led to recessions, or at least a slowdown," says Marko Kolanovic, Chief Global Market Strategist & Co-Head of Global Research at J.P. Morgan. "There is no reason for us to believe that this time will be drastically different, even though we haven't seen the impact yet."

"Interest rates haven't impacted the economy so far in part because balance sheets have been fixed in recent years and debt maturities extended.

That means it takes more time for higher interest rates to affect the economy. There have been some impacts, such as the Silicon Valley Bank crisis, but these have been limited."

"For the consumer, there are some signs of an interest rate shock emerging, in credit card and auto loan delinquencies. You can also see pressures in the mortgage market, with house buying now very difficult in the US. Stresses are building – but slowly – with consumers having built up savings through the pandemic."

"Nonetheless, we think this is coming and will slow down the US and global economy. Right now, this interest rate risk is highly underappreciated by the markets."

## Charting volatility in 2024

While concerns linger, recent conditions have been optimistic. As such, investors' immediate focus has been how to construct strategies that can harvest returns from more stable markets. After a post-pandemic period out of fashion, short volatility strategies are currying favor again.

"People sometimes tend to think that a short volatility strategy performs only when implied volatilities fall," says Daniel Krause, Head of Portfolio Management at finccam.

“However, it actually is trading implied against realized volatility. Therefore, if we see a generally flat equity market or one that is grinding down, it may be that short volatility performs very well in 2024 even though implied volatilities stay the same or even increase.”

Indeed, while exuberance has hit stock markets, some investors are maintaining a focus on hedging. However, this is not universal, with many allowing defensive strategies built up since the Covid-19 pandemic to run off as overall sentiment improved. While a sign of greater optimism, it also leaves markets more vulnerable to shocks.

“The main difference between this year and last year will be greater fragility within markets,” says Davide Silvestrini, Managing Director, Head of EMEA Equity Derivatives Strategy at J.P. Morgan.

“There is a greater chance of more volatile reactions to market events. That is linked to a material shift in investors’ positioning. If we look at European futures, up until last year positioning was materially net short. That is uncommon and has been an anomaly that started at the beginning of the Covid-19 crisis and sharpened with the start of the Ukraine war.”

“Since the end of 2022, this has been progressively reversing. Over the last year, especially the last two months, there has been an extremely sharp recovery in positioning. I believe we are now completely out of the post-Covid anomaly and back in line with positioning before the pandemic.”

“That is important. Investor positioning – how much equity they hold and whether they are hedged with options or futures – impacts how markets react when there is negative news.”

**“Over the last year, especially the last two months, there has been an extremely sharp recovery in positioning. I believe we are now completely out of the post-Covid anomaly and back in line with positioning before the pandemic.”**

**Davide Silvestrini**  
Managing Director, Head of EMEA Equity Derivatives Strategy, J.P. Morgan

This dynamic was in force during the banking crisis in March last year, when a major European banking failure saw the VSTOXX® briefly spike to 30 before swiftly falling back.

“That was partly due to investors’ very conservative positioning and them being hedged,” says Silvestrini. “Not with options, which would normally lead to some reshuffling in the volatility market, but being short futures – so in delta one.”

“Those hedges are now gone, and investors are less protected. My feeling is that if we get a shock this year, volatility could be a lot more impactful as a result. Markets risk experiencing something stronger than just a dip.”

Those conscious of such risks are maintaining tail hedges despite the expense. Finccam uses capped variance swaps to hedge extremely high realized volatility and limit tail risk. For sharply rising implied volatilities, a scenario that became especially important to hedge in the wake of Covid-19, the asset manager buys short-dated, deep out-of-the-money VIX call options.

“When implementing a short volatility strategy, it is paramount to have a good tail hedge,” says Krause. “These things happen, even though we cannot predict exactly when. So, our philosophy is to constantly allocate some capital into tail hedges.”

#### **Judging the right volatility index**

While the OTC markets provide an important source of volatility hedges, traders often find themselves more easily served by the accessibility and liquidity of listed volatility products.

**“Even though most European Investors are aware of the gap risk, they are still reluctant to use the VSTOXX®. However, we have observed that from 2010 onwards, using the VSTOXX® is much more efficient than using the VIX to protect a European portfolio.”**

**Hassan Malongo**  
Volatility Portfolio Manager, Amundi Asset Management



Choosing which listed products to trade then becomes a question of the two most high-profile indexes in volatility markets. Whether to trade derivatives referencing the VIX or VSTOXX® has become an increasingly nuanced question, as both provide increasingly varied use cases.

“For liquidity reasons, many European investors use the VIX, rather than the VSTOXX®, to mitigate the downside risk of their portfolios,” says Hassan Malongo, Volatility Portfolio Manager at Amundi Asset Management. “The VIX is extracted from an index that comprises 500 US stocks while the VSTOXX® reflects the volatility of an index of 50 European stocks. This concentration in certain sectors and individual stocks could trigger higher levels of volatility for the latter. This could also have an impact on the speed of the decay between the two indices and could make a hedging program difficult to monetize.”

“Even though most European Investors are aware of the gap risk, they are still reluctant to use the VSTOXX®. However, we have observed that from 2010 onwards, using the VSTOXX® is much more efficient than using the VIX to protect a European portfolio.”

There are also other scenarios where the VSTOXX® has a unique offering to traders who look for greater precision when positioning for certain events.

“Where the VSTOXX® and its derivatives really shine is when there is a specific event risk that is priced very differently,” says Silvestrini. “This can happen during elections or referenda – there was a very good VSTOXX® trade, for example, to be done leading into the Brexit referendum.”

While current conditions are becalmed, the lesson of recent years shows that investors would be well-served to explore their hedging options in 2024.

# Deepening futurization opens opportunity for buy-side

The futurization of dividend swap and total return swap markets, born from sell-side needs, is now building momentum in its next phase – the growing participation of the buy-side.

The foundations of dividend futures and total return futures lie in banks' need for capital and margin-efficient hedges in the wake of the great financial crisis and stricter OTC derivatives regulation.

While each product has developed into a distinct market and built participation at different rates, both have grown around the EURO STOXX 50® index.

"We now have dividend derivatives, total return futures and volatility futures and options on the EURO STOXX 50®," says Lorena Dishnica, Product Design, Equity and Index at Eurex. "It is an entire ecosystem."

The importance of the EURO STOXX 50® to European risk markets made it a natural starting point for futurization. Pressures that drove futurization of the dividend swap and total return swap markets, such as increased capital demands for OTC positions and the continuous tightening of uncleared margin rules, only got more intense.

For banks especially, the incentive to reduce the number of counterparties that initial margin must be exchanged with has become a central priority.

This imperative is filtering through the rest of the market and has, combined with increasing demand for index investment, set the stage for further index ecosystems to grow through futurization.

"Now that markets are more futurized, market participants need a broad offering from exchanges," says Gabriel Messika, Executive Director, Head of Index Forward Trading Europe at J.P. Morgan. "Management of margin is a big issue for banks, so to have more products for the indices where the banks are taking risks is very important."

This trend is already in motion, with total return futures and dividend futures available on FTSE Russell and MSCI indices.

"As an exchange, we are in constant discussion with market participants," adds Dishnica, "to understand their needs and apply the same methodology and bring those standardized products onto exchange and facilitate the benefits of centrally cleared products."

**“ We now have dividend derivatives, total return futures and volatility futures and options on the EURO STOXX 50®. It is an entire ecosystem.**

Lorena Dishnica  
Product Design, Equity and Index, Eurex

**“ A world has developed where you can trade the index dividend, the index future, the balance sheet, all the basic sets of risks on a stock and the repo side in a very efficient risk-based system.**

Wilrik F. Sinia  
Director, Mint Tower Capital Management

## Indexation for futurization

For buy-side participants, the EURO STOXX 50® has provided the base for a unique trading market that allows for more precise positioning and niche risk opportunities than other high-profile indices such as the S&P 500. While the latter index is central to much of the functioning of financial markets, its broad sweep of constituent companies makes it more of a technical trade than the smaller EURO STOXX 50®. The European index's scope for single stock analysis and arbitrage opportunities between products is greater in the eyes of some traders.

"Europe now has a defined set of risks in the EURO STOXX 50®," says Wilrik F. Sinia, Director of Mint Tower Capital Management. "A world has developed where you can trade the index dividend, the index future, the balance sheet, all the basic sets of risks on a stock and the repo side in a very efficient risk-based system."

"The more risk gets traded and the more public it is, the more money flows into it." New money is also demanding increasing customization from the products that it trades.

As Eurex expands futurization to cover a broader suite of indices, index providers themselves are rushing to meet the rapidly adapting needs of the market. This involves the increasing importance of customization, setting the stage for greater tailoring of futures to firms' demands.

"In the last five to six years, there has been a strong move in index creation to an outsourced product developer model as, and when, sell-side or buy-side clients don't have the resources and know-how in-house," says Serkan Batir, Global Head for Product Development and Benchmarks at STOXX. "They go to an index provider for the necessary information."

"We are seeing increasing customization of exposures to main indices like the EURO STOXX 50®. Futurization will be increasingly applied to these customized products as market participants seek more niche exposures and returns."

## Increasing use cases

When dividend futures on the EURO STOXX 50® launched in 2008, they provided a standardized alternative to an OTC market where banks offloaded their structured product exposures to hedge funds.

Since then, what was a niche market has broadened in appeal. Dividend futures offer investors a new way of investing in shares, with precise exposure to company earnings. The attraction of such products is increasing as market liquidity deepens.

"The initial market structure was one type of investor facing a similar one," says Sinia. "The way banks and hedge funds like us think is not very different. But if you have pension funds or outright investors coming into the market, they think in terms of fundamental asset values, while private investors have a completely different way of thinking too."

"When you have all these different participants coming together in the products you are pricing, then the liquidity becomes much more in-depth. This is one area where we expect the market to develop further."

With progression, use cases have multiplied. Options, first mainly used in conjunction with futures positions, are now traded on a standalone basis. This trend accelerated after the Covid-19 crisis, which provoked a reassessment of dividend

## “ Mid-curve options are a really good addition to the market.

Gabriel Messika  
Executive Director, Head of Index Forward Trading Europe, J.P. Morgan

risk among banks and broadened the use cases for options. The greater liquidity that came with this activity, in turn, attracted new specialist volatility investors.

Eurex has run with this momentum, recently launching mid-curve options offering a listed alternative to swaptions.

“Mid-curve options are a really good addition to the market,” says Messika. “They are very useful for banks that need to hedge their short-term

volatility risk from structured product issuance. Now that the regular options are very liquid, they will offer final investors a good way of hedging special events or macro scenarios that happen during the lifetime of the options.”

As the European futures market assesses its next steps, the mix of market engagement and flexibility that created mid-curve options will be needed in greater spades as product development works to match increasingly rapid evolutions on the buy-side.

## Long-end beckons for dividend derivatives traders

The European dividend derivatives market has started 2024 in positive shape after a strong 2023 in which the market rode the back of strong earnings performances.

Banks, the main sectoral exposure in the dividend market, posted an especially strong performance last year as they enjoyed the benefits of higher interest rates and, in turn, interest income. Meanwhile, constituents from other sectors pulled in strong earnings on the back of inflation and the boost it gave to profit margins.

That significantly reduced the market’s risk premium throughout the year, which started 2023 at elevated levels – the market still not having fully shaken off the memory of Covid-19, when regulators forced many firms to cancel dividend payments.

The market also benefited from new sources of flow in 2023, which brought long-called for diversity to what has traditionally been quite a niche market (see main article). This demand encountered reduced supply as structured product issuance slowed, partly due to the high-rates environment.

“Flow is important,” says Yanis Escudero, Head of Delta One Flow Trading Europe at BNP Paribas. “Last year, we saw more than 20 new Delta One funds being created, with capital allocation to the Delta One and dividend asset class. In addition to a massive buying flow from this sector, real money has been a constant presence buying the dip.”

Much of traders’ focus last year was on the upside in shorter maturities, which may make 2024 – a year that has, so far, seen good results – a year of opportunity in longer maturities.

“The front-end maturities have been very well invested,” says Antoine Deix, Head of Dividend & Repo Solutions at BNP Paribas. “Now, the best way to express a fundamental carry trade is not to focus

on maturities up to 2025, but roll on further out the curve to 2026, where you can probably capture better upside and velocity of convergence.”

With promising technicals and fundamentals, 2024 looks set to be another year of opportunity in dividend derivatives. However, it should still be remembered that this is a market that rewards careful analysis.

“Close analysis helps to avoid being impacted by market movements,” says Kevin Soyer, EMEA Head of Dividend Forecasting at S&P Global Market Intelligence. “Dividends can be canceled for any reason; it could be a bank fine, a wider catastrophe or any regulatory issue. So, looking at how the company can be stressed by such phenomena is key.”

## “ Flow is important. Last year, we saw more than 20 new Delta One funds being created, with capital allocation to the Delta One and dividend asset class. In addition to a massive buying flow from this sector, real money has been a constant presence buying the dip.

Yanis Escudero  
Head of Delta One Flow Trading Europe, BNP Paribas

# Buy-side navigates its burdens

The asset management industry is under constant pressure to maintain competitive fees while managing a strenuous compliance burden. This has led some buy-side firms to streamline their execution model into a single point of contact, creating multi-asset trading desks.

This rise of the buy-side multi-asset trading desk is a phenomenon that has primarily occurred at larger buy-side firms. The form in which firms bring together their trading desks can vary greatly according to company, but it is commonly driven by a drive for cost-efficiency.

“The advantages of the multi-asset concept on the buy-side are that dealers have a streamlined and dedicated single point of contact for execution,” says Katrin Petersen, Head of Distribution at Barclays. “You also have a lot of shared experience on how and where to get the best liquidity and execution. If you combine all that together, you are very likely to have a better understanding of market trends and also the correlations between each asset class.”

““ The advantages of the multi-asset concept on the buy-side are that dealers have a streamlined and dedicated single point of contact for execution.

Katrin Petersen  
Head of Distribution, Barclays

“It is also an efficient way to manage market movements and shocks. You can react quickly on functions such as hedging if you have visibility on all classes together at the same time.”

“For OTC derivatives, and bilateral trades in particular, given the challenges that come with a bilateral trading set-up, like discounting and initial margin, it is important to have a multi-asset trading desk that knows what is important for execution and how to manage the process.”

“You can also optimize your human and financial resources. The structure can create better collaboration between single teams – generating better ideas and better risk management.”

The hunt for efficiency comes in an environment of constant cost pressure, with many firms unable to raise fees in a highly competitive market. This challenge comes alongside a burdensome regulatory environment that affects large, mid-size and small asset management firms alike.

“The challenges that we see, from our and the asset managers’ perspective, is the enormous pressure from the regulatory side,” says Pieter Aartsen, Chief Operation Officer at AFS. “It comes through in the onboarding of clients, but also the organization itself. And the requirements are more and more.”

For larger asset managers, where scalability is more achievable, the need to economize wherever possible has led to multi-asset desks. The degree to which asset class functionality is integrated varies by firm. For many, the first logical step in a multi-asset structure is to combine the functions of a cash asset desk with its derivative variation. This allows for more efficient central risk book management, as the desks handle highly correlated products, such as sovereign bonds and interest rate swaps or CDS and credit, as well as more efficient recycling of risk.

““ We are transitioning from a world where we had separate teams for derivatives, bonds and FX and cash equities into a world where derivatives and cash products are traded together by one team.

Tobias Windecker  
Director, European Head of Derivatives Trading, Allianz Global Investors

“We are transitioning from a world where we had separate teams for derivatives, bonds and FX and cash equities into a world where derivatives and cash products are traded together by one team,” says Tobias Windecker, Director, European Head of Derivatives Trading at Allianz Global Investor. “We have spread our derivatives knowledge across the team, which for a large asset manager such as us makes most sense, not just to serve our internal and external clients better, but to have a broader knowledge base.”

“All of that will be supported by technology solutions – most of them custom-made. This frees up traders’ time from all the tasks where they can’t really add value, like smaller orders on highly liquid instruments.”

## Automation through consolidation

While many firms are seeking greater multi-asset capabilities within their trading functions, most still recognize the importance of specialized traders, whose expertise in an asset class gives the desk an edge. For many, the aim of multi-asset trading is to create space for these specializations to flourish. At this stage, the story of integration becomes one of automation.

“At a large asset manager such as ourselves, we still have specialized equity and fixed income traders,” says Werner Eppacher, Global Head of Trading at DWS. “What has changed over the last couple of years, which you could truly classify as a multi-asset trading desk, is an added layer where traders don’t talk about the instrument itself but workflow and automation.”

“That way of thinking unifies the various asset classes.”

While bonds and equities are executed according to different protocols, there are still points where commonality can be found in workflows, which, in turn, creates efficiencies for a firm. While the reaction to cost pressures may differ, efficiency is an objective that all buy-side tiers seek.

“We are always thinking about how we can improve our operational processes to be more cost-efficient and find better access to liquidity in the markets,” says Florian Astheimer, Managing Partner at Empureon Capital Management.

“That is something where smaller firms can have a competitive advantage over larger firms because they are more flexible and can adapt more easily to different market scenarios, structures and investor demand.”

“That is why we are constantly investing in technology. We try to make our processes really lean and efficient.”

Ultimately, the objective of most buy-side firms is to liberate their traders from administration and let their talents shine. In cross-asset integration, many firms hope to alleviate some of the burdensome aspects of daily financial market business and allow trading desks to create alpha.

“It is very important to have a good trader with good skills who really knows his asset class; for me, that is the extra mile that you can give for the PM or client,” says Valerie Noël, Head of Trading at Syz Group. “I like a mix of automation, specialists and some cross-asset participation.”

# The challenges of mid-size and small asset managers

Without the scale advantages of their larger rivals, mid-size and smaller asset managers have long had to find a unique edge in markets, balancing needs such as liquidity with the flexibility to seek more niche opportunities for returns.

While a smaller set-up can allow for faster decision-making, nimbler operations are often compromised by fewer banking relationships and resources compared to those enjoyed by the largest buy-side firms.

“There are some challenges that large firms face which we as a small firm do not,” says Rui Soares, Member of FAM Investment Team/Fund Manager at FAM Frankfurt Asset Management.

“In that sense, small is beautiful. Is small perfect? Obviously not; there are some things smaller players would like to do which are not easy to implement, such as tail risk hedging in credit, which is much harder to do with CDS as a smaller firm, which big players in the space don’t want to onboard.”

Despite this, for those firms that take the time to build contacts, expertise and AUM, more compact operations do present an opportunity to enter more niche and specialized markets. This allows for flexible strategies that can swiftly move between asset classes, participate in liquid markets, and extract illiquidity premiums where possible.

“We trade liquid products, such as Eurex index options, but also more long-dated products where we try to extract an illiquidity premium, such as very long-dated swaptions and FX correlation swaps,” says Thomas Wihan, Senior Fund Manager at Impact Asset Management.

“We don’t see illiquidity as bad, but as a return source for us while exchange-traded products maintain our convex portfolio.”

The other frontier on which many mid-sized and small asset managers compete is technology. While the investment dollars of larger players in the space create an inherent advantage, it can be easier for smaller firms to embed expertise and a more unified way of thinking across the organization.

“We joke that we are a tech shop that likes to play in financial markets, as pretty much everyone in our organization, from the junior ops staff up, can do some coding,” Russell Hart, EMEA Chief Operation Officer and Business Development at Manteio Capital.

“However, competing with larger firms that have budgets that far exceed ours is a constant issue. That said, there are definitely areas where we think that being smaller allows us to be a bit more nimble and fast.”

# Futures slot into credit ecosystem as adoption gathers pace

The futurization of credit has rapidly gained momentum in Europe, gaining acceptance and enthusiasm among market participants as a listed instrument for exposure to a traditional OTC market.

Given the deep OTC roots of credit, both in its cash and derivatives products, releasing listed products for the market has necessitated a careful targeting of market participant needs.

“It was a commonly held view that listed products were competing or taking liquidity away from OTC markets,” says Lee Bartholomew, Global Head of FIC ETD Product Design at Eurex. “However, this view has changed. With credit futures, we have been able to demonstrate that they can effectively co-exist with OTC markets.”

A crucial element of credit futures’ appeal is their broadening of market access across the buy-side. While OTC credit derivatives remain an important facet of the market, the complexity of compliance, technology and risk management, not to mention maintaining an ISDA in these markets, can be overbearing. This is especially the case with mid-size and smaller asset managers, many of whom could

not access the bilateral relationships needed to trade CDS – even if they were willing to take on the operational burden.

In addition, the structure of credit futures offers greater simplicity to many investors.

“When there is market stress, you usually have the biggest basis between CDS and cash,” says Christian Weber, Head European FICC Market Specialists at Bloomberg L.P. “That is when you start sweating and what you don’t have with a future. With a future, you have a perfect match for an underlying to hedge.”

“It gives you confidence, even if it’s shaky – you are getting what you are expecting in terms of the performance. For the CDS, you never do as it is completely differently constructed.”

In investors’ calculations, liquidity often trumps the cost-efficiencies of listed derivatives when deciding whether or not to trade OTC, ETFs or futures. But healthy momentum is already building in futures liquidity, with good on-screen liquidity for smaller tickets and a robust block market for larger items.

“It was a commonly held view that listed products were competing or taking liquidity away from OTC markets. However, this view has changed. With credit futures, we have been able to demonstrate that they can effectively co-exist with OTC markets.”

Lee Bartholomew  
Global Head of FIC ETD Product Design, Eurex

“It is much easier for us to use listed and clearable products than OTC,” says Imanol Urquizu, Head of Derivatives at Santander Asset Management. “It can get really complicated for some asset managers to get the necessary permissions to trade OTC.”

“Liquidity might not yet be there on-screen, but it does exist with the market-makers, large banks and institutions. When I started analyzing the product six months ago, I was very surprised by the size that providers were willing to trade as blocks – for blocks of €100m, you can get 6bp spreads and up to €1bn of an investment grade product with between 30–40bp of spread, which is attractive in credit.”

Urquizu adds that for €5–20m tickets, on screen liquidity has been impressive, with orders filled almost immediately.

This level of development already serves a section of the asset management community well, making management of daily fund outflows in the €10–20m range a much smoother function.

ETFs – a more developed instrument in the credit market – are also a vehicle for this function. However, portfolio managers are often limited in how much they can use these due to internal restrictions on allocations to any single provider.

However, as with the interplay with OTC, listed credit futures have been designed as a part of the market’s broader ecosystem to function with other exchange-traded products.

“We see credit as a portfolio product,” says Bartholomew. “Initially, we listed ETF options. The segway into futurization was the ESG

corporate bond SRI and then it extended to high yield corporate bonds, emerging markets and sterling credit, with dollars to follow in Q2. We fully believe in a multi-currency approach to credit, establishing Eurex as the global venue for Credit Derivatives.”

Indeed, credit futures benefited from the earlier development of credit ETFs, which built a non-bank liquidity provider presence for the asset class. That then allowed for the faster adoption of futures into these market makers’ offering for the credit market.

Having started life primarily as a block trade product, improving order book liquidity is now enabling ever-larger trades to be executed on-screen, as described by Urquizu. This is bringing in new market participants.

For Andreas McGrath, Credit Delta 1 Trader at Susquehanna, the first stage of a futures market’s development is its use by real money managers trading the product as a replacement for passive risk.

“That is the low-hanging fruit,” he adds. “The next phase in use cases, is when the CTA market realizes that they can address a brand-new market that they couldn’t before via the futures mechanism. So European (cash) credit has been off-limits to those market participants, which represent a \$350bn global industry. The third phase is concurrent with options on credit futures being listed, maybe next year, which is CVAs and loan books which have exposures on the banking side which are much better served via cash than CDS.”

“The final phase, which is still a couple of years away, is retail adoption.”

# Liquidity and collateral management

After a near decade of central bank monetary stimulus and low activity, the rates market has sprung to life in recent years. Spurred by rate rises and increased volatility, the demand for rate derivatives and repo funding options has grown.

In this section, we take stock of the developments in Europe’s rates market during this period and where they might go next. This includes the growth of a listed short-term interest rate derivatives market, principally demonstrated by the adoption of €STR futures, but also includes the possibility of a futures product to serve the growing presence of the EU as an issuer in bond markets.

On the question of repo, market participants are looking to the next stage in the evolution of Europe’s cleared market – namely how to build a greater buy-side presence.

However, European rates markets have also been a story of regulation, with recent advances on the issue of swaps clearing supervision promising a clear set of rules for the market. The negotiations to finalize EMIR 3.0 were long and hard, but the market is looking forward to building on the framework it has set, as explored in this section.

“It is much easier for us to use listed and clearable products than OTC. It can get really complicated for some asset managers to get the necessary permissions to trade OTC.”

Imanol Urquizu  
Head of Derivatives, Santander Asset Management

# European rates ecosystem pulls together, as the market seeks co-efficiency

In the recently elevated rates environment, trading activity in the interest rate space has risen – with futures, swaps and repo activity all increasing on the back of uncertainty and a significant reduction in excess liquidity. Both factors have driven a growing need for market-based funding and pushed users to find trading efficiencies wherever they can.

Against this backdrop, the futures market has made one significant step with the launch of €STR futures and is considering another as the EU's bond issuance program positions it as a significant supplier to Europe's debt markets.

While other jurisdictions, such as the US, have enforced regulatory mandates to move traders from Ibor benchmarks to risk-free rates, such as Sofr, the EU has kept Euribor while introducing €STR as a replacement for the EONIA benchmark.

"Europe does not have a regulatory-driven transition from Euribor to €STR," says Matthias Graulich, Executive Board Member at Eurex Clearing. "Nevertheless, there is a use case for €STR futures as there is risk attached to €STR and people want

to manage that risk. Therefore, there is a continuous use case for €STR, independent of the question of whether there will at some point be an end attached to Euribor or not."

That question is still the cause of considerable debate. Factors such as corporates' need to know their forward-looking rates, necessitating the introduction of term Sofr rates in the US, entrenching demand for Euribor. However, continued concerns about its submission process still cast doubt over its long-term viability.

"From a bank perspective, I would like to see much more executed on €STR in particular because the Euribor fixing process still leads to surprises sometimes," says Thilo Rossberg, head of FICC markets at LBBW. "However, for corporates and project finance users, the calculation is different."

"Take project finance – and other loan participants – users want to know in advance what they're going to pay in interest for a certain period. They don't want to deal with issues like daily fixings and averaging. That's why in the real economy there's a strong preference to stay on Euribor and why there is still a lot of Euribor flow. We have seen this trend assert itself in the US dollar market too, where after the transition from Libor to Sofr the creation of term Sofr seemed necessary to cater to the needs of this user base."

"For banks, particularly in the derivatives space, the interest on your collateral is the main driver of how you look at funding and your discounting."

"From that derivatives perspective, it makes sense to look at €STR rather than Euribor. It does feel like there is a slow-moving train towards an €STR base spread, with more banks steering towards spreads over €STR and viewing it as the most granular interest rate there is."

"However, changing that logic within a bank is a big undertaking and a slow process, with technical adaptation of the systems, adjusting to a new legal framework and auditors."

For now, the need to introduce regulatory impetus and force an end to Euribor has subsided, supporting the thesis that €STR's growth will indeed be a more long-burning, organic process. In part, Euribor's revival has been driven by the rates environment of recent years, with greater activity making data collection more robust.

"A few years ago, when some of us were part of the euro RFR working group, we all assumed that full €STR replacement of Euribor was what we were working towards," says Ales Lipensky, Managing Director, Head of Derivatives Funding at Deutsche Bank. "I guess a part of that was some doubt at the time about the submission mechanism for Euribor and whether that would be a sustainable long-term process that the regulator would allow to continue and if it would be robust enough."

"Something that wasn't realized at the time was that the overall level of rates had contributed to overall skepticism over the Euribor submission mechanism. Since then, things have changed a lot. There has been a big paradigm change in central bank policy and rates have moved higher. That means that there is just a lot more happening in the very short tenors, which should in turn mean that Euribor submissions become more robust."

## The futures of the EU

The volatile conditions over the last two years have been challenging for fixed income markets, with 2023 a particularly painful year to navigate. Between the Silicon Valley Bank failure in March and October, the market endured a rocky ride – contending with inflation expectations and ECB balance sheet unwinding. This created high volatility and low demand for the asset class, although demand for short-term rates and regulated instruments increased.

Since then, volatility has fallen and interest in fixed income has been revived.

"Aggregate flows were important and liquidity improved, especially in credit markets," says Michaël Soued, Head of Aggregate and Multi Asset Total Return at Ostrum Asset Management.

"Volatility everywhere is now pretty low. As a portfolio manager we have had a lot to do, especially with hedging duration and curve factors, which have been the most volatile areas. We have been an active user of Eurex Bund futures and swaps to hedge spreads more precisely."

"We are now looking more at tail risk hedging with options and payer swaptions. The derivatives market is very useful for achieving opportunities in relative value terms. As it is very liquid, we can actively manage our positions and define our targets for risk and alpha."

The desire to use listed fixed income derivatives has been widespread, with Eurex recording its strongest-ever month for fixed income derivatives in January.

"As we hear from market participants, international investors are now returning to the European market," says Jutta Frey-Hartenberger, Fixed Income Product Design at Eurex, "especially from Asia, as Europe now looks more attractive compared to the other G10 economies."

An increasing part of the European debt offering is EU issuance. While the EU has existed as a capital markets borrower for 40 years, its presence has increased significantly with the NextGen EU and SURE program, which was adopted in 2020.

Despite only issuing in euros, the EU already has an international investor base, with buyers from Asia, Southeast Asia, Australia and Canada.

"We want to develop the ecosystem of EU bonds further," says Siegfried Ruhl, Hors Classe Adviser, Directorate General for Budget at the European Commission.

**“ We want to develop the ecosystem of EU bonds further.**

Siegfried Ruhl  
Hors Classe Adviser, Directorate General for Budget,  
European Commission

**“ From a bank perspective, I would like to see much more executed on €STR in particular because the Euribor fixing process still leads to surprises sometimes.**

Thilo Rossberg  
Head of FICC Markets, LBBW

“ A couple of years ago, the EU was a niche issuer. Now we are talking about an issuer who has the potential to become the benchmark for European bond risk, given it will constitute a good mix of all European countries. As such, it is natural to think about a future equivalent instrument for the issuer.

Phillip Class  
 Managing Director and Head of Central Europe Flow Rates Sales, J.P. Morgan

Progress on this front has included a unified funding approach to reduce fragmentation of the EU curve, ECB classification of EU bonds as collateral category one and quoting arrangements on BrokerTec and MTS.

“In November last year, we implemented quoting arrangements and now we are working on a repo facility,” adds Ruhl. “But we also require market support for the transition of EU Bonds to the EGB-market. Banks need to trade our bonds on govvie desks, investors need to amend investment policies, risk policies, collateral agreements and benchmarks to be able to take advantage of EU Bond as a liquid and safe asset with attractive yields.”

Another important part of the EU bond complex will be futures as an additional tool for bringing pricing transparency, deeper liquidity and more efficient risk management to the ecosystem.

“A couple of years ago, the EU was a niche issuer,” says Phillip Class, Managing Director and Head of Central Europe Flow Rates Sales at J.P. Morgan. “Now we are talking about an issuer who has the potential to become the benchmark for European bond risk, given it will constitute a good mix of all European countries.”

“As such, it is natural to think about a future equivalent instrument for the issuer.”

In order to create the futures, market participants will need visibility on the issuance activity of the EU bond complex beyond 2026 – when Next Gen EU is set to end – to ensure the sufficient outstanding volume and repeat issuance needed to constitute a reliable underlying for a futures contract.

Ruhl points out that by 2026, the EU will become the fifth-largest issuer in the European capital market. After 2026, it will still need to roll-over its debt, necessitating annual issuance volumes comparable to a mid-size sovereign.

“There are certain prerequisites such as outstanding debt and what happens beyond 2026 to ensure the sustainability of a futures product,” says Frey-Hartenberger.

“It is important for us as an exchange to address a market need and support the development of EU bond liquidity, as well as developing a toolbox for the EU fixed income market with futures, but also a repo facility as announced by the European Commission is supportive. However, timing is important.”



### Repo efficiencies

Since rates began to rise and central bank stimulus waned, repo has taken an increasingly important role in funding operations. Tighter financial conditions have also elevated the importance of achieving cost-efficiencies wherever possible, which has increased the appeal of cleared repo.

“If I look at who is now active in the cash-driven funding and financing market, it is players like government treasuries that on a cleared repo product get close to the ECB rate for reverse repo,” says Graulich.

“Pension funds are also moving into cleared repo, where they get better terms and easier operational processes with a variety of counterparts without needing multiple individual agreements in place. The 2010 interbank cash-driven repo market that had an outstanding of €250bn is not yet back as there is still €3.5 trillion of excess liquidity in the market.”

“So, we still see further upside on repo going forward. New client types like hedge funds are moving in as their legs being part of a multilateral netting pool for dealers which will reduce balance sheet requirements and allow for a more cost-efficient business and increase capacity available for the market.”

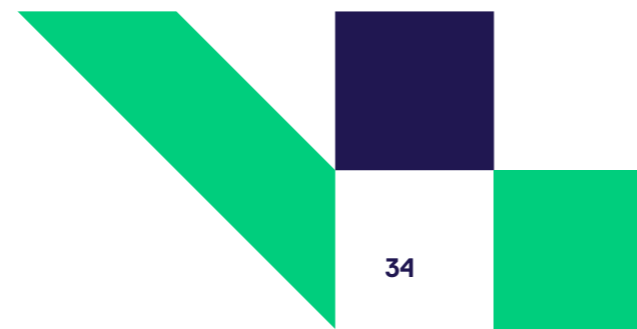
Just as important to control costs as liquidity will be technology, with market participants such as pension funds – which have particular collateral needs due to their investment models – especially keen to find solutions.

“Cleared repo is a good example of an efficiency that the industry is looking forward to,” says Michel Lansink, Head of Trading at Cardano Risk Management.

“There are so many factors in play in collateral management that it becomes a system comprised of different systems – cash moves through one channel, whilst bond movements follow a different chain of events. It would be great to combine the two to allow for the efficient and timely meeting of margin calls. From a buy-side perspective, such developments are very welcome.”

“ Cleared repo is a good example of an efficiency that the industry is looking forward to.

Michel Lansink  
 Head of Trading, Cardano Risk Management



# With the end in sight to regulatory grapples, euro clearing looks ahead to competition

Regulation has been the dominating story of Europe's derivatives clearing industry ever since the UK's vote to leave the European Union. This year, the end to a nearly decade long saga came into sight, as EU co-legislators reached a compromise on EMIR 3.0, a text that will mandate how Europe's clearing system is structured.

Brexit accelerated long-standing EU concerns about its firms' reliance on CCPs located outside the eurozone. The clearing of the vast majority of euro-denominated swaps taking place at LCH, now a third-country CCP, became a major issue to address for regulators.

"It is vital that EU clearing rules work and work well," says Mairead McGuinness, European Commissioner for Financial Stability, Financial Services and the Capital Markets Union at the European Commission. "That includes mitigating some of the risks that stem from the EU's excessive reliance on central counterparties located outside the EU. And so, the newest version of EMIR is about ensuring that the EU's central ecosystem is both safe and attractive."

Many measures have been put forward and debated since Brexit, ranging from relocation and derecognition under EMIR 2.2 to the active account requirement of EMIR 3.0.

All this time, the fine line between fostering competition and ensuring continental resilience has thrown up multiple points of contestation. With a final text on EMIR 3.0 yet to be published and the market awaiting regulatory technical standards from ESMA.

"We have come a very long way since the ECB first raised its substantial systemic risk concerns for the first time in 2011," says Niels Brab, Chief Regulatory Officer at Deutsche Börse. "We all jointly worked very hard to avoid some of the more drastic intervention measures that were discussed around EMIR 2.2."

"Deutsche Börse and Eurex Clearing have always pursued a market-led approach EMIR 3.0 leans on that philosophy."

The multi-year process that led to EMIR 3.0 constituted long and arduous negotiation and industry consultation. While the EU now has an enhanced framework for its clearing ecosystem, significant changes have already been underway in anticipation of the incoming regulatory requirements.

"We are happy that the text has ended and with it, a multi-year process of working on it," says Gaspard Bonin, Deputy Global Head of Derivatives Execution & Clearing at BNP Paribas.

"That is an achievement in itself, and we should recognize the efforts of all those who have worked on it. The European co-legislators were not necessarily starting from aligned positions, and they managed to in the end find a way to come to an agreement before the European elections, so we should recognize this work."

**“ We will have to see if there are still some elements that necessitate further improvements.**

Klaus Löber  
Chair of the CCP Supervisory Committee, European Securities and Markets Authority (ESMA)

"A lot has happened since Brexit. Clearing of euro repo has completely moved to the continent, with a good development of competition between Eurex and LCH. In credit, ICE has closed its London operations while LCH has developed its Paris center. Eurex has also developed its swaps offering too, with an element of market share and business going through it today."

The active account requirement, which mandates firms to clear a proportion of their trades at an EU CCP not only in euro swaps but also in zloty OTC IRD and EUR STIR, has been the main focus of debate in EMIR 3.0. However, it is important to stress that the act contains other measures, designed to promote competition and constitute wins for the industry such as streamlined processes for permitting CCP products.

"We think the final active account proposal is the most operationally efficient and clear," says Scott O'Malia, CEO at ISDA.

"Given some of the options that were discussed over the year, this is probably the most straightforward option. Removing many of the quantitative thresholds from the mandate to clear in the EU will also make people's lives easier. Five trades in a subcategory is straightforward and firms will be able to understand what the scope is once ESMA finishes the RTS."

## A competitive future

With a regulatory foundation for the continent almost set, the industry can start to look ahead to a future where market participants can determine the future shape of the EU clearing ecosystem based on their own competitive efforts.

A crucial first step for the market will be encouraging new sources of liquidity.

"The requirement will generate more activity in accounts in EU CCPs," says Bonin. "However, the regulation does not impact a big part of the market that is necessary for the clearing ecosystem to be stable and complete. Large US and UK hedge funds are not impacted, and neither are most asset managers, who clear voluntarily and are below the thresholds. Public and semi-public entities are also very important in this regard. These participants will need more incentive than just this regulation."

While the matter is, to some extent, now in the hands of the market, regulators will still be keeping a keen eye on how EMIR 3.0 plays out in practice.

"We will have to see if there are still some elements that necessitate further improvements," says Klaus Löber, Chair of the CCP Supervisory Committee at the European Securities and Markets Authority (ESMA), who welcomed the finalization of EMIR 3.0 negotiations and the efforts that had gone into them.

"I am not advocating at this juncture for EMIR 3.2 or EMIR 4.0, but we will have to see to what extent what has been agreed in EMIR 3.0 lives up to expectation," Klaus added, "particularly when it comes to limiting potential risks and challenges to financial stability in the European Union."

**“ It is vital that EU clearing rules work and work well.**

Mairead McGuinness  
European Commissioner for Financial Stability, Financial Services and the Capital Markets Union, European Commission

# Europe considers buy-side pivot as cleared repo beckons

Cleared repo has presented a considerable opportunity for European market participants to reduce costs through margin efficiency and achieve executable pricing in challenging market conditions. While banks have long enjoyed these benefits, the market now needs more buy-side actors as it takes its next steps to maturity.

To some extent, buy-side participation is already happening. The clearing obligation for interest rate swaps has pushed pension funds into cleared markets and raised the necessity of cash management options like CCP cleared repos and reverse repo. More broadly, the withdrawal of ECB liquidity has increased the attraction of repo funding across markets.

However, for many firms there are considerable barriers and costs to entering cleared repo.

“For most buy-side firms, it is not easy to access the cleared repo market,” says Alexander Jacobs, Head of OTC Clearing, ABN AMRO Clearing Bank. “If you are large enough, you could opt to become a full member. However, most buy-side firms do not want to become a full member, as it does not fit their strategy and they do not have the operational resources.”

Facing these challenges, many market participants have cast an eye across the Atlantic. The US cleared repo market, which is older than its European equivalent, has a greater variety and depth of market actors, with greater non-bank participation and a more unified structure – with all Treasury clearing going through one CCP.

“2,400 buy-side funds clear repo through one CCP in the US, an offering that has existed since 2005,” says Frank Odendall, Head of Securities Financing Product & Business Development at Eurex.

“A major difference with the European market is that US cleared repo was initially driven by custodians, such as State Street. Custodians preferred to move client cash away from their balance sheet and into reverse repo, which seemed better from a capital costs point of view.”

“Another notable difference is hedge funds have been able to join the FICC since 2017. That then increased in importance as FCMs came into the space because their clients were seeking funding. Hedge funds, or more holistically non-US counterparties, are treated very badly under G-SIB capital rules. That creates a strong motivation to move repo activity with non-US entities into a US domiciled clearing house.”

**“The appetite is absolutely there for cleared repo across the street. However, it requires a significant use of client resources to set up on the platform.”**

Nicky Parsons  
Head of Product for Fixed Income Prime Services and Cleared Repo EMEA, Société Générale



Those historic advantages received a further boost from regulation with the announcement of mandatory US treasuries cash bond and repo clearing. Whilst there is no repo clearing mandate in Europe on the immediate horizon, Eurex already sees significant daily activity in its version of “sponsored” repo, i.e. the ISA Direct clearing model. E.g. in 2023 the “sponsored” buy-side executed more than 16,000 repo transactions with an average trade size of approx. EUR 200mio on Eurex. In Eurex’ ISA Direct clearing model the buy-side becomes a direct clearing member, but with a traditional clearing bank taking over the responsibility for contributions to the mutualized default fund but often also many day-to-day operational tasks.

“The appetite is absolutely there for cleared repo across the street. However, it requires a significant use of client resources to set up on the platform,” says Nicky Parsons, Head of Product for Fixed Income Prime Services and Cleared Repo EMEA at Société Générale.

“Though Société Générale is active, the market needs more Clearing Agents to provide the services to clients, giving them access to Cleared Repo. The whole cleared repo ecosystem is still building out. In addition to Clearing Agents, more Custodians need to operate the power of attorney framework that is necessary to facilitate settlement with the CCP. As this evolves, more buy-side firms will arrive, including the hedge fund community under the indemnified model. The direction of travel is set; it just takes time.”

In order to further increase the attractiveness of CCP cleared repos, Eurex aims to migrate its repo margining methodology to its market clearing Prisma framework in 2024 with the ambition to offer margin netting with Fixed Income and Money Market Futures in 2025.

# Refit preparations hit the final stretch of the regulatory reporting marathon

European banks face a mounting workload from regulatory reporting rules in 2024, with a 29 April deadline for EMIR Refit constituting a major pressure point for the industry. The regulation will mark a new phase in oversight of derivatives markets, with a renewed focus on issues like data quality only set to increase the workload that firms are already grappling with.

As with the reporting refits being rolled out in other jurisdictions, EMIR Refit resulted from CPMI-IOSCO-led attempts to unify and simplify the reporting rules that govern financial firms.

This has proven a very difficult task, with some common elements adopted. Still, the ambition of standardization is often complicated by different technical specifications for rules and regulators' additional rules and priorities. For European firms, this is most likely to manifest in variations between EU and UK interpretations of EMIR reporting rules.

"There have been clear efforts to adopt aspects of the CDE fields," says Suzanne Calcagno, Global Head of Regulatory Response and Oversight MSS Operations at HSBC Bank.

"But as long as each regulator has their own technical specification for those fields, they are not standardized."

This constitutes a difficult task for firms already working under a heavy compliance burden. To what extent the industry is ready to hit the deadline is still an open question, with many likely to reach 29 April with day two items still to be implemented.

These items will likely include issues like UPIs, a new concept for the market, and pairing and matching. For many firms, discovering how best to interpret and test these fields will need to be a transitional process.

It will also be one that is dependent on reports and sample files from market infrastructure providers. Even aside from firms' internal workloads, managing the dependencies with clearing houses and trade repositories will be a crucial part of ensuring compliance and effective testing.

These dynamics, combined with the overall increase in fields that the new regime will bring, are increasing complexity. Requirements such as action and event types, which have been a challenge for many firms to interpret and validate, and enhanced expectations on trade repositories to validate submissions will increase regulatory reporting costs.

"We do not believe that budget and resources we have to spend on regulatory reporting across different jurisdictions will decrease in the near future," says Melanie Weber, Director Derivatives Clearing Design, Eurex.

"We all need to be prepared. It is a very important topic because it is one of the strategic enablers for the business. So, we have to get it right."

As well as the increased number of fields that firms will have to submit, firms will have to contend with the fact that many existing fields' names and requirements are changing.

"It is a very tough ask for firms at this stage in the game," says John Graham, Senior Director of Regulation at FIA.

While a headache for firms, this also represents a positive step for the industry.

"The level of complexity continues to increase," says Calcagno. "That is because of the way that regulators are now using the information, which is a positive."

"They have each developed much more sophisticated tools for consuming information and identifying what they perceive to be anomalies. However, that brings with it increased complexity in terms of their ask, as well as the requirement to find and correct errors, which is only becoming more urgent."

That represents a significant advance for the industry, with the quality of dialogue between firms and regulators on data noticeably improving in recent years. Data quality has long been a focus of regulators. Complaints that authorities do not use the vast quantities of data sent to them are increasingly irrelevant, with the capacity to analyze fields vastly enhanced by highly sophisticated algorithms. The data itself contributes to policy decisions, so its importance will only increase.

When discussing what firms can expect from the national regulators following the EU EMIR Refit go-live on 29 April, Tim Hartley, EMIR Reporting Director at Kaizen, said: "Based on interviews with the national competent authorities, the mood that I interpreted is that, come this point, they will be more interested in data quality going forward because of the number of changes under EMIR Refit."

"There will be no honeymoon period with EMIR Refit and some of the other G20 reporting regulations that are changing this year as well."



# Technology and digital assets

2024 is set to be a year dominated by technology. Much focus will rightly be on artificial intelligence and its applications to financial market firms and their operations. However, while the hype around blockchain and distributed ledger technology has calmed in recent months, industry efforts to apply it to processes like settlement continue. This section explores the progress of both.

Much like blockchain and DLT adoption have proven to be a slow-build process, AI might take time to feed into the financial system. Adoption of the technology faces challenges, principally on the question of data quality.

For the digital assets industry, the EU's introduction on the Markets in Crypto Assets (MiCA) regulation will mark an important moment, as the technology gains greater credibility in traditional finance circles.

Technological progress is proceeding on other fronts as well. Futurization of the FX market has been a complicated story. Still, recent innovation in the field is set to marry the benefits of OTC flexibility with listed cost-efficiency for market participants. Elsewhere in this section, the status of buy-side automation is examined, focusing on challenges such as transaction cost analysis and algorithm adoption.

# AI and Tokenization: the coming wave of change

The twin innovations of artificial intelligence and tokenization have the potential to transform derivatives markets. However, challenges to adoption remain.

In recent history, listed derivatives markets have transformed from open outcry to electronic trading. In the space of little more than 15 years, markets moved from being entirely manually brokered to predominantly electronically traded. The next wave of transformation could even be more disruptive.

When Bitcoin became mainstream in the mid-2010s, there was a bubble of hype around the potential for the blockchain technology on which it is built to disrupt financial markets. While the immediate impact failed to live up to the hype, the industry is making real progress with pilot cases coming to market in niche areas such as repo trading and OTC derivatives.

The blockchain's settlement efficiency allows the possibility of tokenizing assets and securities. In financial markets, tokenization refers to the process of converting ownership rights to an asset, such as stocks, bonds, real estate, or commodities, into digital tokens that are settled on a blockchain or distributed ledger technology (DLT) platform.

At the same time as DLT pushes towards the mainstream, artificial intelligence (AI) has gone from science fiction to the mass market in little more than five years.

"There is a convergence between AI and blockchain technology in financial markets," says Daniël Rood, Head of AI Startups EMEA, Web3 Google Cloud.

This convergence has huge implications for derivatives markets. While AI is already improving efficiency in a range of processes, such as reconciliations, DLT has the potential to fundamentally change the settlement process and the roles of firms within the market.

Helen Hartwell, Head of ETD Client Consulting at UBS, says: "The listed derivatives market is still at a fairly nascent stage on tokenization, but we are seeing more and more tangible examples live in the broader industry, outside of listed derivatives."

These benefits are soon coming to derivatives markets. Initiatives from companies such as Tokenovate are exploring the application of DLT to OTC derivatives trading and settlement.

There are several early pioneers targeting specific opportunities. For example, Archax, the UK-based venue, offers asset managers the ability to tokenize their funds. Such fund tokenization effectively creates fractional shares in a fund, significantly reducing the entry level to invest in the fund and increasing the potential investor base.

“There is a convergence between AI and blockchain technology in financial markets.”

Daniël Rood  
Head of AI Startups EMEA, Web3 Google Cloud

## “ The listed derivatives market is still at a fairly nascent stage on tokenization, but we are seeing more and more tangible examples live in the broader industry, outside of listed derivatives.

Helen Hartwell  
Head of ETD Client Consulting, UBS

Across finance, others are looking at sectors such as real estate or private equity – traditionally markets with low liquidity and high entry costs.

The opportunities for efficiency are clear: settling trades or processing documentation on a blockchain enables instant settlement, a single, golden source of data and the ability to create fractional units of a larger asset. However, the path to realizing those benefits is long.

Christoph Hock, Head of Tokenization and Digital Assets at Union Investment, says: “At Union Investment, we have had a 10-year journey when it comes to the adoption of blockchain. For us, digital assets are a wrapper; they transform traditional processes, such as physical documentation that sits with a central depository, into digital form.”

“Going forward we will ultimately be a token-based industry, bringing the financial market to a more sophisticated level compared to where it is right now. It is not a question of implementing technology for the sake of it. The key question for us when we evaluate the blockchain is what the benefits are. Tokenization brings speedier settlement, less risk, lower costs and better access to data.”

### Barriers to change

There are several barriers to change in both tokenization and AI. A key issue is that AI is only as good as the data it analyzes. “A big challenge for firms is the ability to safely and securely scale these capabilities,” says Hartwell. “This has to start with a solid data foundation. Not only do you need a lot of data, which firms in our industry have more than ever before, but you also need high quality data. A common challenge is that the critical data

points are held in disparate data sets housed across different systems and at varying degrees of quality. To move beyond basic data analytics, the key is how well a firm can bring together and connect those data silos, making sense of the data holistically and making it accessible for business decision-making.”

The development of DLT-based services requires an even bigger lift. Electronic trading came at a time when everything was moving online, so the investment in infrastructure and technological acceptance was spread across multiple industries. With DLT, innovation and implementation will be much more fragmented, with fewer use cases across industries.

Google’s Rood says: “We are seeing the democratization of AI. The large language models that are available to consumers allow them to query data directly and gain new insights into datasets. Traditional analytics builds on what you know; AI gives you insights that you wouldn’t even see. Doing that safely and securely is key.”

“Tokenization is a similar topic. Blockchain provides for an interesting opportunity for disintermediation. However, there are several challenges – how to run and maintain nodes, how to make sure that your platform is interoperable with other platforms for example.”

Hartwell adds: “The advancement of distributed ledger technology in the listed derivatives marketplace has been at a slower pace than many anticipated, but it holds a lot of promise. The hot topic today is tokenized collateral settlement where it could offer margin efficiency and reduced risk through instant settlement.”

“In terms of where we are right now, while there have been several examples outside listed derivatives, we are yet to see anything take off. That is due in part to the interconnectedness of the industry but also down to regulation.”

“While regulation at a global level remains fragmented and uncertain in many jurisdictions, the EU has been a pioneer in providing a comprehensive regulatory framework for tokenization” says Union Investment’s Hock.

“Regulation is very clear when it comes to tokenization,” he says. “In the EU, we have MiFID II, which covers tokenized bonds and other asset classes, including fund shares. And in Germany, we have the Electronic Securities law, which came into force in 2021, and in 2023, the DLT pilot regime, which allows trading on DLT MTFs. Typically, when it comes to technology, Europe has lagged the US, but in this respect, it is ahead of the curve.”

### Forging the market of tomorrow

With the dual forces of AI and DLT now spreading across capital markets, the question today is how long the transformation of the market will take and what the market structure of tomorrow will look like.

With regards to AI, Hartwell says: “It is clear that digital technologies are advancing rapidly, and AI is set to play a significant role in shaping the future of our marketplace. In post-trade, I think we will see more and more focus from firms on how to scale their capabilities on this in a way that enables the delivery of solutions that offer true and lasting value for clients.”

“To enable that, a gradual transition needs to happen with the way firms approach data. Once the data foundations have been embedded, the pace of change will increase.”

Hock is bullish on the future: “We are in the middle of Web 3.0. The next big game changer is the token economy and digitization. AI will go hand in hand with this and make processes across capital markets much smoother.”

“It is not simply a copy-and-paste approach. I am sure that in five or ten years, the market’s efficiency will have increased significantly.”

Instant settlement of contracts powered by AI and executed on a DLT platform with limited need for intermediation will have a greater impact on market structure and the role of participants in the derivatives market than the advent of electronic trading.

“But fundamentally, some things won’t change”, says Rudolf Siebel, Managing Director at the BVI. “The key thing is to create trust in the new technology,” he says.

“Human behavior still needs to be regulated. The whole value chain has to be built on trust and then pension funds and other institutions will be more comfortable in investing. Europe is in a good position as regulation is creating the basis for trust.”

One thing is for sure – a significant evolution of the derivatives markets is a matter of when, not if. Rood: “Change is already here. The way we operate today is going to dramatically change, and it will go faster than anyone expects today.”

## “ The key thing is to create trust in the new technology.

Rudolf Siebel  
Managing Director, BVI

# Putting choice at the heart of FX markets

The FX market is moving towards a hybrid model offering clients the benefits of both OTC and clearing. The pace of change increases as the market collaborates together with exchanges to innovate and develop new products.

The themes that have dominated the discussions around FX have remained relatively constant for the past five years. The Uncleared Margin Rules (UMR), which came into force in 2022 and the capital treatment of FX for banks under SA-CCR have changed the economics of trading in bilateral uncleared markets while, at the same time, the electrification of the market has continued apace.

While there were initial expectations that large swathes of the FX market in Europe would move into futures following the introduction of UMR, these have been dampened by experience, with OTC markets remaining dominant.

That is not to say that listed markets have not benefitted from the regulatory changes and volumes have grown significantly from a low base. Today, the potential for growth in FX futures remains significant, with current volumes still accounting for a small fraction of the overall market.

Carlo Kölzer, Group CEO of 360T Group, says: "The story for years has been that the FX futures market is going to take over the OTC markets but that hasn't happened. However, capital costs at banks and interest rates rises have forced banks to look for efficiency and they are looking to combine the efficiency of the OTC markets with the efficiencies of the cleared market."

UMR was designed to decrease counterparty risk in OTC markets through the introduction of new margin requirements, which raised the costs of doing business OTC. SA-CCR has imposed higher

capital rules on banks, particularly in FX dealing where, according to Shuo Wu, Global Head of Forward eTrading at Deutsche Bank, the cost of trading went from 10% of the bid/offer to up to three times the spread in instances where the client didn't have a CSA in place.

"FX swaps went from a low margin business to an even lower-margin business," he says.

These changing economics have forced the industry to innovate in terms of market structure. While there was a widespread move into clearing following post-crisis regulatory reforms in the interest rate swap market, there was no mandate to clear FX.

Wu says: "FX works differently to interest rates. It will not be possible to replicate what happened in the interest rate market in terms of the move to a near-fully cleared, model as there is no regulatory mandate to do so."

"FX clearing will be driven by economics: what is in it for the bank and what is in it for the client. The path going forward is for more tailored solutions when it comes to FX clearing. There will be clients looking for more cleared products and moving their business into futures to get the margin efficiencies. For certain customers, full clearing will be a viable option."

Aside from the absence of a regulatory mandate, several nuances to the FX market complicate the transition to clearing. While CLS is ostensibly the settlement infrastructure for FX trades, in reality over 99% of trades are netted off at the large banks which reduces the actual funding requirements in CLS significantly.

When banks switch from the current netting model to clearing, they benefit from multilateral netting between different counterparties. However, doing so also creates a different pool of liquidity, which causes them to lose some of the netting benefits that exist today. This is slowing down the adoption of clearing.

Jonas Schirm, head of FX Institutional sales at Julius Baer, says: "The question has to be "why now" when it comes to clearing. UMR already is a strong incentive but what will the next catalyst be, and which market participants will be leading the change?"

Schirm argues that the development of a hybrid model is a viable path forward, providing choices to FX traders. He says there is a trade-off for all clients between cleared and non-cleared and the inflexion point is different for every client. A mutual fund, for example, that already clears other products will have greater familiarity with the market structure and mechanics of clearing in a way that a family office being offered clearing for the first time will not.

## Move to hybrid

In 2015, Deutsche Börse bought the foreign exchange trading platform 360T, its biggest acquisition to date. Together 360T and Eurex are offering the FX Exchange for Physical (EFP). EFPs allow investors to combine cleared and uncleared liquidity pools by simultaneously executing an FX futures contract and an OTC transaction in the opposite direction.

"By using EFPs, investors can trade OTC and move the risk into the futures markets offering 'the best of the two worlds'," says Carlo Kölzer, Group CEO of 360T Group.

EFPs go a long way towards the development of a hybrid market that provides choices to investors and smoothens the transition to clearing. The development of Flex Futures, which allows for non-standard maturities, and is underway at Eurex for FX, provides another tool.

FX forwards today are mainly used as hedging instruments with specific exposures to be matched. The OTC markets provide full customizability with regard to the size and settlement of that hedge

in one trade. Futures only trade on IMM dates in standard contract size so there is a big difference in terms of the relative customization they offer. Therefore, for clients to adopt a future, they must change how they operate their trading aligning it to IMM days.

Flexible futures go a long way to solving these barriers to adoption. They are designed to provide a convenient and accessible path to the futures market. DB's Wu, who is developing the contracts with Eurex, says that rather than asking clients what they wanted from the contracts, which generated significant variations in response – he asked what they didn't want.

"This narrowed down the priorities for the new products," he says. "Clients don't want to increase the costs of doing business, they don't want fragmentation of liquidity and they don't want a large technology burden. They want a smooth transition that provides them with flexibility and choice of whether to clear or not clear."

Flexible futures come into play by offering a futures contract that relies on the deep pools of OTC liquidity. The futures clearing provides the same workflows as traditional futures, so no large-scale technology build is required.

With the flexible future, everything is nettable and cross-margined. "The benefit is on both sides, for the client and the bank," says Wu.

The future of FX markets will be hybrid, but the listed and cleared markets are increasingly appealing to investors through regulatory change and industry innovation. Choice is at the heart of the market today, and investors will benefit from that choice.

“By using EFPs, investors can trade OTC and move the risk into the futures markets offering ‘the best of the two worlds’.”

Carlo Kölzer  
Group CEO, 360T Group

# Buyside automation Algos and automated trading

Over the past decade, the buy-side has taken greater control of more elements of the technology stack and trade workflows. As the sophistication of markets evolves, so has the approach of asset managers.

Decision making at asset manager firms with regard to technology has changed significantly over the past decade. In areas where funds would traditionally have fully outsourced control, such as the use of algos and automation of trading, they are now looking to bring control in-house. This insourcing has been developed in partnership with the sell-side rather than in place of.

Stefan Helber, Team Lead Rates and FX Trading Europe at DWS, says: “We are connecting the dots based on increases in access to automation techniques, which have increased the level of control we can take to leverage technology. This helps us to do more differentiated coding to cater to our traders’ needs. We are automating what we can from a market impact and liquidity perspective.”

The needs of asset managers vary according to their strategies and the mix of high-touch and low-touch trading they operate. For firms with relatively high-touch, multi-asset trading styles, algos are used predominantly for larger trades as a means of executing without moving the market.

This facilitates the trading process but introduces new requirements, says Mark Erler, Senior Trader at MEAG. “Pre-trade we look at how each algo works over time and whether it provides efficiency. If so, we use it for the bigger trades. For exchange traded derivatives on the equity and fixed income side, we use bank-provided algos.”

“What is important is that we always understand the impact on the market that an algo has. We need to ensure that we beat the risk price provided by the brokers. We then do a full post-trade TCA analysis and look at how we could improve next time.”

One of the key challenges of TCA for algos is the available data against which to analyze performance. Asset managers have invested in building the sample size of data to test algo performance, which is obviously a moving picture on any given day.

Across the market there are initiatives to compare algo performance across different providers, so that the buy-side has transparency over where

to route a trade for different purposes and during different market scenarios.

Helber says: “You need to constantly evaluate performance. We can provide traders with a real-time TCA module so they can see how their order is progressing. They also have a view on things like whether there is economic data coming out that might need the algo to be speeded up to get the trade done before the announcement. Getting all this in place is crucial. You need to be automated, but you also need the ability to interact with the order when you need to.”

Flexibility and the ability to react to market conditions are central to this evaluation. Banks developing algos built-in the ability for the user to change parameters and adapt the algos to their requirements, and the market conditions.

## Data transparency

Transparency and access to data for the buy-side go beyond algo provision. Best execution requirements have forced funds to invest in order to analyze large quantities of data. At the same time, patchy liquidity in some products means firms use data to identify where and when to trade.

Nafisa Yusuf, Director of Market Structure at BlackRock, says: “We are always looking for tools that will give us greater transparency. In Europe, the talk on consolidated tape is making progress, and in recent weeks, the EU council has adopted the changes to the EU trading rules, meaning that access to data will become more democratized so the wider market can take a view of where the liquidity is.”

“All of these factors influence one another; firms are investing in technology to improve algos, which results in better data, which means greater transparency.”

The pace of algo adoption and automation of trading strategies varies across different asset classes. While deeply liquid and predominantly electronic markets such as equities or listed derivatives are ripe for automation, other markets are moving more slowly.

Fixed income is one asset class in which progress is being made but at a slower pace than in other markets. Meanwhile, FX remains relatively immature in terms of automation and algo adoption.

Sunil Patil, Senior FX Trader at APG, says: “NDFs are a peculiar case, as FX has a lot of algos, but you don’t see them in NDFs. The market is quite fragmented, moving from Asian to Latin American time zones with different settlement times and regulations. The fragmentation means that there are very different liquidity profiles between markets so one algo that does the Taiwanese dollar couldn’t be applied to, say, the Peruvian sol.”

“As a result, algos in NDFs have not been commonly used. But as more hedge funds, quant funds and more liquidity providers come into the market, liquidity is being added, so there is a progression of algos in NDFs.”

“NDFs are slowly becoming more automated, and as more players come into the market, the spreads will narrow, and algo adoption will increase.”

“We are always looking for tools that will give us greater transparency.”

Nafisa Yusuf  
Director of Market Structure, BlackRock

“Getting all this in place is crucial. You need to be automated, but you also need the ability to interact with the order when you need to.”

Stefan Helber  
Team Lead Rates and FX Trading Europe, DWS

# Crypto regulation and the changing European landscape

Various frauds and scandals, a sharp price decline in 2022, and a lack of a comprehensive regulatory framework have set back the institutional adoption of crypto derivatives trading. With the introduction of the Markets in Crypto Assets (MiCA) in the EU, the approval of the Bitcoin spot ETF in the US and record high prices, are European institutions now on the cusp of greater adoption?

This year sees the beginning of the phased implementation of MiCA in the EU. MiCA is part of the digital finance package that was launched in 2020 by European regulators. It is one of three regulations designed to provide a framework for developing digital finance. MiCA regulates, among other areas, the trading of spot crypto. MiCA also covers asset-referenced tokens, including stablecoins and utility tokens, such as crypto assets. Under the European framework, crypto derivatives are covered by MiFID II.

Sujata Wirsching, Head of DBG Representative Office Luxembourg and Lead Digital Finance, Group Regulatory Strategy at Deutsche Börse, says: “MiCA is a bit like a light-touch MiFID. It covers areas such as market abuse and licensing, but it is not as detailed as MiFID.”

The current crypto market structure for derivatives trading is divided into three core types of venues. First, the crypto-native centralized exchanges,

such as Binance or Deribit, regulated offshore. Second, the TradFi exchanges, such as Eurex, that offer crypto derivatives. Third, the decentralized exchanges or DeFi.

Retail currently predominantly trades on native markets. However, institutional flow is increasingly traded on TradFi markets owing to this sector's preference for trading on a regulated market.

“TradFi markets will be the biggest beneficiaries of regulation in Europe,” says Niccolò Bardoscia, Head of Digital Assets Trading & Investments, Intesa Sanpaolo – IMI CIB Division.

“Regulated exchanges are already showing good growth in market share in digital assets products, especially after the approval of the ETFs in the US in January. Institutional players are coming, and the TradFi markets are taking market share from the native venues.”

“In Europe today we have a dedicated regulatory framework for crypto assets that doesn't exist in the US, so we have a great chance to get ahead – it is important that we don't waste this chance.”

However, the US is finally making strides towards creating an institutional crypto trading market. In January, the SEC approved several applications to launch a Bitcoin ETF, marking a significant step in the path toward greater institutional adoption.

“ TradFi markets will be the biggest beneficiaries of regulation in Europe.

Niccolò Bardoscia  
Head of Digital Assets Trading & Investments, Intesa Sanpaolo – IMI CIB Division

“There is a tremendous buzz in the US at the moment,” says Tom Jenkins, Head of Strategy, Index Investments Group at FTSE Russell. “The ETF go-live was a very big moment in the US. ETFs that use futures are very relevant, as well as the ones that reference the spot market.”

## Building out the market

As regulations come into place and institutional adoption grows, thoughts are turning to how to build a deeper market for crypto derivatives trading on on-shore regulated markets.

One key initial focus is the expansion of the available assets that can be traded. To date, TradFi exchanges have offered futures and options on ETH and Bitcoin. Bardoscia believes that there is scope for this to be expanded.

“If traditional exchanges want to compete with native markets, they need to improve their offerings. On native markets, I can trade across a range of underlyings, but there are few assets on offer from traditional exchanges currently,” he says.

“I would prefer to trade everything on a regulated market, but currently the breadth of offerings is wider on native exchanges.”

A longer-term question is what role Bitcoin will play in the future financial system. Advocates of Bitcoin claim that it can become digital gold, while detractors argue that it has no intrinsic value.

“The question is whether Bitcoin will eventually become a trusted store of value. It is too early to say. There is a chance it will happen. We do need digital gold, and Bitcoin is the best candidate for that at the moment, but it is not there yet,” says Bardoscia.

Building a yield curve for Ethereum is also an important element of development for institutional markets. According to Tom Jenkins, the first step towards that is standardizing staking calculations.

“This is a priority for us,” he says. “The data is on chain and transparent. What we need to do from a methodology standpoint is to determine things like the start and the end of the day and what reward streams we are going to include in the calculations. We need to form consensus within the community around the parameters that should feed an investible staking product.”

“Longer term we will see the development of a basket of assets that determine a yield curve, as is the case in the fixed income markets today.”

## The role of Central Bank Digital Currencies

A key question in the market today is what role Central Bank Digital Currencies (CBDCs) will play in the future of the crypto market.

CBDCs are digital forms of fiat currencies. In place of CBDCs today, the market uses so-called stablecoins, which allow firms to transact between different digital assets, without the need to move in and out of fiat currencies.

While stablecoins ease the process of transacting in crypto assets, they are run by private companies, and the collapse of Luna in spring 2022 exposed the flaws in over-reliance on individual companies.

For detractors, CBDCs represent what Bitcoin was launched to move away from – the centralized financial system. However, the reality is that, if institutional adoption is to be optimized, CBDCs will need to be introduced.

“The ECB has a working group to develop a digital Euro,” says Wirsching. “It is currently running a trial for companies to suggest use cases and test three different models. It is better to have a central bank digital currency than a stablecoin issued by a private company.”

Bardoscia adds: “I think we need both. Everything is becoming digital, so we need digital money, but Bitcoin has a real chance to become a store of value and have a place in portfolios.”

“It is important that Bitcoin exists as a way out of the financial system and a hedge for some risks, but you also need digital money to settle bonds and stocks, and I think institutional trading of tokenized securities will mostly use CBDCs.”

# Sustainability and carbon

ESG investment is hitting a new phase in its development, and firms need to adapt to the advancements in understanding and modeling of ESG risks.

This section explores how central clearing houses, an essential part of market infrastructure, are adapting to the fight against climate change. This is not just reflected in changes to risk management models to account for climate change's impact on the financial system but also in increasing consideration of how to assess and deal with the carbon footprint of CCPs themselves.

As described in this section, there is still plenty of momentum behind ESG, although new challenges lie ahead in a shifting geopolitical environment and complicated development of regulatory frameworks.

Another result of geopolitical shifts has been the surge in the importance of energy, with European nations forced to look for alternative sources of supply to Russian gas. While a boost for European energy market volumes, with new sources of flow being introduced, the dynamics of these emerging structures are still unclear.

# Adapting to climate change in central clearing

Central clearing houses (CCPs) are a key part of the Financial Market Infrastructure (FMI) landscape that can be impacted by climate change in multiple ways. As regulatory attention turns to ensuring that CCPs are prepared for the risks they face, what considerations should be taken into account, and what are the challenges for firms in understanding the risks of climate change and the transition to net zero?

CCPs excel in managing financial risks and are vital to the global financial system. And, while regulators have set out strict conditions over how they manage financial risks, rules and guidelines are less advanced with respect to managing the risks that are posed by climate change.

CCPs are exposed to a multitude of risks from climate change, both in terms of the impact on their operations and the wider market. At the same time, they are playing a central role in the transition to net zero by launching products that enable clients to hedge risks and invest in the transition.

Today, regulators and central banks are taking a keener interest in the impact of climate change and the wider transition on CCPs as part of a wider review of FMIs.

Marc Reinke, Head of Sustainable Finance Office at De Nederlandsche Bank, says that considerations around the impact of climate change are now a key consideration for Central Banks: "As ECB Board Member Frank Elderson once said: 'If you destroy nature, you destroy the economy,'" he says.

"There are multiple studies that show how finance is dependent on a sustainable environmental ecosystem. Physical risks, as well as transition risks, could be significant and threaten the stability of institutions and potentially the entire system. I see it as our task to have climate and nature-related risks on our radar."

Reinke says that it is essential that FMIs, including CCPs, understand the risks and manage them appropriately. However, it is not a case of a one-size-fits-all approach, as each institution has a different risk profile.

The Dutch Central Bank published a guide last year setting out best practices for risk management. It was compiled along the lines of the CPMI-IOSCO Principles for Financial Market Infrastructures and identified ten relevant principles, including governance, operational risk and disclosures.

There is broad consensus that the CPMI-IOSCO Principles form a strong basis for consideration of the risks that CCPs face with regard to the climate. Still, there will be a need for additional work to adapt the guidelines specifically to climate risks.

“ At the ECB, we definitely think that the key considerations of the CPMI-IOSCO PFMI are as relevant for climate as they are for cyber security and other risks.

Fiona van Echelpoel  
Deputy Director General in the Directorate General Market Infrastructure and Payments, ECB

“At the ECB, we definitely think that the key considerations of the CPMI-IOSCO PFMI are as relevant for climate as they are for cyber security and other risks,” says Fiona van Echelpoel, a Deputy Director General in the Directorate General Market Infrastructure and Payments of the ECB.

“At a high level, the principles seem to capture the traditional types of risks (e.g., credit, liquidity, operational, business), which would still be the main channels for the materialization of climate-related threats.”

“At the same time, of course, the language is high level and was aimed at other areas. We are therefore working with the global regulatory community to ask whether the current level of text gives enough direction and to look at whether CCPs (and other FMIs) are actually incorporating climate into their risk frameworks.”

#### Understanding the risks

Since 2016, ESMA has been conducting regular CCP stress tests focusing on credit, liquidity, and other financial risks. In the 2023 stress test, ESMA included climate risk for the first time.

ESMA's approach focuses on four main areas: business model risk, physical risk, market risk and counterparty risk.

In line with ESMA's expectations, CCPs are advancing in the understanding of the climate risks they face, says Christina Sell, Chief Sustainability Officer, Trading & Clearing at Deutsche Börse.

“We are very aware of these risks, and that is why we adopted a standalone ESG strategy for the clearinghouse last year,” she says.

“ESG and adaptability to climate risk are our priority. My colleagues from risk have had a busy year enhancing our risk framework. However, this is just the beginning, and it is important

to maintain the dialogue within the industry and especially with regulators.”

However, while some elements of the overall risk are clear, others are harder to quantify. Markus Müller, Chief Investment Officer, ESG & Global Head of Chief Investment Office at Deutsche Private Bank, says: “Some of the risks are not clear, and we need to provide clarity on the risks step by step.”

“When it comes to counterparty risk, we see that markets can move suddenly, resulting in higher margin calls – as we saw in 2013 with the energy markets moves that caused a default on a European CCP.”

“Also, companies providing consumer goods face shocks with higher commodity prices. How do they manage this margin and manage the risk? We need to remember why we have CCPs – to reduce risk profiles and provide stability in an era of uncertainty. We will never be able to eliminate risk, but we can reduce it.”

#### Getting the data

While CCPs have to understand the risks to their business model from climate change, they also need to ensure that they are reducing their own environmental footprint. And while the overall risks might be understood, quantifying them is another issue. At the heart of this lies data.

“The environmental footprint aspect is an important one,” says van Echelpoel. “Firstly, CCPs need to understand where they are today and that is not easily calculated. There are methodological issues to be addressed, but the industry is advancing in that respect.”

“It is acknowledged that an FMI's environmental footprint across its operations may be hard to construct. Value chains are very complex, and the FMI needs to consider all its suppliers

**“ Our role is to focus on the underlying assets. We have hundreds of analysts that analyze thousands of companies and we put that data in the hands of our clients.**

Maximilian Horster  
Managing Director, Global Head of Strategy, ISS ESG

**“ We started with collateral, but we want to move to the transaction side. We started with a margin calculator, the next step could be to provide what-if calculations that incorporate climate data.**

Christina Sell  
Chief Sustainability Officer, Trading & Clearing, Deutsche Börse

and service providers as well. However, there are already disclosures around things like water use, waste management and sources of electricity to support operations.”

Mitigating the complexity in evaluating the impact across value chains requires sophisticated tools that can monitor exposures dynamically in order to measure risk through the ecosystem of the organization, including the wider supply chain.

Ozgur Ozel, Regulatory Trust Lead, Financial Services at Google Cloud, says: “The challenge is not only looking into the first order effects but also second and third orders.”

“Underneath all of this lies the data quality; you need reliable data to make reliable predictions. You need to use not only historical events, but also to understand that climate events will be more sudden and catastrophic. We help clients have access to the data that will help them better understand the risks.”

For CCPs, managing climate change is about managing the risks inherent to the climate but also about meeting international standards for disclosure and reporting with regard to their own carbon footprint. As you move further down the supply chain, the data becomes harder to source.

There have been significant developments across the market to ease the process for firms seeking to quantify and analyze supply chain data, both for investment and reporting purposes.

Maximilian Horster, Managing Director, Global Head of Strategy at ISS ESG, says: “Our role is to focus on the underlying assets. We have

hundreds of analysts that analyze thousands of companies and we put that data in the hands of our clients.”

“In 2009, we had scope 1 and 2 greenhouse gas emissions only. Today, we have 800 data points on climate for a single company alone. The data is there. It could be relevant in pre-trade, post-trade and reporting, as well as across different regulatory requirements. For a market infrastructure provider's purpose, ESG data is a raw gemstone that hasn't been turned into a diamond yet.”

“Adding value to this data is something that Eurex Clearing is already offering its clients,” says Sell. “Eurex Clearing has added environmental data to its collateral reports to clients,” she says. “The beauty of this service is that it is tailor-made, so it is very easy to start the conversation about the insights. We incorporate the data from ISS and plan to enhance the data. We can add whatever data points are needed, but it is essential that we also look at our footprint and try to be a role model.”

“We started with collateral, but we want to move to the transaction side. We started with a margin calculator, the next step could be to provide what-if calculations that incorporate climate data.”

# Energy markets and the transition

Power markets have taken center stage as a means of investing in the transition while generating alpha. As industries turn to electronification and decarbonization, these markets are only going to increase in significance.

Over the past decade, two core trends have defined energy markets in Europe. Firstly, there has been a dramatic increase in the amount of energy generated by renewable energy sources. Secondly, efforts have been made to connect markets to create a more integrated system.

These trends have recently coincided with increased price fluctuations as geopolitics has rocked the power supply across the continent. This was seen most notably following the Russian invasion of Ukraine, which resulted in unprecedented spikes in the price of energy.

Steffen Riediger, Director European Power Derivatives, Business Development Power & Global Commodity Markets at EEX, says: "We are here to provide price signals. These price signals have become more relevant over the past three years in the wake of the energy crisis. Wholesale price signals helped the industry adapt to new price levels."

EEX Group operates trading platforms for the physical electricity markets in which investors can trade five minutes before delivery and financially settled markets with contracts all the way out to ten years. In addition to traditional hedgers, the exchange

has seen a significant inflow of capital from financial investors over the past three years, providing additional liquidity to the market.

## Structural shifts

Historically, energy markets have focused on oil prices rather than power prices. This changed with the Russian invasion of Ukraine and power has now become a key focus for investors.

Over the 2010-to-2020-decade, power prices in Germany never went above €100 per megawatt hour. In the summer of 2022, following the invasion of Ukraine, traded prices went up to more than €1000. Prices are now back down to less than €100, and the market anticipates falling prices going forward. However, the industry has learned that it needs to hedge further out.

"We have seen a structural change," says Riediger. "European energy consumers are now exposed to global factors. We have managed to move away from grid-bound Russian gas to globally traded LNG."

"That means that we are competing with other countries in the world. It also means that the announcement of a potential strike at an LNG facility in Australia sends prices in Europe up and has an impact on the German power price. We haven't seen that before." These factors are driving change in the underlying dynamics of the power markets. The make-up of market participants is also changing.

"Electricity markets are becoming an area that more financial investors want to invest in," says Riediger. "This is driving volume growth at EEX and an increased sophistication of trading with algorithmic trading on the rise in a market that has historically been a call-around market."

“ Electricity markets are becoming an area that more financial investors want to invest in.

Steffen Riediger  
Director European Power Derivatives, Business Development Power & Global Commodity Markets, EEX

# The fightback against the doubters

Investment into ESG and other climate-related funds is increasing despite headwinds from detractors, particularly in the US. In the five years since Eurex first launched ESG futures, the world and investors' preferences have changed.

Estimates of the total AUM held in ESG funds globally vary considerably. However, few question the astronomical growth that the market has experienced over the past decade. According to consultancy PWC, the total AUM of ESG-focused institutional investment will rise by 84% by 2026 to \$34tr, making up over a fifth of total assets held.

ESG investment today covers a plethora of strategies and approaches, from exclusions of certain companies or sectors to investing around specific themes such as one or more of the Sustainable Development Goals.

These different approaches come within a fragmented regulatory environment and, increasingly, a fragmented political environment. In the US, some states, particularly those with significant oil and gas sectors, have pulled public investments from funds that promote ESG.

However, according to a financial services industry specialist speaking at the conference, the growth of ESG investment is set to continue. "The biggest growth driver in ESG investment is that climate change is becoming a reality for individuals and companies alike," she says.

"We know now that 2023 was the warmest year on record and we are seeing the consequences of climate change – flooding, heat waves and wildfires increasing in frequency and intensity."

According to the specialist, the second driver is that investors tend to follow the money. With ever-increasing amounts committed to ESG investment, and more and more investable instruments and assets being launched, more funds are committed.

"The final driver is performance," she adds. "ESG-aligned benchmarks are frequently outperforming the parent index. These three drivers are resulting in significant inflows."

## Challenges to growth

While the growth of ESG AUM has been strong, there have been several challenges for investors. Regulation remains fragmented, even within Europe where the UK has taken a different approach in its implementation of the Sustainable Finance Disclosure Regulation (SFDR) with regard to issues such as the application of a taxonomy, which it has yet to develop.

Elsewhere, the EU rules around greenwashing have taken a different approach to the SEC in the US. All this creates uncertainty and complexity for investors.

A greater challenge for investors operating in both Europe and the US is the differing political climate. In March, the Financial Times reported that more than \$13bn were pulled from BlackRock ESG funds by Republican US states in the ongoing backlash against ESG decarbonization.

However, according to George Harrington, Global Head of Fixed Income and Derivatives at MSCI, the instances of push-back do not represent the whole of the United States. "We have seen considerable flows into sustainable listed derivatives and ETFs in the US, so the increasing trend of sustainable investing is still there," he says.

“The US is very diverse – different states have very different views. So, while Texas is not going to select a climate-related strategy and several other states are with them on that, other states are climate-focused. And those states are investing in ESG or climate-related strategies using state pension plans and educational endowments.”

Erhard Radatz, Global Head of Portfolio Management at Invesco Quantitative Strategies, says: “We are most often asked to quantify the impact of ESG on clients’ risk return profiles. There was a significant underperformance of ESG funds in 2022. Clients are looking at sustainability, but they also have financial goals.”

#### **Building out the investments**

These challenges and different regulations and approaches create complexity and opportunities for exchanges and index providers.

Growing liquidity in listed ESG index derivatives contracts requires standardization. This requires compromise from investors to trade a contract that offers an ESG wrapper but perhaps does not completely overlap with their approach.

“What we generally tend to find in both ESG and climate investing is that investors are very focused on a particular objective – whether that be a net zero target that they’ve set for 2040 or 2050, for example, or around a specific methodology, which we see with Paris-aligned investing among our European clients,” says Harrington.

“That naturally creates some splintering of liquidity because there are a lot of products that investors

can use via futures and options and they’re going to follow their own investment strategy utilizing the derivatives. I think in the ESG and climate space, you’re going to see a number of pockets of liquidity in the market.”

ESG index derivatives on Eurex are now five years old and the exchange today offers 38 futures and options contracts in the segment, a significant number for a market in its relative infancy.

“While we are taking a more conservative approach in the development of new contracts, we are responding to client demand: this year we expanded our equity-linked product suite with futures on socially responsible investing indices based on STOXX® and MSCI benchmarks,” says Zubin Ramdarshan, Head of Product Design, Equity & Index at Eurex.

Finding products that fit the different approaches to investment is key for exchanges and index providers. A further one is minimizing tracking error against the parent benchmark. “The question of exclusions is linked to performance,” says Ramdarshan. ESG on the equity side has had a successful run because typically the index tends to be overweight on technology. The question is at what point does that mean revert and start to underperform.

“We will see how quickly methodology changes to include certain segments might arise. As long as something has low tracking error and outperforms, everything is good. As soon as that changes though, that will be the real test for ESG. It has been a very benign environment to date.”

**“ While we are taking a more conservative approach in the development of new contracts, we are responding to client demand: this year we expanded our equity-linked product suite with futures on socially responsible investing indices based on STOXX® and MSCI benchmarks.**

Zubin Ramdarshan  
Head of Product Design, Equity & Index, Eurex

## **Eurex – Architects of trusted markets**

Eurex stands for the leading European derivatives exchange and – with Eurex Clearing – one of the leading central counterparties globally. Being architects of trusted markets characterized by market liquidity, efficiency and integrity, we provide our customers with innovative solutions to seamlessly manage risk. On the trading side, we mastermind the most efficient derivatives landscape by pioneering ingenious products and infrastructures as well as by building ‘smart’ into technology – offering a global product range, operating the most liquid fixed income markets in Europe and featuring open and low-cost electronic access. As central counterparty, Eurex Clearing builds trusted relationships with and amongst market participants, enabling effective risk management and delivering high efficiencies to clients.

## **Contact**

**EUREX MARKETING**  
marketing@eurex.com

© Eurex, May 2024

**Published by**  
Eurex Frankfurt AG  
Mergenthalerallee 61  
65760 Eschborn  
Germany

www.eurex.com

**ARBN Number**  
Eurex Frankfurt AG ARBN 100 999 764

© 2024 by Deutsche Börse AG. Eurex®, the EX® and EC®-Logo are registered trademarks of Deutsche Börse AG. This publication is published for information purposes only and does not constitute accounting advice, investment advice or an offer, solicitation or recommendation to acquire or dispose of any investment or to engage in any other transaction. While reasonable care has been taken in the preparation of this publication neither Eurex Frankfurt AG, nor any of its affiliates make any representation or warranty regarding the information contained herein. Customers should consider the legal, accounting and requirements in the jurisdictions relevant to them before using Eurex® products or services.

**Find out more online at**  
[www.eurex.com](http://www.eurex.com)



**See you next year!**

**26–27 February, 2025**

**37 Sessions**

**40 Sponsors and partners**

**120 Speakers**

**225 Attendees on average per session**

**250 Buy-side participants**

**500 On-line attendees**

**1,169 On-site attendees**

**1,594 Total unique attendees**



[Discover the recordings!](#)